



MONOLITHIC POWER SYSTEMS

PRODUCT CATALOG

2024/25

[MONOLITHICPOWER.COM](https://www.monolithicpower.com)

Why Choose MPS

Proven Semiconductor Manufacturer

MPS has emerged as the fastest-growing semiconductor company by developing superior products, providing excellent support, and aiding the world's largest companies with their product development.

Products: Superior Technology

**HIGHLY EFFICIENT
POWER CONVERSION**

95+%
efficiency



A black MPS chip is shown above a blue and white power conversion module, with lines indicating the flow of power.

SUPERIOR POWER DENSITY
Space-Saving, High-Performance Power Modules

85W in 10x12mm



A small black MPS chip is shown resting on the tip of a human finger to illustrate its tiny size.

BMS SOLUTIONS

±3% SOC
State-of-Charge Accuracy



A row of green BMS modules with circular indicators is shown against a green background.

ULTRA-COMPACT POWER DEVICES

Up to **70%**
Space savings!



A small MPS chip (MPM54304) is highlighted in a green dashed box on a larger circuit board layout.

Expert Engineering Resources

ON-SITE

Embedded engineering teams join our largest customers on location

ON-DEMAND

Knowledgeable FAE/AE resources respond as needed to assist customers in optimizing designs

VIRTUAL

Remote engineers provide virtual design sessions

- Product Recommendations
- Project Troubleshooting
- Technical Consulting



[MonolithicPower.com/Quote-Samples-Support](https://www.monolithicpower.com/Quote-Samples-Support)

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SWITCHING REGULATORS | DC/DC POWER CONVERSION

CPU Core (Controllers)

Maximum Operating Input Voltage < 55V

Part Number	V _{cc} (Min) (V)	V _{cc} (Max) (V)	I _d (Typ) (mA)	Shutdown Current (Typ) (mA)	f _{sw} (MHz)	# of Output Rails Regulated Output Phases	Package	Notes	
MP2965	3	3.6	30	0.15	0.2 to 3	2	10	QFN-48 (6x6)	VR13.HC/AVSBus
MP2888A	3	3.6	30	0.15	0.2 to 5	1	10	QFN-40 (5x5)	NVIDIA OpenVReg
MP2884A	3	3.6	30	0.15	0.2 to 5	1	4	QFN-40 (5x5)	NVIDIA OpenVReg
MP2886A	3	3.6	30	0.15	0.2 to 5	1	6	QFN-40 (5x5)	NVIDIA OpenVReg
MP2853	3	3.6	34	0.11	0.2 to 3	2	5	QFN-40 (5x5)	AMD SVI2
MP2855	3.15	3.45	40	0.17	0.2 to 3	2	9	TQFN-40 (5x5)	AMD SVI2
MP2926	3.15	3.45	40	0.15	0.2 to 3	3	6	TQFN-40 (5x5)	SOC, DDR memory power
N MP2891	3.1	3.5	50	0.25	0.2 to 3	2	16	QFN-56 (7x7)	NVIDIA OpenVReg, CPU/GPU, ASIC
N MP2880	3.15	3.45	55	0.15	0.2 to 3	1	20	TQFN-56 (7x7)	ASIC, CPU/GPU
N MP2882	3.15	3.45	55	0.15	0.2 to 3	2	16	TQFN-56 (7x7)	ASIC, CPU/GPU
N MP2927	3.15	3.45	40	0.15	0.2 to 3	3	8, 1, 1	TQFN-40 (5x5)	Any processor with PMBus/AVSBus
N MP2890	3.1	3.5	50	0.25	0.2 to 3	2	20	QFN-64 (8x8)	NVIDIA OpenVReg
N MP2852	3.15	3.45	40	0.15	0.2 to 3	2	13	TQFN-48 (6x6)	AMD SVI 2.0, supports 3-bit PVID mode, PMBus/I ² C Compliant
N MP2894	3.15	3.45	30	0.15	0.2 to 3	1	4	QFN-40 (5x5)	PWM-VID interface, NVIDIA OpenVReg 4+ and 4i+ spec, PMBus/I ² C Compliant
N MP2896	3.15	3.45	30	0.15	0.2 to 3	1	6	QFN-40 (5x5)	PWM-VID interface, NVIDIA OpenVReg 4+ and 4i+ spec, PMBus/I ² C Compliant
N MP2898	3.15	3.45	30	0.15	0.2 to 3	1	10	QFN-40 (5x5)	PWM-VID interface, NVIDIA OpenVReg 4+ and 4i+ spec, PMBus/I ² C Compliant

CPU Core (Controllers)

CPU Core Power (Intelli-Phase™)

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	I _{sw} Limit (Typ) (A)	Shutdown Current (Typ) (mA)	f _{sw} (MHz)	PWM Logic (V)	Package	Notes
MP86905	4.5	16	50	75	0.08	0.1 to 2	3.3	QFN-23 (4x4)	-
MP86945A	4.5	16	60	90	0.01	0.1 to 2	3.3	TQFN-25 (4x5)	-
MP86934	4.5	16	25	60	0.03	0.1 to 2	3.3	TQFN-21 (3x4)	-
MP86933	4.5	16	12	25	-	0.1 to 2	3.3	TQFN-13 (3x3)	-
MP86957	3	16	70	110	0.09	0.1 to 3	3.3	LGA-41 (5x6)	-
MP86972	3	12	60	90	0.09	0.1 to 3	3.3	TLGA-35 (3x6)	-
MP86950	4.5	16	50	75	-	0.1 to 2	3.3	LGA-27 (4x5)	-
MP86998	3	16	80	110	0.09	0.1 to 3	3.3	TLGA-41(5x6)	-
MP86920	4.5	16	20	50	-	0.1 to 2	3.3	LGA-27 (4x5)	-
MP86936	3	16	60	90	0.09	0.1 to 3	3.3	TQFN-23 (3x6)	-
MP86965	4.5	16	60	90	-	0.1 to 2	3.3	TLGA-31 (4x5)	-
MP86952	3	16	70	110	0.09	0.1 to 3	3.3	LGA-41 (5x6)	Radiation tolerant
MP86956	3	16	70	110	0.09	0.1 to 3	3.3	LGA-41 (5x6), TLGA-41 (5x6)	-
MP86992	3	16	50	75	0.09	0.1 to 3	3.3	LGA-41 (5x6)	-
MP86962	3	16	80	110	0.09	0.1 to 3	3.3	TLGA-41(5x6)	Radiation tolerant
MP86935-A	3	12	60	90	0.09	0.1 to 3	3.3	TLGA-35 (3x6)	-
MP87180	3	16	80	120	0.005	0.1 to 1.5	3.3 and 5	TLGA-41 (5x6)	Quiet Switcher™ technology
MP87190	3	16	90	120	0.005	0.1 to 1.5	3.3 and 5	TLGA-41 (5x6)	Quiet Switcher™ technology
N MP87100	3	16	100	110	0.005	0.1 to 3	3.3	TLGA-41 (5x6)	Quiet Switcher™ technology
N MP87990-N	3	16	50	100	0.001	0.1 to 3	3.3 and 5	TLGA-33 (5x5)	DCR sensing

N - New Product **S** - Sampling Product

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (Max) (A)	I_{SW} Limit (Typ) (A)	Shutdown Current (Typ) (mA)	f_{SW} (MHz)	PWM Logic (V)	Package	Notes
N MP87991	3	16	50	100	0.001	0.1 to 3	3.3 and 5	TLGA-33 (5x5)	IMON sensing
N MP87992	3	16	70	120	0.005	0.1 to 3	3.3 and 5	TLGA-41 (5x6)	Quiet Switcher™ technology

Step-Down Converters (Buck)

Maximum Operating Input Voltage $1.5V \leq V_{IN} \leq 6V$

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (Max) (A)	I_Q (Typ) (μ A)	V_{FB} (Typ) (V)	f_{SW} (MHz)	Power Good	Light-Load Efficiency	Constant-On-Time (COT)	100% Duty Cycle Industrial	Package	Notes
MP28200	2	5.5	0.2	0.5	-	1.5	✓	✓	✓	-	QFN-12 (2x2)	Ultra-low I_Q
MP28310	2	5.5	0.3	0.5	-	1.5	✓	✓	✓	-	CSP-12 (1.2x1.6)	100mA LDO with 300nA I_Q , prog. V_{OUT} by CTRL, P2P with the MP28210, equivalent to the TPS62743
MP21600	2.3	5.5	0.6	11	0.6	2.4	-	✓	✓	✓	QFN-6 (1x1.5)	High switching frequency, ultra-small package
MP28300	2	5.5	0.3	0.5	-	1.5	✓	✓	✓	✓	QFN-12 (2x2)	Ultra-low I_Q
MP28301	2	5.5	0.7	0.5	0.6	1.5	✓	✓	✓	✓	QFN-12 (2x2)	100mA LDO with 300nA I_Q , prog. V_{OUT} by CTRL, P2P with the MP28300
MP28210	2	5.5	1	0.5	-	1.5	✓	✓	✓	✓	CSP-12 (1.2x1.6)	P2P with the MP28310
MP2141N	2.3	5.5	1	11	0.6	2.2	✓	✓	✓	✓	SOT563 (1.6x1.6)	Output discharge, power good only for fixed V_{OUT} version
MP2148	2.3	5.5	1	10	0.6	2.2	✓	✓	✓	✓	QFN-6 (1x1.5)	High switching frequency, ultra-small package
MP21148	2.3	5.5	1	500	0.6	2.4	✓	-	✓	✓	QFN-6 (1x1.5)	FCCM, low ripple across entire load range
MP2149	2.7	6	1 (2x)	45	0.608	1	-	✓	-	✓	TSOT23-8	Dual 1A output current
MP2151	2.5	5.5	1	25	0.6	1.1	✓	✓	✓	✓	SOT563 (1.6x1.6), UTQFN (1.2x1.6)	1% V_{FB} accuracy, output discharge, adj. and fixed V_{OUT} versions, P2P with the MP2152/3
MP2181	2.5	5.5	1	21	0.6	1.2	✓	✓	✓	✓	SOT583 (1.6x2.1)	External soft start, 1% V_{FB} accuracy, output discharge, P2P with the MP2182/3/4
MP2141Q-18	2.3	5.5	1.5	20	-	2.2	-	✓	✓	✓	SOT563 (1.6x1.6)	Fixed 0.61V/1.8V output voltage, output discharge, VSEL for PFM/PWM
MP2152	2.5	5.5	2	25	0.6	1.1	✓	✓	✓	✓	SOT563 (1.6x1.6), UTQFN (1.2x1.6)	1% V_{FB} accuracy, output discharge, adj. and fixed V_{OUT} versions, P2P with the MP2151/3
MP2172C	2.38	5.5	2	450	0.6	1.1	-	-	✓	✓	UTQFN (1.2x1.6)	FCCM, 1% V_{FB} accuracy, output discharge
MP2192C	2.5	5.5	2	450	0.6	1.1	-	-	✓	✓	WLCSP-6 (1.23x0.85)	FCCM, 1% V_{FB} accuracy, fast output discharge, P2P with the MP2193
MP2182	2.5	5.5	2	21	0.6	1.2	✓	✓	✓	✓	SOT583 (1.6x2.1)	External soft start, 1% V_{FB} accuracy, output discharge, P2P with the MP2182/3/4
MP2122A	2.7	6	2 (2x)	45	0.608	1	-	✓	-	✓	TSOT23-8	Dual 2A output current
MP2166 MPQ2166	2.7	6	2 (2x)	60	0.6	3	✓	✓	-	✓	QFN-18 (2x3), QFN-18 (2.5x3.5)	Dual-channel, external soft start
S MP1641	2.4	6	1	35	0.6	2.4	✓	✓	✓	✓	SOT563 (1.6x1.6)	PG indicator, P2P with MP1601/5 family
S MP1642	2.4	6	2	35	0.6	2.4	✓	✓	✓	✓	SOT563 (1.6x1.6)	PG indicator, P2P with MP1601/5 family
S MP1641C	2.4	6	1	35	0.6	2.4	✓	-	✓	✓	SOT563 (1.6x1.6)	FCCM, PG indicator, P2P with MP1601/5 family
S MP1642C	2.4	6	2	35	0.6	2.4	✓	-	✓	✓	SOT563 (1.6x1.6)	FCCM, PG indicator, P2P with MP1601/5 family
S MP1641N	2.4	6	1	35	0.6	2.4	-	✓	✓	✓	SOT563 (1.6x1.6)	P2P with MP1601/5 family
S MP1642N	2.4	6	2	35	0.6	2.4	-	✓	✓	✓	SOT563 (1.6x1.6)	P2P with MP1601/5 family
S MP1641A	2.4	6	1	35	0.6	2.4	-	-	✓	✓	SOT563 (1.6x1.6)	FCCM, P2P with MP1601/5 family
S MP1642A	2.4	6	2	35	0.6	2.4	-	-	✓	✓	SOT563 (1.6x1.6)	FCCM, P2P with MP1601/5 family
MP2153	2.5	5.5	3	25	0.6	1.1	✓	✓	✓	✓	SOT563 (1.6x1.6), UTQFN (1.2x1.6)	1% V_{FB} accuracy, output discharge, adj. and fixed V_{OUT} versions, P2P with the MP2151/2
MP2193	2.5	5.5	3	450	0.6	1.1	-	✓	✓	✓	WLCSP-6 (1.23x0.85)	1% V_{FB} accuracy, output discharge, adj. output, P2P with the MP2192C
MP2164	2.5	5.5	3	50	0.6	2.3	✓	✓	✓	✓	QFN-12 (2x2)	Forced PWM and auto-PFM mode

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Operating Input Voltage $1.5V \leq V_{IN} \leq 6V$

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (Max) (A)	I_Q (Typ) (μ A)	V_{FB} (Typ) (V)	f_{SW} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	100% Duty Cycle	Industrial	Package	Notes
MP2183	2.5	5.5	3	21	0.6	1.2	✓	✓	✓	✓	✓	-	SOT583 (1.6x2.1)	1% V_{FB} accuracy, output discharge, P2P with the MP2181/3/4
MP2188	2.5	5.5	3 (2x)	80	0.6	1.2	✓	-	✓	✓	✓	-	QFN-16 (2.2x2.6)	Dual-output, output discharge
MP2131	2.7	5.5	4	19	0.6	1.2	✓	-	✓	✓	✓	-	QFN-12 (2x2)	Output discharge
MP2184	2.5	5.5	4	21	0.6	1.2	✓	✓	✓	✓	✓	-	SOT583 (1.6x2.1)	1% V_{FB} accuracy, output discharge, P2P with the MP2181/2/3
MP2147	2.8	5.5	4	40	0.6	1.2	✓	-	✓	✓	-	-	QFN-12 (2x3)	Output discharge, PWM/PFM mode, dynamic voltage scaling
MP2145	2.8	5.5	6	40	0.6	1.2	✓	-	✓	✓	-	-	QFN-12 (2x3)	Output discharge, PWM/PFM mode, dynamic voltage scaling
N MP1604	2.4	5.5	4	4.5	0.4	1.25	✓	-	✓	✓	-	-	SOT583 (1.6x2.1)	High performance, low I_Q , supports V_{OUT} from 0.4V, 1% output accuracy, output discharge
N MP2194	2.4	5.5	4	4.5	0.4	1.25	✓	-	✓	✓	-	-	SOT583 (1.6x2.1)	High performance, low I_Q , supports V_{OUT} from 0.4V, 1% output accuracy, output discharge
N MP1604C	2.4	5.5	4	450	0.4	1.25	✓	-	-	✓	-	-	SOT583 (1.6x2.1)	High performance, -C for FCCM verison, low I_Q , supports V_{OUT} from 0.4V, 1% output accuracy, output discharge
N MP1608	2.4	5.5	6	4.5	0.4	1.25	✓	-	✓	✓	-	-	SOT583 (1.6x2.1)	High performance, low I_Q , supports V_{OUT} from 0.4V, 1% output accuracy, output discharge
N MP2196	2.4	5.5	6	4.5	0.4	1.25	✓	-	✓	✓	-	-	SOT583 (1.6x2.1)	High performance, low I_Q , supports V_{OUT} from 0.4V, 1% output accuracy, output discharge
N MP1608C	2.4	5.5	6	450	0.4	1.25	✓	-	-	✓	-	-	SOT583 (1.6x2.1)	High performance, -C for FCCM verison, low I_Q , supports V_{OUT} from 0.4V, 1% output accuracy, output discharge
MP8847	2.7	6	6	300	0.6	0.85 to 2.2	✓	-	✓	-	-	-	QFN-14 (2x3)	I ² C, prog. V_{OUT} , power-save mode
MP8770C	3	17	8	100	0.6	0.7	✓	✓	-	✓	-	-	QFN-16 (3x3)	FCCM, wide V_{IN} range supports 3.3V, 5V, and 12V inputs
MP8771	3	18	10	100	0.6	0.7	✓	✓	✓	✓	-	-	QFN-16 (3x3)	Fast load transient response, SCP, UVP, OCP, and hiccup
MP8774	3	18	12	100	0.6	0.7	✓	✓	✓	✓	-	-	QFN-16 (3x3)	High frequency, wide V_{IN} range supports 3.3V, 5V, and 12V inputs
MP8774H	3	18	12	100	0.6	1.4	✓	✓	✓	✓	-	-	QFN-16 (3x3)	High frequency, wide V_{IN} range supports 3.3V, 5V, and 12V inputs

Step-Down Converters (Buck)

Maximum Operating Input Voltage $\leq 28V$

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{out} (Max) (A)	I_d (Typ) (mA)	V_{FB} (Typ) (V)	f_{sw} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	Package	Notes
MP1479	4.2	18	1	0.19	0.805	0.8	-	-	✓	✓	SOT563 (1.6x1.6)	Low UVLO, P2P with the MP1476/MP1477
MP2313	4.5	24	1	0.2	0.8	2	-	-	✓	-	TSOT23-8	High frequency, light-load mode (AAM pin), P2P with the MP2138
MP2388	4.5	21	1	0.2	0.798	2	-	-	✓	-	QFN-8 (1.5x2.5)	Small package, ultra-thin profile option
MP2317	7.5	26	1	0.15	0.791	0.6	-	-	✓	-	TSOT23-6	Low current limit version of the MP2314, optimized EMI
MP2322	3	22	1	0.005	0.6	1.25	✓	-	✓	✓	QFN-8 (1.5x2)	Ultra-low I_q , small package, output discharge
MP1476	4.2	18	2	0.19	0.805	0.8	-	-	✓	✓	SOT563 (1.6x1.6)	P2P with the MP1479/MP1477
MP2318	4.5	24	2	0.2	0.798	2	-	-	✓	-	TSOT23-8	High frequency, light-load mode (AAM pin), P2P with the MP2313
MPQ2314	4.5	24	2	0.18	0.791	0.5	-	-	✓	✓	TSOT23-8	AAM power-save mode, industrial grade
MP2332H	4.2	18	2	0.2	0.805	1.2	✓	✓	-	✓	SOT583 (1.6x2.1)	High frequency, FCCM, P2P with the MP2333H
MP2321	4	19	2	0.04	0.6	Prog	✓	✓	✓	-	QFN-14 (2x3)	Forced PWM or auto-PFM/PWM mode selectable, 100% duty cycle
MP2392	4.2	24	2	0.2	0.805	0.65	✓	✓	✓	✓	SOT583 (1.6x2.1)	P2P with the MP2393
MP2331H	4.2	24	2	0.2	0.805	1.2	✓	✓	-	✓	SOT583 (1.6x2.1)	High frequency, FCCM, P2P with the MP2330H
MP2344	7.5	26	2	0.17	0.791	0.6	-	-	✓	-	TSOT23-6	P2P with the MP2317/MP2345, optimized EMI
MP2345	7.5	26	2.5	0.17	0.791	0.6	-	-	✓	-	TSOT23-6	P2P with the MP2317/MP2344, optimized EMI
MP2393	4.2	24	3	0.2	0.805	0.65	✓	✓	✓	✓	SOT583 (1.6x2.1)	P2P with the MP2392
MP2333H	4.2	18	3	0.2	0.805	1.2	✓	✓	-	✓	SOT583 (1.6x2.1)	High frequency, FCCM, P2P with the MP2332H
MP2330H	4.2	24	3	0.2	0.805	1.2	✓	✓	-	✓	SOT583 (1.6x2.1)	High frequency, FCCM, P2P with the MP2331H
MP1477	4.2	17	3	0.2	0.805	0.8	-	-	✓	✓	SOT-563 (1.6x1.6)	P2P with the MP1479/MP1476
MP1477H	4.2	17	3	0.2	0.805	1.2	-	-	-	✓	SOT563 (1.6x1.6)	High frequency, FCCM
N MP1653A	4.2	17	3	0.2	0.6	1.2	-	-	✓	✓	SOT563 (1.6x1.6)	Forced PWM operation mode, high switching frequency, adj. output from 0.6V
MP1660	4.5	16	3	0.19	0.6	0.6	-	-	✓	✓	SOT-563 (1.6x1.6)	600mV V_{REF}
MP2223	4.5	18	3/2	1	0.8	0.54	-	-	✓	-	TSOT23-8	Dual 3A/2A buck, 180° out-of-phase operation
MP2348	4.2	24	4	0.2	0.802	0.65	-	✓	✓	✓	SOT583 (1.6x2.1)	Forced PWM, auto-PFM mode, ultrasonic mode
MP8854	2.85	18	4	0.42	0.6 to 1.108 (Adj)	0.5 to 1.25	✓	✓	✓	✓	QFN-14 (3x4)	I ² C prog. FB range, int. telemetry, accurate V_{out}/I_{out} readback via I ² C, P2P with the MP8861/69S
N MP8853	2.85	18	4	0.42	0.6 to 1.108 (Adj in 4mV Steps)	0.5 to 1.25	✓	-	✓	✓	QFN-14 (3x3)	I ² C prog. FB range and f _{sw} , accurate V_{out}/I_{out} readback via I ² C

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Maximum Operating Input Voltage $\leq 28V$

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{out} (Max) (A)	I_o (Typ) (mA)	V_{FB} (Typ) (V)	f_{sw} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	Package	Notes
MP8864	4.5	21	4	0.5	0.6 to 1.87 (Adj in 10mV Steps)	0.6 to 1.6 (Selectable)	✓	✓	✓	-	QFN-15 (3x3)	I ² C interface, prog. V_{out} , power-save mode
MP8870	3	18	15	0.06	0.3V to 1.536V (in 1.5mV Steps)	0.55 to 0.75	✓	✓	✓	✓	QFN-21 (3x4)	Frequency and current limit adj. via I ² C, differential V_{out} remote sense, adaptive COT for ultra-fast transient response
N MP1676	4.2	16	6	0.18	0.4	0.8	-	-	✓	✓	SOT583 (1.6x2.1)	Wide 0.4V to 10V V_{out} range, $\pm 1\%$ accuracy, new generation
N MP1676H	3.9	16	6	0.18	0.4	1.2	-	-	✓	✓	SOT583 (1.6x2.1)	Wide 0.4V to 10V V_{out} range, $\pm 1\%$ accuracy, new generation
N MP1676C	4.2	16	6	0.62	0.4	0.8	-	-	✓	-	SOT583 (1.6x2.1)	-C for FCCM version, wide 0.4V to 10V V_{out} range, $\pm 1\%$ accuracy
S MP1678	4.2	16	8	0.16	0.4	0.8	✓	-	✓	✓	QFN-10 (2x3)	PG indicator, FCCM/PFM mode selection
MPQ8623	4	16	6	0.65	0.9	0.6/1.1/2	✓	✓	✓	✓	QFN-14 (2x3)	Prog. current limit, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output capacitor, excellent load reg.
MPQ8626	4	16	6	0.65	0.6	0.6/1.1/2	✓	✓	✓	✓	QFN-14 (2x3)	Prog. current limit, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output capacitor, excellent load reg.
MP2349	4.5	24	6.5	0.105	0.6	0.7	-	-	✓	✓	QFN-11 (2x2)	Forced PWM, auto-PFM mode, ultrasonic mode
N MPQ8861	2.85	18	12	0.42	0.6 to 1.108 (Adj)	0.5 to 1.25	✓	✓	✓	✓	QFN-14 (3x4)	Wettable flank package, output adj. in 4mV steps, I ² C
MPQ8633A	4	16	16	0.65	0.6	0.6/0.8/1	✓	✓	✓	✓	QFN-21 (3x4)	Prog. current limit and freq., voltage tracking, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output capacitor, excellent load reg.
MPQ8633B	4	16	20	0.65	0.6	0.6/0.8/1	✓	✓	✓	✓	QFN-21 (3x4)	Prog. current limit and freq., voltage tracking, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output capacitor, excellent load reg.
MPQ8634A	4	16	12	0.65	0.9	0.6/0.8/1	✓	✓	✓	✓	QFN-21 (3x4)	Prog. current limit and freq., voltage tracking, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output capacitor, excellent load reg.
MPQ8634B	4	16	20	0.65	0.9	0.6/0.8/1	✓	✓	✓	✓	QFN-21 (3x4)	Prog. current limit and freq., voltage tracking, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output capacitor, excellent load reg.
MPQ8655	4	16	30	2.5	0.6	0.4/0.6/0.8/1	✓	-	✓	✓	TQFN-25 (4x5)	Drop-in replacement for MPQ8645P, scalable multi-phase operation, digital interface, true remote V_{out} sense, prog. V_{out} , current limit, and freq.
N MPQ8785	3.1	16	40	18	0.35 to 1.5	0.3 to 2	✓	-	✓	✓	TLGA-37 (5x6)	Digital POL with PMBus, flexible for multiple rails in system, adaptive COT, common footprint package (with 0.5mm pitch)
N MPQ8786	3.1	16	25	18	0.35 to 1.5	0.3 to 2	✓	-	✓	✓	TLGA-37 (5x6)	Digital POL with PMBus, flexible for multiple rails in system, adaptive COT, common footprint package (with 0.5mm pitch)
N MPQ8787	3.1	16	40	18	0.6	0.78 to 0.82	✓	-	✓	✓	TLGA-37 (5x6)	Scalable, synchronous, flexible for multiple rails in system, adaptive COT, common footprint package (with 0.5mm pitch)
N MPQ8787A	3.1	16	40	18	0.6	0.78 to 0.82	✓	-	✓	✓	TLGA-37 (5x6)	Scalable, synchronous, flexible for multiple rails in system, adaptive COT, common footprint package (with 0.5mm pitch)

Step-Down Converters (Buck)

Maximum Operating Input Voltage $\leq 28V$

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{out} (Max) (A)	I_o (Typ) (μA)	V_{FB} (Typ) (V)	f_{sw} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	Industrial	Package	Notes
MP2328	4.5	28	2	0.16	0.5	0.45	✓	✓	✓	✓	-	SOT583 (1.6x2.1)	P2P with the MP233x family
MP2328C	4.5	28	2	0.56	0.5	0.45	✓	✓	-	✓	-	SOT583 (1.6x2.1)	FCCM
MP2338	4.5	28	3	0.16	0.45	0.45	✓	✓	✓	✓	-	SOT583 (1.6x2.1)	P2P with MP2328
MP2316	4	19	3	0.04	0.6	Prog	✓	✓	✓	✓	-	QFN-14 (2x3)	High efficiency, 100% duty cycle
MP2326	3.9	19	4	0.04	0.6	Prog	✓	✓	✓	✓	-	QFN-14 (2x3)	Selectable PFM/PWM mode, 100% duty cycle
MP8715	4.5	21	4	0.66	0.805	0.5	✓	✓	-	-	-	QFN-14 (3x4), SOIC-8E	100% duty cycle, ext. freq. sync
MP1499	4.5	16	5	0.6	0.807	0.5	-	✓	✓	-	-	QFN-10 (2x3)	Ext. freq. sync range 200kHz to 2MHz, current mode
MP2384	4.5	24	4	0.105	0.6	0.7	✓	-	✓	✓	-	QFN-11 (2x2)	Output discharge, thermal shutdown with auto-retry, P2P with the MP2329/MP2386
MP2384C	4.5	24	4	0.105	0.6	0.7	✓	-	-	✓	-	QFN-11 (2x2)	FCCM
MPQ8636-4	4.5	18	4	0.86	0.611	Prog	✓	✓	-	✓	✓	QFN-16 (3x4)	CCM, non-latch OVP, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output capacitor
MP2225	4.5	18	5	0.32	0.6	0.5	-	-	✓	-	-	TSOT23-8	External freq. sync, P2P with the MP2236
MPQ8623	4	16	6	0.65	0.9	0.6/1.1/2.2	✓	✓	✓	✓	-	QFN-14 (2x3)	Prog. current limit, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output capacitor, excellent load reg.
MP8861	2.85	18	6	0.42	0.6 to 1.108 (Adj)	0.5 to 1.25	✓	✓	✓	✓	-	QFN-14 (3x4)	I ² C prog. FB range, integrated telemetry, accurate V_{out}/I_{out} readback via I ² C, P2P with the MP8854/69S
MP2236	3	18	6	0.15	0.6	0.6	-	-	✓	✓	-	TSOT23-8	P2P with the MP2225
MP2236C	3	18	6	0.15	0.6	0.6	-	-	-	✓	-	TSOT23-8	FCCM
MP2229	4.5	21	6	0.4	0.6	Prog	-	✓	✓	-	-	QFN-14 (3x3)	Current mode, external frequency sync
MP8865	4.5	21	6	0.5	0.6 to 1.87 (Adj in 10mV Steps)	0.6 to 1.6 (Selectable)	✓	✓	✓	-	-	QFN-15 (3x3)	I ² C interface, prog. V_{out} , power-save mode
MP2329	4.5	24	6.5	0.105	0.6	0.7	✓	-	✓	✓	-	QFN-11 (2x2)	Output discharge, thermal shutdown with auto-retry, P2P with the MP2384/MP2386
MP2329C	4.5	24	6.5	0.105	0.6	0.7	✓	-	-	✓	-	QFN-11 (2x2)	FCCM version of the MP2329
MP2386C	4.5	24	8	0.105	0.6	0.7	✓	-	✓	✓	-	QFN-11 (2x2)	FCCM, P2P with the MP2384/MP2329
MP2386	4.5	24	8	0.105	0.6	0.7	✓	-	✓	✓	-	QFN-11 (2x2)	Output discharge, OCP, OVP, UVP, thermal shutdown with auto-retry, P2P with the MP2384/MP2329
MP2276	2.7	16	8	0.6	0.8	0.6/1.1/2	✓	✓	✓	✓	-	QFN-14 (2x3)	Prog. current limit, forced PWM/auto-PFM mode
MP8770	3	17	8	0.1	0.6	0.7	✓	✓	✓	✓	-	QFN-16 (3x3)	Fast load transient response, SCP, UVP, OCP, and hiccup
MP8770C	3	17	8	0.1	0.6	0.7	✓	✓	-	✓	-	QFN-16 (3x3)	FCCM, wide V_{in} range supports 3.3V, 5V, and 12V inputs

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Down Converters (Buck)

Maximum Operating Input Voltage $\leq 28V$

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{out} (Max) (A)	I_o (Typ) (μA)	V_{rs} (Typ) (V)	f_{sw} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	Industrial	Package	Notes
MP8867	4.5	17	8	0.56	0.6 to 1.87 (Adj in 10mV Steps)	0.5 to 1.5 (Selectable)	✓	✓	✓	-	-	QFN-14 (3x4)	I ² C, prog. V_{out} , power-save mode
MP8759	4.5	26	8	0.117	0.6	0.7	✓	-	✓	✓	-	QFN-12 (2x3)	USM, PFM/PWM selection, hiccup mode OCP and UVP, output discharge
MP2238	4.2	18	8	0.15	0.6	0.6	-	-	✓	✓	-	QFN-12 (2x3)	1% V_{rs} accuracy, 8A version of the MP2236
MP8771	3	18	10	0.1	0.6	0.7	✓	✓	✓	✓	-	QFN-16 (3x3)	Fast load transient response, SCP, UVP, OCP, and hiccup
MPQ8636A-10	4.5	18	10	0.86	0.611	Prog	✓	✓	-	✓	✓	QFN-16 (3x4)	CCM, latch-off OVP/OCP
MP8758H	4.5	22	10	0.19	0.604	0.5	✓	-	✓	✓	-	QFN-21 (3x4)	Thermal auto-retry, hiccup mode OCP and UVP, PFM/PWM mode
MP8714	4.5	17	10	0.56	0.6	Ext clock	✓	✓	✓	-	-	QFN-14 (3x4)	Ext. freq. sync 200kHz to 2MHz, current mode
MP8868	4.5	17	10	0.56	0.6 to 1.87 (Adj in 10mV Steps)	0.5 to 1.5 (Selectable)	✓	✓	✓	-	-	QFN-14 (3x4)	I ² C, prog. V_{out} , power-save mode
MP8720	4.5	26	10	0.14	0.6	0.7	✓	-	✓	✓	-	QFN-16 (3x3)	Output discharge, adj. current limit, FCCM or PSM, over-current limit, latch-off reset
MP8772	3	17	12	0.1	0.6	0.7	✓	✓	✓	✓	-	QFN-16 (3x3)	Fast load transient response, SCP, UVP, OCP, and hiccup
MP8774	3	18	12	0.1	0.6	0.7	✓	✓	✓	✓	-	QFN-16 (3x3)	Wide V_{in} range supports 3.3V, 5V, and 12V inputs
N MP8774C	3	18	12	0.1	0.6	1.4	✓	✓	-	✓	-	QFN-16 (3x3)	FCCM version of the MP8774H
MP8774H	3	18	12	0.1	0.6	1.4	✓	✓	✓	✓	-	QFN-16 (3x3)	High frequency, wide V_{in} range supports 3.3V, 5V, and 12V inputs
MP8869S	2.85	18	12	0.42	0.6 to 1.108 (Adj)	0.5 to 1.25	✓	✓	✓	✓	-	QFN-14 (3x4)	V_{out} adj. up to 5.5V with FB pin, integrated telemetry, accurate V_{out}/I_{out} readback via I ² C, P2P with the MP8861/54
MP8719	4.5	26	12	0.135	0.6	0.5 / 0.7	✓	-	✓	✓	-	QFN-16 (3x3)	Output discharge, USM, buck converter with $\pm 1A$ LDO and buffered reference
S MP2421	3.6	24	20	0.2	0.4	0.65/0.8/1	✓	✓	✓	✓	-	TLGA-28 (3x4)	20A, selectable freq., differential remote sense for high output accuracy, 1% reference voltage accuracy
S MP2422	3.6	24	25	0.23	0.4	0.5/0.8/1	✓	✓	✓	✓	-	TLGA-36 (5x5)	25A, selectable freq., differential remote sense for high output accuracy, 1% reference voltage accuracy
S MP2422B	3.6	24	25	0.23	0.4	0.3/0.5/0.65/0.8/1	✓	✓	✓	✓	-	TLGA-36 (5x5)	Digital interface
S MP2423	3.6	24	30	0.23	0.4	0.5/0.8/1	✓	✓	✓	✓	-	TLGA-36 (5x5)	30A, selectable freq., differential remote sense for high output accuracy, 1% reference voltage accuracy
MPQ8636H-20	4.5	18	20	1	0.611	Prog	✓	✓	-	✓	✓	QFN-29 (5x4)	CCM, hiccup OVP
MP8792	2.7	16	12	0.65	0.6	0.6/0.8/1 (Selectable)	✓	✓	✓	✓	-	QFN-21 (3x4)	Differential V_{out} sense, adj. accurate current limit level, 0.5% FB, selectable PSM/FCCM, V_{out} tracking, pre-biased start-up
MP8794	2.7	16	20	0.65	0.6	0.6/0.8/1 (Selectable)	✓	✓	✓	✓	-	QFN-21 (3x4)	Adj. current limit, prog. frequency, differential V_{out} sense

Step-Down Converters (Buck)

Maximum Operating Input Voltage \leq 28V

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	I _Q (Typ) (μA)	V _{FB} (Typ) (V)	f _{SW} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Constant-On-Time (COT)	Industrial	Package	Notes
MP8795H	2.7	16	20	0.65	0.6	0.6/0.8/1 (Selectable)	✓	✓	✓	✓	-	QFN-21 (3x4)	FCCM, adj. current limit, prog. frequency, differential V _{OUT} sense
MP8796	4	16	30	0.7	0.6	Prog	✓	✓	✓	✓	-	TQFN25 (4x5)	Prog. current limit, scalable multi-phase operation, remote sense, hiccup or latch-off for OCP, OVP, and OTP, non-PMBus version of the MPQ8645P
MP8796B	4	16	30	2.5	0.6	Prog	✓	-	-	✓	-	TQFN-25 (4x5)	Digital interface
MPQ8633A-H	4	16	12	0.65	0.6	0.6/0.8/1	✓	✓	✓	✓	✓	QFN-21 (3x4)	Prog. current limit and freq., voltage tracking, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output cap., excellent load reg., non-latch OCP
MPQ8633B-H	4	16	20	0.65	0.6	0.6/0.8/1	✓	✓	✓	✓	✓	QFN-21 (3x4)	Prog. current limit and freq., voltage tracking, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output cap., excellent load reg., non-latch OCP
N MPQ8645	4	16	30	2.5	0.6	0.4/0.6/ 0.8/1	✓	-	✓	✓	✓	TQFN-25 (4x5)	Scalable, pre-biased start-up, true remote V _{OUT} sense, excellent load regulation, stable w/ zero-ESR output cap.
MP8638	4.5	16	12	0.1	0.62	0.7 to 1	✓	-	✓	✓	-	QFN-16 (3x3)	Prog. current limit and frequency, low I _Q output discharge
MP8639	4.5	16	6	0.105	0.62	0.75	✓	-	✓	✓	-	QFN-11 (2x2)	Low I _Q , prop. switching loss red., output discharge
MPQ8643	4	16	20	0.65	0.6	0.6/0.8/1	✓	✓	✓	✓	✓	QFN-21 (3x4)	Prog. current limit and freq., voltage tracking, prop. switching loss red., pre-biased start-up, stable w/ zero-ESR output cap., excellent load reg.

Step-Down Converters (Buck)

Maximum Operating Input Voltage < 100V

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	I _Q (Typ) (mA)	V _{FB} (Typ) (V)	f _{SW} (kHz)	Power Good	External Soft Start	Light-Load Efficiency	Sync Rectifier	Industrial	Package	Notes
S MP2462	4.2	34	2	0.055	0.6	800	-	-	✓	✓	-	TSOT23-6	Adj. output from 0.6V, ±1% FB accuracy, low quiescent current, output discharge, low-dropout mode
MP4410	4.5	36	0.1	0.02	1	Prog	✓	-	-	✓	-	QFN-10 (3x3)	Low I _Q
MP4568	4.5	45	0.1	0.02	1	Prog	-	✓	-	✓	✓	QFN-10 (3x3)	Prog. peak-current limit
MP4569	4.5	75	0.3	0.02	1	1000	✓	✓	-	✓	✓	QFN-10 (3x3), SOIC-8E	Integrated high-side/low-side
MP2420	4.5	75	0.3	0.02	1	Prog	✓	✓	-	✓	✓	TSSOP-16	Watchdog, step-down
MPQ2459	4.5	55	0.5	0.73	0.812	480	-	-	-	-	✓	TSOT23-6	Built-in power MOSFET
MPQ2456	4.5	50	0.5	0.73	0.85	1200	-	-	✓	-	✓	TSOT23-6	OCP
MP4566	4.5	36	0.6	0.035	1	1000	-	-	✓	-	-	QFN-8 (2x3)	-
MPQ2451	3.3	36	0.6	0.13	0.794	2000	-	-	✓	-	✓	TSOT23-6L QFN-6L	-
MP2454	3.3	36	0.6	0.06	0.8	2300	✓	✓	-	-	✓	QFN-10 (3x3)	External frequency sync
MP2457	5	36	0.6	0.065	0.8	2000	-	-	✓	✓	✓	TSOT23-6	-
MP2460	4.5	45	0.6	0.15	0.8	1600	-	-	✓	✓	-	TSOT23-6	LDO mode, 98% max duty

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Step-Down Converters (Buck) Maximum Operating Input Voltage < 100V

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	I _Q (Typ) (mA)	V _{FB} (Typ) (V)	f _{sw} (kHz)	Power Good	External Soft Start	Light-Load Efficiency	Sync Rectifier	Industrial	Package	Notes
MP4562	4.5	60	2	0.03	0.8	2500	-	✓	✓	✓	✓	TSOT23-8	Configurable frequency
MP9572	4.5	60	2	0.04	0.8	2200	✓	✓	-	✓	✓	QFN-12 (2.5x3)	-
MP4541	10	80	0.8	0.015	1	Prog	-	-	✓	✓	✓	SOIC-8EP	High efficiency at light loads
MP4581	10	100	0.8	0.015	1	Prog	-	-	✓	✓	✓	SOIC-8EP	High efficiency at light loads
S MP4582	4.5	100	2	0.008	0.8	400	✓	-	✓	✓	✓	QFN-19 (3x5)	Integrated MOSFET, low I _Q , high efficiency at full loads
S MP4583	4.5	100	3	0.008	0.8	400	✓	-	✓	✓	✓	QFN-19 (3x5)	Integrated MOSFET, low I _Q , high efficiency at full loads
MPQ4458	3.8	36	1	0.12	0.8	Prog	-	-	-	-	-	TQFN-10 (3x3)	Integrated HS-FET
MPQ4558	3.8	55	1	0.14	0.8	Prog	-	-	✓	-	✓	QFN-10 (3x3), SOIC-8E	Current mode control
MP4431 MPQ4431	3.3	36	1	0.01	0.8	Prog	✓	✓	✓	✓	✓	QFN-16 (3x4)	Selectable FCCM or AAM mode, prog. soft-start time, good EMI, low-dropout mode
MP2269	3.3	30	1	0.012	0.8	Prog	✓	✓	✓	✓	-	QFN-15 (2x3)	Current mode control, low I _Q , forced PWM or auto-PFM/PWM, low-dropout mode
MPQ4459	3.8	36	1.5	0.12	0.8	Prog	-	-	✓	-	✓	TQFN-10 (3x3)	Current mode control
MPQ2490	4.5	36	1.5	0.5	0.805	700	✓	✓	-	-	✓	SOIC-8	Prog. output current limit
MPQ4561	3.8	55	1.5	0.14	0.795	Prog	-	✓	✓	-	-	QFN-10 (3x3)	Integrated HS-FET
MP4425M MPQ4425M	4	36	1.5	0.5	0.2	2200	-	-	-	-	✓	QFN-13 (2.5x3)	PWM dimming and OCP/SCP protection, ext. freq. sync
MP9942/ MP9942A	4	36	2	0.5	0.792	410	✓	-	✓	✓	-	TSOT23-8	Consumer grade, ext. freq. sync
MP4420H MPQ4420H	4	36	2	0.5	0.792	410	✓	-	-	✓	✓	TSOT23-8	Ext. frequency sync
MPQ4560	3.8	55	2	0.14	0.797	Prog	-	-	✓	-	✓	QFN-10 (3x3), SOIC-8E	AEC-Q100 qualified
MP4432 MPQ4432	3.3	36	2.2	0.01	0.8	Prog	✓	✓	✓	✓	✓	QFN-16 (3x4)	Selectable FCCM or AAM mode, prog. soft-start time, good EMI, low-dropout mode
MPQ4460	3.8	36	2.5	0.12	0.8	Prog	-	-	✓	-	-	QFN-10 (3x3)	Prog. output current
MP2560	4.5	42	2.5	0.12	0.8	Prog	-	-	✓	-	-	QFN-10 (3x3), SOIC-8E	Current mode control
MP2565	4.5	50	2.5	0.12	0.8	Prog	-	-	✓	-	-	QFN-10 (3x3), SOIC-8E	Integrated HS-FET
MP2496	7	36	2.5	1.6	-	350/250/ 150	-	-	-	-	-	QFN-26 (4x4)	Int. smart USB charging port, auto-detect, cable compensation
MP2499A	5	36	3	0.7	0.792	Prog	-	-	✓	✓	-	QFN-13 (2.5x3)	Current mode control, ext. freq. sync, output line drop compensation
MP4423H MPQ4423H	4	36	3	0.5	0.79	410	✓	-	-	✓	✓	QFN-8 (3x3)	External frequency sync
MP9943/ MP9943A	4	36	3	0.5	0.79	410	✓	-	✓	✓	-	QFN-8 (3x3)	Consumer grade, ext. freq. sync
MP4433 MPQ4433	3.3	36	3	0.01	0.8	Prog	✓	✓	✓	✓	✓	QFN-16 (3x4)	Selectable FCCM or AAM mode, prog. soft-start time, good EMI, low-dropout mode
MP4570 MPQ4570	4.5	55	3	0.45	1	Prog	✓	✓	✓	✓	✓	TSSOP-20EP	External frequency sync
MP2263	3.3	30	3	0.012	0.8	350 to 2500 (Adj)	✓	✓	✓	✓	-	QFN-15 (2x3)	Current mode control, low I _Q , forced PWM or auto-PFM/PWM, low-dropout mode

Step-Down Converters (Buck)

Maximum Operating Input Voltage < 100V

	Part Number	V _{in} (Min) (V)	V _{in} (Max) (V)	I _{out} (Max) (A)	I _o (Typ) (mA)	V _{FB} (Typ) (V)	f _{sw} (kHz)	Power Good	External Soft Start	Light-Load Efficiency	Sync Rectifier	Industrial	Package	Notes
N	MP8883 MPQ8883	3.5	45	3	0.6	-	Prog	✓	-	✓	✓	✓	QFN-16 (3x3)	Current mode, I ² C, OTP, ext. freq. sync
	MP4462 MPQ4462	3.8	36	3.5	0.12	0.792	Prog	-	-	-	✓	✓	QFN-10 (3x3), SOIC-8E	AEC-Q100 qualified
	MP4473	4.5	36	3.5	0.5	0.815	Prog	✓	✓	✓	✓	✓	QFN-20 (3x4)	High frequency
	MP4430 MPQ4430	3.3	36	3.5	0.01	0.8	Prog	✓	✓	✓	✓	✓	QFN-16 (3x4)	Selectable FCCM or AAM mode, prog. soft-start time, good EMI, low-dropout mode
N	MP4423C MPQ4423C	4	36	6	0.75	0.792	420/2200	-	-	✓	✓	✓	QFN-16 (3x4)	Spread spectrum, PFM/PWM mode, ext. sync, output discharge
	MP4255 (Dual)	4	36	6 2x (3A)	0.3	0.4	250/420/ 1100/2100	-	-	✓	✓	✓	QFN-21 (4x5)	Dual-channel, spread spectrum, I ² C
	MP2491C	4	32	6	0.45	0.5	490	✓	-	✓	✓	-	QFN-13 (2.5x3)	Adjustable current limit, V _{out} scaling control
	MP2491N	4	32	6	0.185	0.5	540	✓	✓	✓	✓	-	QFN-13 (2.5x3)	High light-load efficiency
	MP8675	4.5	42	6	0.9	0.808	420	-	-	-	✓	-	SOIC-8E	Synchronizable gate driver, ext. freq. sync
N	MP8856 MPQ8856	4	36	5	0.4/ 0.2	-	450/1000	✓	-	-	✓	✓	QFN-16 (3x3)	140W, 100% duty cycle, I ² C
S	MP8857 MPQ8857	4	36	5	0.5/ 0.1	0.33/ 0.5/2	450/1000	✓	-	-	✓	✓	QFN-21 (4x4)	100% duty cycle, I ² C
S	MP8880A MPQ8880A	4	60	4.5	-	-	150 to 2200	✓	-	-	✓	-	QFN-20 (4x5)	Digital prog. sync, AEC-Q100 qualified

Step-Down Controllers

	Part Number	V _{in} (Min) (V)	V _{in} (Max) (V)	I _o (Typ) (mA)	V _{FB} (V)	f _{sw} (kHz)	Soft Start	Package	Notes
	MP2910	5	12	2.7 (I _{CC} UG and LG Open)	0.8	300	Int	SOIC-14, SOIC-8E	Sync PWM DC/DC linear, power good indicator for Intel, Grantsdale FSB_VTT power sequence
	MP2905	3	28	0.6	0.6	200 to 500 (Adj)	Ext	MSOP-10	Ideal for applications above 15A
	MP9928	4	60	0.75	0.8	Adj via Ext R _{FREQ}	Ext	TSSOP-20EP, QFN-20 (3x4)	Current mode, duty cycle up to 99.5%, prog. freq.
N	MP9929	7	100	0.55	0.8	100 to 1000 (Adj)	Ext	QFN-26 (4x6)	Adj. freq., 180° out-of-phase SYNCO, selectable cycle-by-cycle current limit, prog. CCM, AAM mode, and pulse-skip mode, low-dropout operation
S	MP9931	7	100	0.05	0.8	100 to 1000 (Adj)	Ext	QFN-23 (4x4)	COT control, strong driver ability, V _{OUT} is up to 80V, selectable USM/PSM/FCCM
	MP2908A	4	60	0.75	0.8	100 to 1000 (Adj)	Ext	TSSOP-20EP, QFN-20 (3x4)	Industrial grade, PG, prog. CCM, AAM mode, and pulse-skip mode

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Up Charge Pumps

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (A)	I_Q (Typ) (mA)	f_{SW} (kHz)	Industrial	Package	Notes
MP9361	2.8	5	0.11	2	1350	✓	TSOT23-6	Fixed $5V_{OUT}$, high performance, regulated, int. soft start, OCP, SCP, inrush current limit
MP9218	2.8	5	0.11	2	1350	-	QFN-6 (2x2)	Fixed $5V_{OUT}$, high performance, regulated

Step-Up Controllers

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (A)	f_{SW} (kHz)	I_Q (Typ) (mA)	V_{FB} (Typ) (V)	Soft Start	Package	Notes
MP3910	5	35	1	30 to 400 (Adj)	0.288	1.237	Ext	MSOP-10	Peak current mode boost PWM controller with prog. frequency, ext. SS, and light load
MP3910A	9	14	1	30 to 400 (Adj)	0.4	1.237	Ext	SOIC-8E	Peak current mode boost PWM controller with prog. frequency, ext. SS, and light load
MP6002	10	100	3	550	1	1.21	Int	SOIC-8E	Flyback/forward DC/DC converter, 30W, int. 150V power switch
MP6001	10	100	2	550	1	1.21	Int	SOIC-8E	Flyback/forward DC/DC converter, 15W, int. 150V power switch
MP6003	10	100	-	550	1	1.21	Int	SOIC-8E	Monolithic flyback/SEPIC DC/DC converter

Step-Up Converters (Boost)

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{SW} Limit (Typ) (A)	I_Q (Typ) (mA)	V_{OUT} Range (V)	f_{SW} (kHz)	Package	Notes
MP3439	2.7	5	3.5	0.023	5 to 5.5	2000	WLCSP-20 (1.75x2.1)	Dual-phase, ultra-small
S MP28600	0.4	5.5	1	0.0004	2.5 to 5.5	1000	SOT563	Ultra-low I_Q
MP3209	2.5	6	0.35	0.64	3 to 22	1400	TSOT23-5, UTQFN-8 (2x2)	Int. comp, tiny inductors and capacitors (+J168:J192) can be used
MP3217	2.5	6	0.5	0.46	V_{IN} to 36	670	TSOT23-6	Cycle-by-cycle OCP, UVLO, thermal shutdown, P2P with the MAX5025-5028
MP1400	2.7	7	0.6	0.2	-0.9 to -6	1500	CSP-8 (0.8x1.6)	Output adj. from -0.9V to -6V, very small size
MP5418	2.3	5	0.2	0.22	0 to V_{IN}	30 to 550	QFN-10 (1.8x1.4)	Dual output, negative charge pump, adj. regulator
MP3416	0.8	5.5	1	0.0085	1.8 to 5.5	1500	TSOT23-8, QFN-8 (1.5x2.2)	Output disconnect, down mode, sync
MP3120	0.8	5	1.2	0.47	2.5 to 5	1100	TSOT23-6	Output disconnect, LDO mode, sync
MP3430	2.7	5.5	1.2	0.3	2.7 to 90	1300	QFN-16 (3x3)	APD current monitoring (1:10 or 1:2 ratio) with 5% accuracy and 50ns response time, prog. APD current limit and protection, int. comp and SS
MP3410	1.8	6	1.3	0.36	2.5 to 6	550	TSOT23-5	Output disconnect, sync
MP3414	0.6	4	1.8	0.035	1.8 to 4	1000	TSOT23-8	Output disconnect, sync
MP1541	2.5	6	1.9	0.64	3 to 22	1300	TSOT23-5	Internal current limit
MP3438	2.7	16	2	0.3	2.7 to 16	1400	SOT583	COT control, internal soft start, selectable PSM/USM/FCCM, sync.
MP1542	2.5	22	2.6	0.7	3 to 22	700/1300	MSOP-8	Prog. soft start
MP3414A	1.8	5.5	3	0.022	1.908 to 5.5	1000	TSOT23-8	Wider input version of the MP3414, sync

Step-Up Converters (Boost)

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{SW} Limit (Typ) (A)	I_O (Typ) (mA)	V_{OUT} Range (V)	f_{SW} (kHz)	Package	Notes
MP3213	2.5	22	3.5	0.7	3 to 22	700/1300	MSOP-8E	Prog. soft start
MP1530	2.7	5.5	3.6	1.3	2.7 to 22	1400	QFN-16 (3x3), TSSOP16	Triple output charge pump, LDO for TFT bias
MPQ1530	2.7	5.5	3.6	1.3	2.7 to 22	1400	QFN-16 (3x3)	Triple output charge pump, LDO for TFT bias, industrial grade
MP3415	1.8	5.5	4.2	0.022	1.98 to 5.5	1000	QFN-12 (2x2)	Output disconnect, sync
MP3425	3.1	22	5	0.65	3.1 to 55	300 to 2000 (Prog)	QFN-14 (3x4)	Prog. UVLO and EN hysteresis, industrial grade
MP3421	1.9	5.5	5.5	0.043	2.5 to 5.5	600	QFN-14 (2x2)	Output disconnect, sync
MP3422	1.9	5.5	6.5	0.043	2.5 to 5.5	600	QFN-14 (3x4)	Output disconnect, sync
MP3426	3.2	22	8.5	0.65	3.2 to 35	300 to 2000 (Prog)	QFN-14 (3x4)	Prog. UVLO, soft start, UVLO hysteresis, industrial grade
MP3423	1.9	5.5	9	0.043	2.5 to 5.5	600	QFN-14 (2x2)	Output disconnect, sync
MP3424A	2	5.5	9.5	0.32	3 to 5.5	580	QFN-14 (2x2)	Prog. current, output disconnect, sync
MP3437	2.7	16	10	0.1	V_{IN} to 16	600	TSOT23-8, QFN-10 (2x2.5)	PSM, FCCM, and USM in light load
MP3432	2.7	13	10	0.51	V_{IN} to 16	600	QFN-13 (3x4)	Selectable PSM/USM/FCCM, prog. switching peak current limit, auto pass-through mode in PSM when $V_{IN} > V_{OUT}$, sync
MP3429	0.8	13	21.5	0.45	1 to 16	600	QFN-13 (3x4)	Selectable PSM/USM/FCCM, prog. UVLO and hysteresis, sync
MP3431	2.7	13	21.5	0.45	1 to 16	600	QFN-13 (3x4)	Selectable PSM/USM/FCCM, prog. input current limit, UVLO, and hysteresis, sync
S MP3433	2.8	20	20	0.35	2.8 to 22	700	QFN-16 (3x3)	Dynamic V_{OUT} control
MP3428A	3	20	25	0.65	3 to 22	600	QFN-22 (3x4)	Input disconnect, ext. soft start, prog. UVLO and hysteresis, sync

Step-Up Energy Storage (Dying Gasp)/Power Backup Management PMICs

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	V_{STORE} (Max) (V)	I_{LIMIT} Charging (A)	I_{LIMIT} Dumping (A)	I_O (Typ) (mA)	V_{FB} (V)	Package	Notes
MP5505E	2.7	7	30	0.54	6	2 (Max)	0.801/0.795	QFN-20 (3x4)	Input current limit, adj. dv/dt slew rate, reverse-current protection
MP5455	2.7	7	30	0.5	5	2 (Max)	0.79	QFN-20 (3x4)	For USB Type-C HDMI comm. interface reference design
MP5507E	2.7	7	30	0.5	5	2 (Max)	0.79	QFN-16 (2.5x3.2)	Bus PG indicator, adj. dv/dt slew rate for VB start-up, 1.2MHz buck release mode f_{SW} , smaller package version of the MP5505A
MP5512	4	18	40	0.96	5	1	0.8	QFN-28 (4x5)	Prog. storage and release voltage, hot-swap management unit for PCIe
MP5515	2.8	18	32	0.5 to 2	6.5	3 (Max)	0.8	QFN-30 (5x5)	Prog., high-efficiency, lossless energy storage and power backup management unit for SSD and HDD applications
N MP5516N	2.65	16	28	Adj	5	-	0.6/1.2	QFN-25 (4x4)	Power loss protection IC with e-fuse
N CD5519	2.65	16	36	0.075 to 0.7	2/3/ 4/5	-	0.6/1.2	QFN-25 (4x4)	Power loss protection IC with e-fuse
MP5520	2.7/2.7	16/5.7	36	0.05 to 0.7	1/3/ 5/7	-	0.8	QFN-37 (5x6)	Dual e-fuses and power-sharing function

SWITCHING REGULATORS | DC/DC POWER CONVERSION

Step-Up LNBs

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	Standard	I_{out} (Max) (A)	22kHz Tone Signal Generated	Package	Notes
MP8124	8	14	DiSEqC™ 1.x	0.5	Ext	QFN-14 (2x3)	Converter with int. switch, low-noise LDO output, line drop compensation, selectable V_{out} comp., adj. SS output
MP8128	8	14	DiSEqC™ 1.x and DiSEqC™ 2.x	1	Selectable Int or Ext	QFN-20 (3x3)	I ² C, low-noise LDO output, selectable V_{out}

Buck-Boost

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{sw} Limit (Typ) (A)	I_a (Typ) (mA)	V_{FB} (V)	f_{sw} (kHz)	Sync	Package	Notes
MP8860	2.8	22	1	1	-	500	✓	QFN-16 (3x3)	1A I_{out} , 4-switch converter, I ² C, 1V to 20.47V V_{out} range
MP8862	2.8	22	2	1	-	500	✓	QFN-16 (3x3)	2A I_{out} , 4-switch converter, I ² C, 1V to 20.47V V_{out} range
MP2155	2	5.5	2.2	0.08	0.496	1000	✓	QFN-10 (3x3)	Power-save mode, load disconnect, 1.5V to 5V V_{out} range
MP28160	2.5	5.5	2.5	0.22	-	1800	✓	CSP-12 (1.4x1.8)	0.5A I_{out} converter, fixed 3.3V V_{out}
MP28163	2	5.5	2.9	0.07	0.496	1100	✓	QFN-10 (3x3)	Power-save mode, load disconnect, 1.5V to 5V V_{out} range
MP28167-A	2.8	22	3	1	1	500/750 (Selectable)	✓	QFN-16 (3x3)	3A I_{out} , 4-switch integrated converter, 1V to 20.47V V_{out} range with FB pin, I ² C
N MP28167-B	2.8	22	3	1	1	500/750/1000/1250 (Selectable)	✓	QFN-16 (3x3)	3A I_{out} , 4-switch, int. converter, 1V to 20.47V V_{out} range with FB pin, I ² C
MP28167	2.8	22	3	1	-	500	✓	QFN-16 (3x3)	3A I_{out} , 4-switch converter, fixed 5V V_{out}
MP8859	2.8	22	3	1	-	500	✓	QFN-16 (3x3)	3A I_{out} , 4-switch converter, I ² C, 1V to 20.47V V_{out} range
MP28162	1.2	5.5	1.5	0.025	0.5	2000	✓	WLCSP-15 (1.3x2.1)	Ultra-small
MP28164	1.2	5.5	4.2	0.025	0.5	2000	✓	QFN-11 (2x3)	Power-save mode, load disconnect
MP4245	4	36	5	0.18	0.1/0.4/0.72/1.6	250/350/420 (Selectable)	✓	QFN-21 (4x5)	36V, 4-switch USB PD solution converter, spread spec. sel., I ² C and 2-time prog. memory
MP2980	4	24	Prog	0.07/0.055	Prog	200/300/400/600 (Selectable)	✓	QFN-32 (4x4)	4-switch controller, I ² C, 3V to 20V V_{out} range
MP2984	5	36	Prog	0.07/0.055	Prog	200/300/400/600 (Selectable)	✓	QFN-32 (4x4)	USB Type-C PD controller, I ² C, <50mA step current limit adj. via IPWM pin, 3V to 20V V_{out} range
MP4247 (Hybrid)	3.6	36	5	0.775/0.13	0.33/0.5/2	280/420/600	✓	QFN-20 (3x5)	36V, 100W, int. low-side memory MOSFETs, I ² C
N MP4248 (Hybrid)	3.6	36	5	0.775/0.13	0.33/0.5/2	280/420/580 (Selectable)	✓	QFN-20 (3x5)	36V, 140W, int. low-side memory MOSFETs, I ² C, high-side current sense, configurable input UVLO
MP28167-N	2.8	22	3	1	1	500/750/1000/1250 (Selectable)	✓	QFN-16 (3x3)	3A I_{out} , 4-switch, int. buck-boost converter, PG indication
N MP4246	4	22	9/13.2	0.9/0.13	0.33/0.5/2	280/420/600/1000 (Selectable)	✓	QFN-19 (4x5)	6A I_{out} , 4-switch integrated converter, 1V to 22V V_{out} range, I ² C
S MP4235	3	36	9/13.2	0.9/0.13	0.33/0.5/2	280/420/600/1000 (Selectable)	✓	QFN-19 (4x5)	6A I_{out} , 4-switch integrated converter, 1V to 24V V_{out} range, I ² C

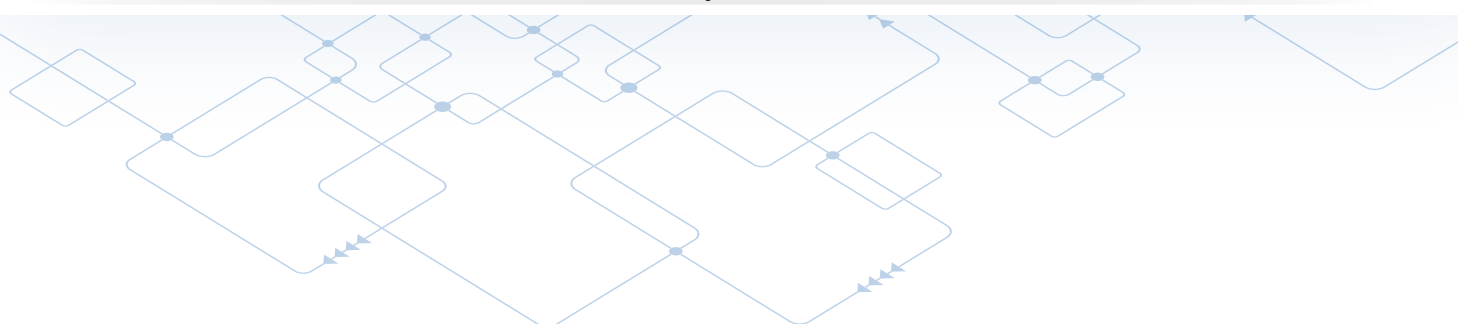
LDOs | DC/DC POWER CONVERSION

LDOs

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{out} (mA)	I_o (Typ) (mA)	Load Regulation (%)	PSRR at 1kHz (dB)	V_{FB} (Typ) (V)	Dropout Voltage (mV)	Package	Notes
MP2000	1.35	6	150	65	0.001	50	0.5	250 (I_o : 100mA) 300 (I_o : 150mA)	TSOT23-5	Low-voltage input (1.35V to 6V)
MP8801	2.7	6.5	150	125	0.001	70	1.22	150 (I_o : 150mA)	TSOT23-5	Low noise, excellent for RF applications, low cost
MP8802	2.7	6.5	250	125	0.001	70	1.22	230 (I_o : 250mA)	TSOT23-5	Excellent for RF applications, low cost
MP20056	2.5	5.5	250	150	0.003	63	0.8	100 (I_o : 250mA)	QFN-8 (2x2), TSOT23-5	Fixed output, current limiting, thermal protection
MP20041	2.5	6	300 (2x)	114	0.003	65	-	75 (I_o : 100mA) 220 (I_o : 300mA)	QFN-8 (2x2)	Dual fixed output, P2P with the RT9012
MP2002A	1.35	6.5	500	100	0.001	26	0.5	290 (I_o : 500mA)	QFN-8 (2x3)	Adj. V_{out} , PG and EN pins
MP8904	2.5	6.5	500	100	0.001	26	0.496	300 (I_o : 500mA)	QFN-8 (2x3)	Power good output, industrial grade
MP20045	2.5	5.5	1000	110	0.0003	56	1.5	140 (I_o : 1000mA)	QFN-8 (3x3), SOIC-8E	High input/output current with fast response, fixed and adj. +0.252 V_{out}
MP20051	2.5	5.5	1000	110	0.0003	63	0.8	140 (I_o : 1000mA)	QFN-8 (3x3), SOIC-8E (4.9x6)	-
MP20046	2.7	5.5	2000	75	0.0003	70	-	210 (I_o : 2000mA)	SOIC-8E, QFN-10 (3x3)	High input/output current with fast response
MP20073	1.3	6	2000	-	-	-	-	-	MSOP-8E	DDR2/3 termination regulator
MP20075	1.3	3.6	3000	-	-	-	-	-	MSOP-8E	DDR2/3/3L/4 termination regulator, $V_{DRV} = 3.3V$

High-Performance Low-Dropout Linear Regulators

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{out} (mA)	I_o (Typ) (mA)	Load Regulation (%)	PSRR at 1kHz (dB)	V_{FB} (Typ) (V)	Dropout Voltage (mV)	Package	Notes
MP2016	4	42	30	12	0.003	50	1.23	700 (I_o : 30mA)	QFN-8 (2x3), TSOT23-5	Ideal for automotive applications
MP2015A	2.5	24	150	3.3	0.005	41	1.215	700 (I_o : 150mA)	TSOT23-4, QFN-6 (2x2), QFN-8 (3x3)	EN pin
MP2019	3	40	300	10	0.04	45	1.25	420 (I_o : 300mA)	SOIC-8EP	Industrial grade
MP2014	3	40	500	10	0.03	45	-	750 (I_o : 500mA)	TO252-5	Low I_o
MP2018	3	16	500	10	0.03	45	-	750 (I_o : 500mA)	TO252-5	Low I_o , fixed V_{out} , power good
MP2005	1	5.5	800	100	0.0005	65	0.5	70 (I_o : 800mA)	QFN-8 (2x3)	Fast transient, 48dB PSRR at 1MHz



SUPERVISORY | DC/DC POWER CONVERSION

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_O (Typ) (μA)	Threshold Accuracy (%)	Reset Threshold Accuracy (%)	Delay Time (ms)	Package	Notes
MP6400	1.8	6	1.6	1	1	2.1 to 10000	QFN-10 (3x3)	Power-save mode, load disconnect
MPQ6411	4.8	5.2	-	-	-	-	QFN-10 (3x3)	Power-save mode, load disconnect
MP6420	3.6	18	3	0.5	-	3000 to 4600	TSOT23-8	Battery protection IC for two 3-series cell Li-ion, int. protective MOSFET, PTC interface
MP6412	2.2	12	1	-	-	-	QFN-10 (1.4x1.8)	Ultra-low I_O load switch controller, reset timer

MOSFET DRIVERS | DC/DC POWER CONVERSION

Half-Bridge Gate Drivers

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Bootstrap Supply (Max) (V)	Peak Pull-Up Current (A)	Peak Pull-Down Current (A)	Rise Time (ns)	Fall Time (ns)	Turn-On Delay (ns)	Turn-Off Delay (ns)	Package	Notes
MP18024	9	16	100	3	4.5	15	9	20	20	SOIC-8E	4A, high frequency
MP1906	10	16	80	0.35	1	50	30	80	80	SOIC-8	High performance
MP1907	4.5	18	100	2.5	3.5	12	9	18	20	QFN-10 (3x3)	Overlap protection and OTP function for half-bridge driver
MP1907A	4.5	18	100	2.5	3.5	12	9	18	20	QFN-10 (3x3)	No overlap protection function for independent MOSFET drive logic
N MP1907B	4.5	18	100	2.5	3.5	12	9	18	20	QFN-10 (3x3)	No OTP function for power supply applications with additional OTP
N MP1907L	4.5	18	100	2.5	3.5	12	9	18	20	QFN-10 (3x3)	No OTP and overlap protection for power supply applications with independent MOSFET drive logic and additional OTP
MP18021A	9	18	100	1.5	2.5	12	9	16	16	SOIC-8E, QFN-8 (3x3)	High frequency, industrial grade
MP18021	9	18	100	1.5	2.5	12	9	16	16	SOIC-8EP, QFN-8 (3x3)	High frequency, N-channel MOSFET with 1ns matching delay
MP1909	4.5	12	50	2	4	10	6	110	30	SOT583	Low I_O , supports 100% duty, 30V, high frequency
MP1911	2.5	16	-	-	-	30	30	270	350	SOT583	1A, H-bridge solenoid valve driver
P MP1916	4.5	5.5	95	1.7	5.2	10	3	17	17	WLCSP-12L	5A GaN driver
MP1917	8	17	115	2.6	4.5	15	15	20	20	QFN-8 (4x4)	105V, 4A, high-frequency
MP1917A	8	15	115	2.6	4.5	15	15	20	20	QFN-10 (4x4)	100V, 4A, high-frequency
MPQ1918	3.6	5.5	100	1.6	5	5	3	20	20	FCQFN-14 (3x3)	5A, automotive GaN driver
MP1918	3.6	5.5	100	1.6	5	5	3	20	20	FCQFN-14 (3x3)	5A, industrial GaN Driver

PMICS & MULTIPLE OUTPUTS | DC/DC POWER CONVERSION

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	V_{OUT} (V)	V_{FB} (V)	I_{OUT} (A)	f_{SW} (kHz)	Package	Notes
MP28300	2	5.5	Buck: 0.8/1/1.2/1.5/1.8/2.5/3.3 LDO: 1.3/1.8/3.3	-	0.3	1500	QFN-12 (2x2)	Ultra-low 500nA I_q , 300mA buck + 100mA LDO, prog. V_{OUT} via CTRL, COT, PG
MP28310	2	5.5	Buck: 1.2/1.5/1.8/2.5/2.8/3/3.3 LDO: 1.8/2.8/3	-	0.3	1500	CSP-12 (1.2x1.6)	Ultra-low 500nA I_q , ultra-small package, 300mA buck + 100mA LDO, prog. V_{OUT} via CTRL, COT, PG
MP28301	2	5.5	Buck: 0.8/1/1.2/1.5/1.8/2.5/3.3 LDO: 1.2/2.5/3	-	0.7	1500	QFN-12 (2x2)	Ultra-low 500nA I_q , 700mA buck + 100mA LDO, prog. V_{OUT} via CTRL, COT, PG
MP5408	6	36	5.1/5.17/5.3	-	USB 1: 3 USB 2: 3	Prog	QFN-26 (5x5)	Integrated, smart, dual USB charging ports, auto-detection, supports USB Type-C 5V at 3A DFP mode
MP5403	2.7	6	Ch 1: 0.9/1.1/2.5/2.85 Ch 2: 0.9/1.2/1.8/2.5	0.6	Ch 1: 3.5 Ch 2: 2.5	1500	UTQFN-20 (2.5x3)	Configurable mini PMIC, two buck converters, one load switch (3A)
MP5403B	2.7	6	0.6 to 6	0.6	Ch 1: 5 Ch 2: 4	1500	UTQFN-20 (2.5x3)	Mini PMIC, dual peak buck converter, one load switch (2A)
MP5416	2.8	5.5	Prog	Prog	Prog Buck 1: 4.5 Buck 2: 2.5 Buck 3: 4 Buck 4: 2	Prog	QFN-28 (4x4)	I ² C, memory, prog. V_{OUT} /fSW/ISW via I ² C/memory, config. mini PMIC, four buck converters (4.5A/4A/2.5A/2A), four 300mA LDOs, one 10mA RTC LDO
MP5418	2.3	5	V_{OUT1} : 0 to $-V_{IN}$ V_{OUT2} : 0 to -CTL	-	0.2	30 to 550	QFN-10 (1.4x1.8)	Negative charge pump, adj. negative regulator
MP5470	4	16	0.55 to 7	Prog	Prog Buck 1: 3 Buck 2: 3 Buck 3: 2 Buck 4: 2	800	QFN-22 (3x4)	I ² C, four buck converters, parallel mode for higher current, one GPIO pin
MP5470B	4	16	0.55 to 7 or $V_{IN} \times D_{MAX}$ (if $V_{IN} < 7V$)	V_{FB1} : 0.7 V_{FB2} : 0.78 V_{FB3} : 0.78 V_{FB4} : 0.78 V_{FB5} : 0.78	Buck 1: 3 Buck 2: 3 Buck 3: 2 Buck 4: 2	500 to 1600 (Prog)	QFN-22 (3x4)	Four buck converters (3A/3A/2A/2A), flexible system settings via the I ² C and memory
MP5475	3	16	Prog	V_{FB1} : 1.1 V_{FB2} : 1.1 V_{FB3} : 1.1 V_{FB4} : 1.8	Prog Buck 1: 6 Buck 2: 6 Buck 3: 6 Buck 4: 6	500 to 2000	QFN-35 (5x5)	Fully integrated, 12V, I ² C, telemetry, flexible system configuration
MP5417	2.8	5.5	Prog	Prog	Prog Buck 1: 4 Buck 2: 2 Buck 3: 4 Buck 4: 2	1200 to 1800	QFN-28 (4x4)	I ² C, memory, prog. V_{OUT} /fSW/ISW via I ² C/memory, four buck converters, two LDOs, two GPIO pins
MP5413	2.7	5.5	Prog	Prog	Prog Buck 1: 3 Buck 2: 2 Buck 3: 3 Buck 4: 2	1200 to 1800	WLCSP-38 (2.7x3.1)	Ultra-small package, sleep mode control, I ² C, memory, prog. V_{OUT} /fSW/ISW via I ² C/memory, four buck converters, two LDOs, two GPIO pins
MP5461	V_{IN1} : 4.2 V_{IN2} : 2.5	V_{IN1} : 22 V_{IN2} : 5.5	3.3	-	2.5	1800	CSP-12 (1.4x1.8)	Dual-input 0-ring switches, power path selection input/indication, fast SCP on OR _{OUT} , fast reverse block within 2 μ s on OR _{OUT} , output OVP for buck-boost

PMICS & MULTIPLE OUTPUTS | DC/DC POWER CONVERSION

	Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	V_{OUT} (V)	V_{FB} (V)	I_{OUT} (A)	f_{SW} (kHz)	Package	Notes
N	MP5423	25	100	Buck: 14 LDO 1/2: 5/3.3	-	0.3	200	SOIC-8EP (4.9x6)	300mA buck converter, two LDOs (100mA/40mA)
N	MP5424	2.7	5.5	Buck 1/2/3/4: 0.4 to 3.58 [Adj] LDO 2/4/5: 0.65 to 0.3587 [Adj]	$V_{FB1/2/3/4}$: 0.4 to 3.58 [Adj]	Prog Buck 1: 2 Buck 2: 2.5 Buck 3: 4.5 Buck 4: 4.5	1100 to 2750 (Prog)	QFN-26 (3.5x4.5)	Prog. V_{OUT} via I ² C/memory, config. mini PMIC, three LDOs (0.3A), one load switch (3A), POR output
N	MP8855	2.7	22	Buck-Boost: 0.6 to 22 Buck: 0.6 to V_{IN} Boost (3x3): 3.7 to 22 Boost (3x4): 2.7 to 22	Prog	Prog Buck 1: 5 Buck 2: 5	1000	QFN-21 (4x4)	Five-topology selection via the PSEL pin, one buck-boost, two bucks, one interleaving buck, one interleaving boost, one buck + one boost, memory-prog. parameters
	MPQ7920-AEC1	2.7	5.5	0.4 to 3.58 or V_{IN}	V_{FB1} : 1.375 V_{FB2} : 1.35 V_{FB3} : 1.375 V_{FB4} : 0.675	Prog Buck 1: 2 Buck 2: 2.5 Buck 3: 4.5 Buck 4: 4.5	1800 to 2400	QFN-26 (3.5x4.5)	RTC-dedicated LDO+, four low-noise LDOs, I ² C two-time prog. MTP
N	MP5479	2.7	5.5	Buck 1/2/3: 0.4V to 3.58V/12.5mV Step, or 0.4V to 2.2V/7.4mV Step Buck 4: 0.4V to 3.58V/12.5mV Step LDO: 0.65V to 3.58V/12.5mV Step	V_{FB1} : 1.375 V_{FB2} : 1.35 V_{FB3} : 1.375 V_{FB4} : 0.675	Prog Buck 1: 2 Buck 2: 2.5 Buck 3: 4.5 Buck 4: 4.5	1100 to 2750 (Prog)	QFN-26 (3.5x4.5)	Five LDOs, flexible system settings via I ² C and MTP
	MP8891	4	16	0.55 to 7	0.55 to 1.82 (Prog)	Prog Buck 1: 3 Buck 2: 3 Buck 3: 2 Buck 4: 2	500k to 1.6M via I ² C	QFN-22 (3x4)	I ² C, parallel mode for higher current, one GPIO pin
	MP8892	4	16	0.55 to 7	0.55 to 1.82 (Prog)	Prog Buck 1: 4.5 Buck 2: 2 Buck 3: 2 Buck 4: 1	500k to 1.6M via I ² C	QFN-22 (3x4)	I ² C, parallel mode for higher current, one GPIO pin
N	MP5493	5	36	0.8 to 0.9 x V_{IN}	V_{FB1} : 0.8 V_{FB2} : 1.2	Dual: 2A	550	TSOT23-8	Dual step-down converter for PLC mode; one chip to replace buck, boost, and LDO
S	MP5415	2.8	5.5	Buck 1: 2A DC/DC Converter Buck 2: 2A DC/DC Converter Buck 3: 2A DC/DC Converter Buck 4: 2A DC/DC Converter	Prog	Buck 1: 2A Buck 2: 2A Buck 3: 2A Buck 4: 2A	Prog	QFN-28 (4x4)	I ² C, memory, prog. $V_{OUT}/f_{SW}/I_{SW}$ via I ² C/memory, config. mini PMIC, four 300mA LDOs, one 10mA RTC LDO
N	MPQ5476	5.75	15	Buck 1/2/3/4: 0.5 to 2.75	0.5 to 1.3	Prog Buck 1: 6A Buck 2: 6A Buck 3: 6A Buck 4: 6A	500, 750, 1000, 1250 (Prog)	QFN-35 (5x5)	Fully integrated, 12V, I ² C telemetry, flexible system configurations
N	MP5431	2.8	5.5	Buck 1/2/3: Prog LDO: V_{OUT1V} (0.8 to 1.2), $V_{OUT1.8V}$ (1.7 to 2)	V_{FB1} : 1.1 V_{FB2} : 1.1 V_{FB3} : 1.8	Prog Buck 1: 5A Buck 2: 5A Buck 3: 2A	750 to 2000 (Prog)	TQFN-28 (3x4)	DDR5 client DIMM PMIC with digital interface
N	MP5431C	2.8	5.5	Buck 1/2/3: Prog LDO: V_{OUT1V} (0.8 to 1.2), $V_{OUT1.8V}$ (1.7 to 2)	V_{FB1} : 1.1 V_{FB2} : 1.1 V_{FB3} : 1.8	Prog Buck 1: 6A Buck 2: 6A Buck 3: 2A	750 to 2000 (Prog)	TQFN-28 (3x4)	DDR5 client over-clocking DIMM PMIC with I ² C/I ² C interface

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (V)	V _{FB} (V)	I _{OUT} (A)	f _{SW} (kHz)	Package	Notes
N MP5472	3	16	Buck: 0.3 to 3.8 LDO: 3.6V Max	V _{FB1P} : 0.8 V _{FB1P} : 0.8	Buck 1: 6A Buck 2: 6A	500, 750, 1000, 1250 (Prog)	QFN-26 (4x4)	Fully integrated 12V, I ² C, flexible system configurations
S MP5477	4	16	Prog Buck 1/2/3/4/5: Up to 2.047 in 1mV Steps LDO: Up to 3.3 in 2mV Steps	V _{FB1} : 1.2 V _{FB2} : 0.9 V _{FB3} : 1.8 V _{FB4} : 0.5 V _{FB5} : 1.05	Buck 1: 6A Buck 2: 2A Buck 3: 2A Buck 4: 3A Buck 5: 3A	Prog	QFN-41 (5x5)	One LDO, flexible system setting via I ² C
N MPQ8894	3	16	Buck A/B/C: 0.8 to 1.435, or 0.6 to 1.235 Buck D: 1.5 to 2.135, or 2.2 to 2.835 LDO: V _{OUT_1V} (0.9 to 1.2), V _{OUT_1.8V} (1.7 to 1.9)	V _{FB1} : 1.1 V _{FB2} : 1.1 V _{FB3} : 1.1 V _{FB4} : 1.8	Buck 1: 4A Buck 2: 4A Buck 3: 4A Buck 4: 4A LDO_1V: 0.05 LDO_1.8V: 0.05	500 to 1250 (Prog)	FCQFN-35L (5x5)	12V, I ² C/I ² C interface for DDR5
N MPQ8895	3	16	Buck A/B/C: 0.8 to 1.435, or 0.6 to 1.235 Buck D: 1.5 to 2.135, or 2.2 to 2.835 LDO: V _{OUT_1V} (0.9 to 1.2), V _{OUT_1.8V} (1.7 to 1.9)	V _{FB1} : 1.1 V _{FB2} : 1.1 V _{FB3} : 1.1 V _{FB4} : 1.8	Buck 1: 6A Buck 2: 6A Buck 3: 6A Buck 4: 6A LDO_1V: 0.05 LDO_1.8V: 0.05	500 to 1250 (Prog)	FCQFN-35L (5x5)	12V, I ² C/I ² C interface for DDR5
N MPQ8895F	3	16	Buck A/B/C: 0.8 to 1.435, or 0.6 to 1.235 Buck D: 1.5 to 2.135, or 2.2 to 2.835 LDO: V _{OUT_1V} (0.9 to 1.2), V _{OUT_1.8V} (1.7 to 1.9)	V _{FB1} : 1.1 V _{FB2} : 1.1 V _{FB3} : 1.1 V _{FB4} : 1.8	Buck 1: 6A Buck 2: 6A Buck 3: 6A Buck 4: 6A LDO_1V: 0.05 LDO_1.8V: 0.05	500 to 1250 (Prog)	FCQFN-35L (5x5)	12V, I ² C/I ² C interface for DDR5

FLYBACK | DC/DC POWER CONVERSION

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	V _{FB} (V)	f _{SW} (MHz)	Package	Notes
MP6004	14	80	2.05	0.38	1.99	10 to 200	QFN-14 (3x3)	13W, integrated 180V power switch
MP6005	8	80	0.8V x 160mV / R _{SENSE}	0.45	2	250	MSOP-10	Flyback/forward controller with PSR or SSR, 2A gate, 0.8A sync drivers
MP6001	10	100	2	1	1.21	-	SOIC-8E	15W, integrated 150V power switch
MP6002	10	100	4	1	1.21	-	SOIC-8E	30W, integrated 150V power switch

FULLY INTEGRATED PoE PD SOLUTIONS | DC/DC POWER CONVERSION

Part Number	Pass Device	Current Limit (mA)	Thermal Protection	IEEE Detection & Classification	Package	Notes
MP8004	100V, 1Ω DMOS	420	✓	802.3af	QFN-20 (4x6)	13W PoE PD interface and PWM converter
MP8007	100V, 0.48Ω DMOS	840	✓	802.3af	QFN-28 (4x5)	13W primary-side regulated flyback without optocoupler feedback, 200kHz f_{sw}
MP8008	100V, 0.48Ω DMOS	840	✓	802.3af/at	QFN-28 (4x5)	25.5W PoE PD interface and peak-current mode flyback controller
MP8009	100V, 0.48Ω DMOS	840	✓	802.3af/at	QFN-28 (4x5)	Fully integrated, 802.3af/at, PoE PD interface with flyback/forward controller, 4.7ms soft-start time
MP8009A	100V, 0.48Ω DMOS	840	✓	802.3af/at	QFN-28 (4x5)	Fully integrated, 802.3af/at, PoE PD interface with flyback/forward controller, 32ms soft-start time
MP8007H	100V, 0.48Ω DMOS	840	✓	802.3af	QFN-28 (4x5)	13W primary-side regulated flyback without optocoupler feedback, 300kHz f_{sw}
MP8030	100V, 0.35Ω DMOS	Prog	✓	802.3af/at/bt	QFN-32 (5x6)	High efficiency, supports forward/flyback topology
MP8017	100V, 0.5Ω DMOS	420	✓	802.3af	QFN-19 (3x4)	802.3af, PoE PD solution with PSR or SSR, active-clamp flyback converter

PoE PSE CONTROLLERS | DC/DC POWER CONVERSION

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{out}	I_{lim}	PoE Standards Supported	FET	MPS Method	Pair Control	Operating Temperature Range (°C)	Number of PSE Ports	Package	Notes
MP3924	44	57	Prog	Prog	802.3af/at	-	DC Disconnect	-	-40 to +125	4	QFN-32 (5x5)	-

DC/DC CONTROLLERS FOR PoE | DC/DC POWER CONVERSION

Part Number	V_{in} (Min) (V)	V_{in} (Max) (V)	I_{sw} Limit (Typ) (A)	I_d (Typ) (mA)	V_{FB} (Typ) (V)	f_{sw} (MHz)	Package	Notes
MP3900	8.6	12	$0.2V / R_{SENSE}$	0.18	0.816	330	MSOP-8	Boost controller, 10V gate driver
MP6001	10	100	2	-	-	55 to 550	SOIC-8E	15W, integrated 150V power switch
MP6002	10	100	4	1	1.21	55 to 550	SOIC-8E	30W, integrated 150V power switch
MP6004	14	80	2.05	0.38	1.99	10 to 200	QFN-14 (3x3)	13W, integrated 180V power switch
MP6005	8	80	$0.8V \times 160mV / R_{SENSE}$	0.45	2	250	MSOP-10	Flyback/forward controller with PSR or SSR, 2A gate, 0.8A sync drivers
MP3910	5	35	$0.185V / R_{SENSE}$	0.288	1.237	-	MSOP-10	Peak current mode boost PWM controller with prog. frequency, external SS, and light load
MP3910A	9	14	$0.185V / R_{SENSE}$	0.4	1.237	-	SOIC-8	Peak current mode boost PWM controller with prog. frequency, external SS and light load

PoE PD IDENTITY | DC/DC POWER CONVERSION

Part Number	Pass Device	Current Limit (mA)	Thermal Protection	IEEE Detection & Classification	Package	Notes
MP8003A	100V, 0.48Ω DMOS	840	✓	802.3af/at	QFN-10 (3x3)	25.5W PoE PD controller
MP8001	100V, 0.8Ω DMOS	420	✓	802.3af	SOIC-8	15W PoE PD controller
MP8020	100V, 0.35Ω DMOS	Prog	✓	802.3af/at/bt	QFN-18 (3x5)	71W PoE PD controller

DIGITAL REGULATORS | DC/DC POWER CONVERSION

Synchronous Step-Down Converters with I²C/Digital Interface

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (mA)	I _O (Typ) (mA)	V _{FB} (Typ) (V)	f _{SW} (MHz)	Power Good	External Soft Start	Light-Load Efficiency	Sync Rectification	Constant-On-Time (COT)	Package	Notes
MP8833A	2.7	5.5	1.5	1	2.5	Prog	-	✓	-	-	-	QFN-16 (2x3)	I ² C, TEC current monitor, external sync function
N MP8853	2.85	18	4	0.42	0.6 to 1.108 (Adj)	500 to 1250	✓	✓	✓	✓	✓	QFN-14 (3x3)	I ² C prog. FB range, int. telemetry, accurate output voltage/current, readback via I ² C
MP8861	2.85	18	6	0.42	0.6 to 1.108 (Adj)	500 to 1250	✓	✓	✓	✓	✓	QFN-14 (3x4)	I ² C prog. FB range, int. telemetry, accurate output voltage/current, readback via I ² C
MP8864	4.5	21	4	0.5	0.6 to 1.87V	600 to 1600	✓	✓	✓	✓	-	QFN-15 (3x3)	Prog. V _{OUT} , power-save mode
MP8847	2.7	6	6	0.3	0.6	850 to 2200	✓	-	✓	✓	-	QFN-14 (2x3)	Prog. V _{OUT} , power-save mode
MP8865	4.5	21	6	0.5	0.6 to 1.87V	600 to 1600	✓	✓	✓	✓	-	QFN-15 (3x3)	Prog. V _{OUT} , power-save mode
MP8867	4.5	17	8	0.56	0.6	500 to 1500	✓	✓	✓	✓	-	QFN-14 (3x4)	Prog. V _{OUT} , power-save mode
MP8868	4.5	17	10	0.56	0.6	500 to 1500	✓	✓	✓	✓	-	QFN-14 (3x4)	Prog. V _{OUT} , power-save mode
MP8796B	4	16	30	2.5	0.6	Prog	✓	-	-	✓	✓	TQFN-25 (4x5)	Digital interface
MP8869N	2.85	18	12	0.42	0.6 to 1.108 (Adj)	500 to 1250	✓	✓	✓	✓	✓	QFN-14 (3x4)	I ² C interface; high-efficiency, wide-input, synchronous buck converter with integrated telemetry
MP8870	3	18	15	0.06	Option 1: 0.3 to 1.536 Option 2: 0.6 to 3.072	Prog	✓	✓	✓	✓	✓	QFN-21 (3x4)	I ² C, high performance, fast transient response; adjustable frequency, mode, current limit, and I ² C address; differential V _{OUT} remote sense
S MP2422B	3.6	24	25	0.23	Option 1: 0.3 to 1.536 Option 2: 0.6 to 3.072	Prog	✓	✓	✓	✓	✓	TLGA-36 (5x5)	I ² C version of the MP2422

Synchronous Buck-Boost Converters with I²C/Digital Interface

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{SW} Limit (Typ) (A)	I _O (Typ) (mA)	V _{FB} (Typ) (V)	f _{SW} (MHz)	Sync	Package	Notes
MP8859	2.8	22	3	1	-	500	✓	QFN-16 (3x3)	3A I _{OUT} , 4-switch, I ² C, 1V to 20.47V V _{OUT} range
MP8860	2.8	22	1	1	-	500	✓	QFN-16 (3x3)	1A I _{OUT} , 4-switch, I ² C, 1V to 20.47V V _{OUT} range
MP8862	2.8	22	2	1	-	500	✓	QFN-16 (3x3)	2A I _{OUT} , 4-switch, I ² C, 1V to 20.47V V _{OUT} range
MP28167-A	2.8	22	3	1	1	500/750 (Selectable)	✓	QFN-16 (3x3)	3A I _{OUT} , 4-switch, int. converter, 1V to 20.47V V _{OUT} range with FB pin, I ² C
MP4247 (hybrid)	3.6	36	5	0.775/0.13	0.33/0.5/2	280/420/600	✓	QFN-20 (3x5)	100W, low-side, int. memory MOSFETs, I ² C
N MP4248 (Hybrid)	3.6	36	5	0.775/0.13	0.33/0.5/2	280/420/580 (Selectable)	✓	QFN-20 (3x5)	140W, int. low-side memory MOSFETs, I ² C, high-side current sense, config. input UVLO
N MP28167-B	2.8	22	3	1	1	500/750/1000/1250 (Selectable)	✓	QFN-16 (3x3)	3A I _{OUT} , 4-switch, int. converter, 1V to 20.47V V _{OUT} range with FB pin, I ² C

ISOLATED PRODUCTS/HIGH POWER | DC/DC POWER CONVERSION

Isolated Gate Drivers

Part Number	Isolation Rating (kV _{RMS})	Configuration Type	# of Channels	CMTI (Min) (kV/µs)	Power-Switch Type	Peak Source Current (A)		U/VLO (V)	Input VDDI (V)	Driver Output (Max) (V)	Package	Notes
						3/5/8/10/12	2.8 to 5.5					
MP18831	2.5/3/5	Dual-Input Half-Bridge	2	100	SiC FET, IGBT, MOSFET, GaN FET	4	4	3/5/8/10/12	2.8 to 5.5	30	SOIC-16 NB, SOIC-16 WB, LGA-13,	UL1577/VDE-0884-17/CQC certified
N MPQ18831	2.5/3/5	Dual-Input Half-Bridge	2	150	SiC FET, IGBT, MOSFET, GaN FET	4	8	5/8/10/12/15	2.8 to 5.5	30	SOIC-16 NB, SOIC-16 WB, SOIC-16-14 WB (3.3mm Creepage), LGA-13	UL1577/VDE-0884-17/CQC certified, AEC-Q100
MP18851	2.5/3/5	Dual Input, Independent Dual-Channel	2	100	SiC FET, IGBT, MOSFET, GaN FET	4	4	3/5/8/10/12	2.8 to 5.5	30	SOIC-16 NB, SOIC-16 WB, LGA-13,	UL1577/VDE-0884-17/CQC certified
N MPQ18851	2.5/3/5	Dual Input, Independent Dual-Channel	2	150	SiC FET, IGBT, MOSFET, GaN FET	4	8	5/8/12	2.8 to 5.5	30	SOIC-16 NB, SOIC-16 WB, SOIC-16-14 WB (3.3mm Creepage), LGA-13	UL1577/VDE-0884-17/CQC certified, AEC-Q100
MP18871	2.5/3/5	PWM Input Half-Bridge	2	100	SiC FET, IGBT, MOSFET, GaN FET	4	4	3/5/8/10/12	2.8 to 5.5	30	SOIC-16 NB, SOIC-16 WB, LGA-13,	UL1577/VDE-0884-17/CQC certified
N MPQ18871	2.5/3/5	PWM Input Half-Bridge	2	150	SiC FET, IGBT, MOSFET, GaN FET	4	8	5/8/12	2.8 to 5.5	30	SOIC-16 NB, SOIC-16 WB, SOIC-16-14 WB (3.3mm Creepage), LGA-13	UL1577/VDE-0884-17/CQC certified, AEC-Q100
N MP18811	3/5	Single-Channel Gate Driver	1	100	SiC FET, IGBT, MOSFET, GaN FET	4	4	3/5/8/10/12	2.8 to 5.5	30	SOIC-8 NB	UL1577, VDE-0884/CQC certified, 8-pin, single output with split output
N MPQ18811	3/5	Single-Channel Gate Driver	1	100	SiC FET, IGBT, MOSFET, GaN FET	6	10	5/8/10/12/15	2.8 to 5.5	30	SOIC-8 WB, SOIC-8 NB	UL1577, VDE-0884/CQC certified, 8-pin, single output with Miller clamp, AEC-Q100
P MPQ18815	5	Single-Channel Gate Driver	1	100	SiC FET, IGBT, MOSFET	4	4	12/15/17	2.8 to 5.5	30	SOIC-16 WB	Desat detection, active miller clamp, soft turn-off, external buffer, AEC-Q100, UL1577 and VDE-0884 certified

Isolated Power Supplies

Part Number	Device Type	Output Power (W)	Output Power (W)			Integrated Transformer	Package Size: WxL (mm)	Isolation Rating (kV _{DC})	# of Outputs	Package	Notes
			V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Typ) (V)						
P MPQ6007-AEC1	Converter	10	4.5	42	12 to 24	-	3x3	5+ (Dependent on Transformer Design)	1, Multiple Possible	QFN-11	Automotive, active clamp, primary-side regulated flyback
P MPDQ11510GRDE-171P2-AEC1	Converter	15 to 50	20	1200	12 to 24	-	10x10	5+ (Dependent on Transformer Design)	1, Multiple Possible	QFN-22	Automotive flyback converter with integrated 1700V SiC FET and 5mm creepage
P MPDQ11510GY-171P2-AEC1	Converter	15 to 50	20	1200	12 to 24	-	7.85x7.5	5+ (Dependent on Transformer Design)	1, Multiple Possible	SOIC-28 WB	Automotive flyback converter with integrated 1700V SiC FET and 7.5mm creepage
N MPQ18913	Converter	6	5	35	20	-	2x2.5	5+ (Dependent on Transformer Design)	1, Multiple Possible	QFN-10	AEC-Q100, 5MHz high-frequency SiC/IGBT bias supply, automatic resonant frequency detection

Isolated Power Supplies

	Part Number	Device Type	Output Power (W)			Integrated Transformer	Package Size: WxL (mm)	Isolation Rating (kV _{ins})	# of Outputs	Package	Notes	
			V _{in} (Min) (V)	V _{in} (Max) (V)	V _{out} (Typ) (V)							
N	MID3W2424	Isolated Module	3	5	35	24	✓	10x10 x4.8	3	1	LGA-6	24V _{in} , 3W, isolated power module for SiC bias supplies
S	MID6W2424	Isolated Module	6	5	35	24	✓	10x10 x4.8	3	1	LGA-6	24V _{in} , 6W, isolated power module for SiC bias supplies
N	MID1W2424AGYE	Isolated Module	1.5	5	35	24	✓	10.3x10.3 x2.5	5	1	SOIC-16 WB	24V _{in} , automotive, 1.5W, isolated power module for SiC bias supplies
N	MIE1W0505BGY	Isolated Module	1	2.6	5.5	5/3.3	✓	10.3x10.3 x2.5	3/5	1	SOIC-16 WB	5V _{in} , 1W, automotive, isolated power module
N	MIE1W0505BGLVH	Isolated Module	1	2.6	5.5	5/3.3	✓	4x5x1.18	3	1	LGA-12	5V _{in} , tiny package
	MID1W0505AGY	Isolated Module	1	4.5	5.5	5	✓	10.3x10.3 x2.5	1.5/3	1	SOIC-16 WB	5V _{in} /5V _{out}
	MID06W0505AGY	Isolated Module	0.6	4.5	5.5	5	✓	10.3x10.3 x2.5	1.5/3	1	SOIC-16 WB	5V _{in} /5V _{out}
	MID06W0503AGY	Isolated Module	0.6	4.5	5.5	3.3	✓	10.3x10.3 x2.5	1.5/3	1	SOIC-16 WB	5V _{in} /3.3V _{out}
	MID04W0503AGY	Isolated Module	0.4	4.5	5.5	3.3	✓	10.3x10.3 x2.5	1.5/3	1	SOIC-16 WB	5V _{in} /3.3V _{out}
	MID02W0303AGY	Isolated Module	0.2	3	3.6	3.3	✓	10.3x10.3 x2.5	1.5/3	1	SOIC-16 WB	3.3V _{in} /3.3V _{out}

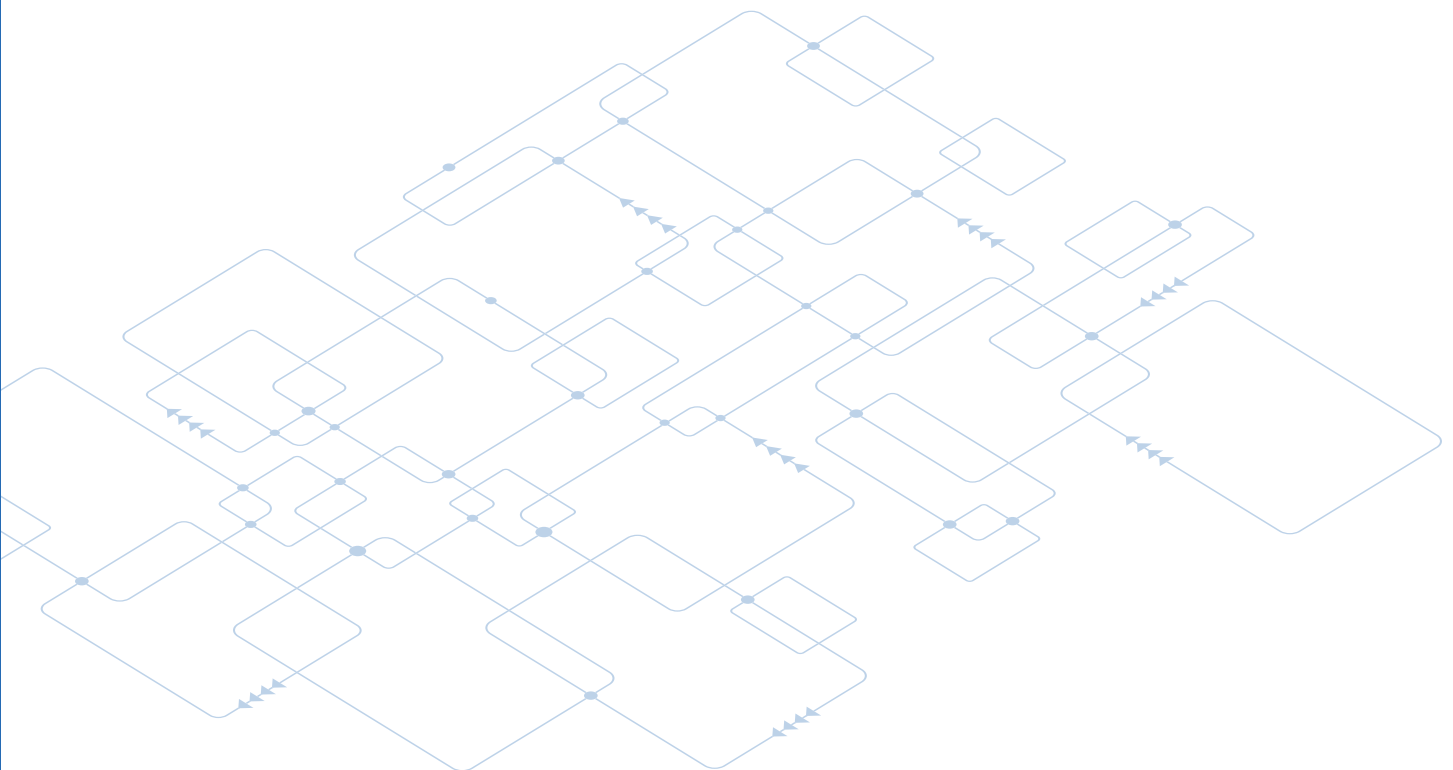
Digital Isolators

	Part Number	Total Channel Count	# of Channels (For ward/Reverse)	Isolation Rating (kV _{RMS})	Data Rate	Propagation Delay (Typ) (ns)	Min CMTI (kV/μs)	Surge Voltage Level (V _{PK})	V _{in} (Min) (V)	V _{in} (Min) (V)	Package	Notes
S	MP27911	2	1/1	5	150	13	100	8000	2.5	5.5	SOIC-8 WB	High power, for industrial and medical markets
S	MP27920	2	2/0	5	150	13	100	8000	2.5	5.5	SOIC-8 WB	High power, for industrial and medical markets
S	MP27411	2	1/1	3.75	150	13	100	5300	2.5	5.5	SOIC-8 NB	High power, for industrial and medical markets
S	MP27420	2	2/0	3.75	150	13	100	5300	2.5	5.5	SOIC-8 NB	High power, for industrial and medical markets
N	MPQ27911	2	1/1	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-8 WB, SOIC-8 NB	Automotive
S	MPQ27920	2	2/0	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-8 WB, SOIC-8 NB	Automotive
S	MPQ27922	4	2/2	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	Automotive
N	MPQ27931	4	3/1	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	Automotive
S	MPQ27940	4	4/0	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	Automotive
S	MPQ27933	6	3/3	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	Automotive
N	MPQ27942	6	4/2	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	Automotive
N	MPQ27951	6	5/1	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	Automotive

ISOLATED PRODUCTS/HIGH POWER | DC/DC POWER CONVERSION

Digital Isolators

	Part Number	Total Channel Count	# of Channels (Forward/Reverse)	Isolation Rating (kV _{RMS})	Data Rate	Propagation Delay (Typ) (ns)	Min. CMTI (kV/µs)	Surge Voltage Level (V _{PK})	V _{IK} (Min) (V)	V _{IK} (Min) (V)	Package	Notes
S	MPQ27960	6	6/0	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	Automotive
N	MP27922	4	2/2	5	150	14	100	7071	3	5.5	SOIC-16 WB	High power, for industrial and medical markets
N	MP27931	4	3/1	5	150	14	100	7071	3	5.5	SOIC-16 WB	High power, for industrial and medical markets
N	MP27940	4	4/0	5	150	14	100	7071	3	5.5	SOIC-16 WB	High power, for industrial and medical markets
N	MP27933	6	3/3	5	150	14	100	7071	3	5.5	SOIC-16 WB	High power, for industrial and medical markets
N	MP27942	6	4/2	5	150	14	100	7071	3	5.5	SOIC-16 WB	High power, for industrial and medical markets
N	MP27960	6	6/0	5	150	14	100	7071	3	5.5	SOIC-16 WB	High power, for industrial and medical markets
N	MP27622	4	2/2	5	150	14	100	7071	3	5.5	SOIC-16 WB	For general consumer and power meter markets
N	MP27631	4	3/1	5	150	14	100	7071	3	5.5	SOIC-16 WB	For general consumer and power meter markets
N	MP27640	4	4/0	5	150	14	100	7071	3	5.5	SOIC-16 WB	For general consumer and power meter markets
N	MP27633	6	3/3	5	150	14	100	7071	3	5.5	SOIC-16 WB	For general consumer and power meter markets
N	MP27642	6	4/2	5	150	14	100	7071	3	5.5	SOIC-16 WB	For general consumer and power meter markets
N	MP27660	6	6/0	5	150	14	100	7071	3	5.5	SOIC-16 WB	For general consumer and power meter markets
S	MP27220	2	1/1 (Bidirectional)	3.75	2	16	100	5000	3	5.5	SOIC-8 NB	For general consumer and power meter markets



SINGLE-OUTPUT STEP-DOWN MODULES WITH INTEGRATED INDUCTOR

| POWER MODULES

Synchronous

 $V_{IN} \text{ Max} \leq 7V$

Part Number	I_{OUT} (A)	V_{IN} (V)	Light-Load Efficiency	Power Good	TC/Digital Interface	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
MPM3804	0.6	2.3 to 5.5	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	Adjustable V_{OUT} , excellent load and line regulation
MPM3804-12	0.6	2.3 to 5.5	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	1.2V fixed V_{OUT} , ultra-small QFN package
MPM3804-18	0.6	2.3 to 5.5	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	1.8V fixed V_{OUT} , ultra-small QFN package
MPM3804-25	0.6	2.3 to 5.5	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	2.5V fixed V_{OUT} , ultra-small QFN package
MPM3804-33	0.6	2.3 to 5.5	✓	✓	-	Internal	✓	QFN-10 (2x2x0.9)	3.3V fixed V_{OUT} , ultra-small QFN package
MPM3805	0.6	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , adjustable V_{OUT}
MPM3805-12	0.6	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 1.2V fixed V_{OUT}
MPM3805-18	0.6	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 1.8V fixed V_{OUT}
MPM3805-25	0.6	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 2.5V fixed V_{OUT}
MPM3805-33	0.6	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 3.3V fixed V_{OUT}
MPM3811	1	2.3 to 5.5	✓	-	-	Internal	✓	QFN-10 (2x2x1.6)	Peak 1.2A, ultra-small QFN package, excellent load and line regulation
MPM3814C	1	2.75 to 6	-	✓	-	Internal	✓	LGA-14 (2.5x2.5x1.2)	High efficiency, ultra-small package, ultra-low noise FCCM, adjustable from 0.6V
MPM3810	1.2	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , adjustable V_{OUT}
MPM3810-12	1.2	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 1.2V fixed V_{OUT}
MPM3810-18	1.2	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 1.8V fixed V_{OUT}
MPM3810-25	1.2	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 2.5V fixed V_{OUT}
MPM3810-33	1.2	2.5 to 6	✓	✓	-	Internal	✓	QFN-12 (3x2.5x0.9)	Ultra-low I_O , 3.3V fixed V_{OUT}
MPM3822C	2	2.7 to 6	-	✓	-	Internal	✓	QFN-18 (2.5x3.5x1.6)	Ultra-low ripple, adjustable output from 0.6V, FCCM
MPM3824C	2	2.75 to 6	-	✓	-	Internal	✓	LGA-14 (2.5x2.5x1.2)	High efficiency, ultra-small package, ultra-low noise FCCM, adjustable from 0.6V
MPM3820	2	2.7 to 6	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.6V, ultra-low I_O , high light-load efficiency
MPM3830	3	2.7 to 6	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	High light-load efficiency
MPM3833C	3	2.7 to 6	-	✓	-	Internal	✓	QFN-18 (2.5x3.5x1.6)	Ultra-low ripple, adjustable output from 0.6V, FCCM
MPM3834C	3	2.75 to 6	-	✓	-	Internal	✓	LGA-14 (2.5x2.5x1.2)	High efficiency, ultra-small package, ultra-low noise FCCM, adjustable from 0.6V
MPM3840	4	2.8 to 5.5	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Light-load efficiency, 100% duty cycle, low I_O

SINGLE-OUTPUT STEP-DOWN MODULES WITH INTEGRATED INDUCTOR

| POWER MODULES

Synchronous ($V_{IN} \text{ Max} \leq 7V$)

Part Number	I_{OUT} (A)	V_{IN} (V)	Light-Load Efficiency	Power Good	I ² C/Digital Interface	Soft-Start	Protection Features (OCP/SCP/UV/LO/OTP)	Package	Notes
MPM3860	6	2.75 to 7	-	✓	-	Int/Ext	✓	QFN-24 (4x6x1.6)	Adjustable output from 0.6V, FCCM
MPM3864	6	2.75 to 7	-	✓	-	External	✓	EC LGA-19 (3x3)	Adjustable output from 0.6V, FCCM
N MPM3816C	1	2.7 to 5.5	-	✓	-	Internal	✓	EC LGA-10 (2x2.2x1.2)	Adjustable output from 0.4V, FCCM
N MPM3826C	2	2.7 to 5.5	-	✓	-	Internal	✓	EC LGA-10 (2x2.2x1.2)	Adjustable output from 0.4V, FCCM
N MPM3836C	3	2.7 to 5.5	-	✓	-	Internal	✓	EC LGA-10 (2x2.2x1.2)	Adjustable output from 0.4V, FCCM
N MPM3846C	4	2.7 to 5.5	-	✓	-	Internal	✓	EC LGA-10 (2x2.2x1.2)	Adjustable output from 0.4V, FCCM
S MPM3812C	1	2.3 to 5.5	-	-	-	Internal	✓	EC LGA-6 (1.5x2x1)	Adjustable output from 0.6V, ultra-small
S MPM3895-25	25	3 to 7	-	✓	✓	Internal	✓	EC LGA-29 (5x6x2.9)	Adjustable output from 0.5V to 4V, ultra-fast transient response
P MPM3896-20	20	2.8 to 6	-	✓	✓	Internal	✓	EC LGA-29 (5x6x2.3)	Adjustable output from 0.3V, ultra-fast transient response
P MPM3896-30	30	2.8 to 6	-	✓	✓	Internal	✓	EC LGA-29 (5x6x2.9)	Adjustable output from 0.3V, ultra-fast transient response

Synchronous ($7V < V_{IN} \text{ Max} \leq 24V$)

Part Number	I_{OUT} (A)	V_{IN} (V)	Light-Load Efficiency	Power Good	I ² C/Digital Interface	Soft-Start	Protection Features (OCP/SCP/UV/LO/OTP)	Package	Notes
MPM3606	0.6	4.5 to 21	✓	-	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.8V, fast transient response
MPM3606A	0.6	4.5 to 21	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	PSM at light loads, adjustable output from 0.8V
MPM3612	1	3 to 22	✓	✓	-	Internal	✓	LGA (3x3x2)	Ultra-low 5 μ A I_o
MPM3612-33	1	3 to 22	✓	✓	-	Internal	✓	LGA (3x3x2)	Ultra-low 5 μ A I_o
MPM3610	1.2	4.5 to 21	✓	-	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.8V, low I_o
MPM3610A	1.2	4.5 to 21	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.8V, low I_o , power good
MPM3620	2	4.5 to 24	✓	-	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.8V
MPM3620A	2	4.5 to 24	✓	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.8V
MPM3632C	3	4 to 18	-	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Adjustable output from 0.8V, FCCM
MPM3632S	3	4 to 18	-	✓	-	Internal	✓	EC LGA-10 (3x3x1.45)	Ultra-low profile, small package, FCCM, adjustable output from 0.8V
MPM3650	6	2.75 to 17	-	✓	-	Int/Ext	✓	QFN-24 (4x6x1.6)	Adjustable output from 0.6V, high efficiency, ultra-thin
MPM3650C	6	2.75 to 17	-	✓	-	Int/Ext	✓	QFN-24 (4x6x1.6)	FCCM, adjustable output from 0.6V, high efficiency, ultra-thin
MPM3683-7	8	2.7 to 16	✓	✓	-	Internal	✓	QFN-28 (7x7x4)	Peak 10A, ultra-low ripple, ultra-fast transient response
MPM3683-10	10	2.7 to 16	✓	✓	✓	Internal	✓	LGA-29 (7x7x4.4)	-
MPM3695-10	10	3.3 to 14	-	✓	✓	Internal	✓	LGA (8x8x2)	0.5V to 5V output, parallelable up to 60A peak, ultra-thin
MPM3683-20	20	2.7 to 16	-	✓	-	External	✓	LGA-29 (7x7x4.4)	Ultra-fast transient response

Synchronous $[7V < V_{IN} \text{ Max} \leq 24V]$

Part Number	I_{OUT} (A)	V_{IN} (V)	Light-Load Efficiency	Power Good	I ² C/Digital Interface	Soft Start	Protection Features (OCP/SCP/UVL/OTP)	Package	Notes
MPM3695-25	20	3 to 16	-	✓	✓	Internal	✓	QFN-59 (10x12x4)	Peak 25A, 0.5V to 5.5V output, parallelable up to 50A peak
MPM3690-20B	26	3.2 to 16	-	✓	-	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient response
MPM3690-30B	36	3.2 to 16	-	✓	-	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient response
MPM3690-50B	50	3.2 to 16	-	✓	-	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient response
MPM3690-50D	50	3 to 16	-	✓	✓	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient response
MPM3695-100	100	3.2 to 16	-	✓	✓	Internal	✓	BGA (15x30x5.18)	Ultra-fast transient response, low ripple, parallelable up to 800A
N MPM3698	120A	4.5 to 16	-	-	✓	Internal	✓	BGA (15x30x5.18)	Ultra-fast transient response, low ripple, parallelable with the MPM3699
N MPM3699	160A	4.5 to 16	-	-	✓	Internal	✓	BGA (15x30x5.18)	Ultra-fast transient response, low ripple, parallelable with the MPM3698
P MPM3690S-15	15	3 to 16	-	-	✓	Internal	✓	EC LGA (5x6x2.9)	Adjustable output from 0.35V to 5.5V, ultra-fast transient response
N MPM3695-20	25	3 to 16	-	✓	✓	Internal	✓	EC LGA-32 (5x6x4.4)	0.5V to 5.5V V_{OUT} range, ultra-fast transient response

Synchronous $[24V < V_{IN} \text{ Max} \leq 36V]$

Part Number	I_{OUT} (A)	V_{IN} (V)	Light-Load Efficiency	Power Good	I ² C/Digital Interface	Soft Start	Protection Features (OCP/SCP/UVL/OTP)	Package	Notes
MPM3630	3	18	-	✓	-	Internal	✓	QFN-20 (3x5x1.6)	Synchronous step-down regulator with integrated inductor
MPM3506A	0.6	4.5 to 36	-	✓	-	Internal	✓	QFN-19 (3x5x1.6)	Adjustable output from 0.8V
MPM3509	0.9	4 to 36	-	-	-	Internal	✓	QFN-17 (3x5x1.6)	Adjustable output from 0.8V
MPM3510A	1.2	4.5 to 36	-	✓	-	Internal	✓	QFN-19 (3x5x1.6)	Adjustable output from 0.8V
MPM3515	1.5	4 to 36	-	-	-	Internal	✓	QFN-17 (3x5x1.6)	Adjustable output from 0.8V
MPM3550E	5	4 to 36	-	✓	-	Internal	✓	LGA-18 (12x12x4.2)	Metal can, ultra-low EMI, adjustable output from 1V to 12V

Synchronous $[V_{IN} \text{ Max} > 36V]$

Part Number	I_{OUT} (A)	V_{IN} (V)	Light-Load Efficiency	Power Good	I ² C/Digital Interface	Soft Start	Protection Features (OCP/SCP/UVL/OTP)	Package	Notes
MPM3593	3	3.5 to 45	✓	✓	✓	Internal	✓	QFN-41 (6x8x1.6)	High efficiency, OTP
MPM3530	3	4.5 to 55	✓	✓	-	External	✓	QFN-44 (12x10x4)	Continuous output, prog. f_{sw} with ext. synchronous function
P MPM3519	10	3.3 to 36	-	✓	✓	Internal	✓	EC LGA-29 (7x7x4.4)	Low EMI

MULTIPLE-OUTPUT STEP-DOWN MODULES WITH INTEGRATED INDUCTOR | POWER MODULES

Synchronous

Part Number	I_{OUT} (A)	# of Outputs	V_{IN} (V)	Light-Load Efficiency	Power Good	PC/Digital Interface	Soft Start	Protection Features (OC/PS/SCP/UVLO/OVP)	Package	Notes
MPM38111	Dual 1A	2	2.7 to 6	✓	-	-	Internal	✓	QFN-14 (4x4x1.6)	Ultra-low I_o
MPM38222	Dual 2A	2	2.7 to 6	✓	-	-	Internal	✓	QFN-14 (4x4x1.6)	Ultra-low I_o
N MPM3596	Dual 3A	2	3.5 to 45	-	-	✓	Internal	✓	QFN-45 (10x10x4)	Single 6A I_{OUT} , parallelable up to 36A
MPM54304	Quad (3A, 3A, 2A, 2A)	4	3 to 16	-	✓	✓	Internal	✓	LGA-33 (7x7x2)	MTP-programmable
MPM54504	Quad 5A	4	3 to 16	-	✓	-	Int/Ext	✓	BGA (9x15x5)	Ultra-fast transient response, low ripple
MPM81204	Quad (12A, 12A, 5A, 5A)	4	4 to 16	-	✓	-	Internal	✓	BGA (9.5x16x4.98)	Ultra-fast transient response, low ripple
MPM3690-20A	Dual 13A	2	3.2 to 16	-	✓	-	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient response
MPM3690-30A	Dual 18A	2	3.2 to 16	-	✓	-	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient response
MPM3690-50A	Dual 25A	2	3.2 to 16	-	✓	-	Int/Ext	✓	BGA (16x16x5.18)	Ultra-fast transient response
MPM82504	Quad 25A	4	3 to 16	-	✓	✓	Internal	✓	BGA (15x30x5.18)	Ultra-fast transient response, low ripple, parallelable up to 800A
MPM54322	Dual 3A	2	3 to 16	✓	✓	✓	Int/Ext	✓	EC LGA (5x5.5x1.85)	Ultra-fast transient response, ultra-low noise output
N MPM54522	Dual 6A	2	3 to 16	✓	✓	✓	Int/Ext	✓	EC LGA (5x6.5x2.76)	Ultra-fast transient response, ultra-low noise output
MPM54524	Quad 5A	4	4 to 16	-	✓	✓	Int/Ext	✓	EC LGA (8x8x2.9)	Ultra-fast transient response
N MPM54532	Dual 6A	2	3.3 to 16	✓	✓	✓	Int/Ext	✓	EC LGA (5x5.5x1.85)	Ultra-fast transient response, ultra-low noise output
P MPM3599	Dual 12A	2	6 to 45	-	✓	✓	Internal	✓	BGA (15x30x5.18)	Ultra-fast transient response, low ripple
MPM54313	Triple 3A	3	4 to 16	-	✓	✓	Int/Ext	✓	BGA (8x9x2.58)	Ultra-low noise and ripple, ideal for optical port power

mEZ POWER MODULES | POWER MODULES

Boost Boost (V_{IN} Max < 6V)

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_o (μA)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OC/PS/SCP/UVLO/OVP)	Package	Notes
mEZD41501A-A	1	2.7 to 4.2	5	-	-	-	Int	OTP	SiP-6 (27x20)	600kHz, high efficiency
mEZD41502A-A	2	2.7 to 4.2	5	-	-	-	Int	OTP	SiP-6 (27x20)	High efficiency
mEZD41503A-A	3	2.7 to 4.2	5	-	-	-	Int	OTP	SiP-6 (27x20)	High efficiency

Boost Boost (V_{IN} Max ≥ 6V)

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_o (μA)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OC/PS/SCP/UVLO/OVP)	Package	Notes
mEZD41501A-B	1	2.7 to 10	12	-	-	-	Int	OTP	SiP-6 (27x20)	600kHz, high efficiency
mEZD41501A-C	1	2.7 to 13	15	-	-	-	Int	OTP	SiP-6 (27x20)	600kHz, high efficiency
mEZD41502A-B	2	2.7 to 10	12	-	-	-	Int	OTP	SiP-6 (27x20)	600kHz, high efficiency
mEZD41502A-C	2	3.4 to 13	15	-	-	-	Int	OTP	SiP-6 (27x20)	600kHz, high efficiency
mEZD41503A-B	3	2.7 to 10	12	-	-	-	Int	OTP	SiP-6 (27x20)	600kHz, high efficiency

Buck Buck ($V_{IN} \text{ Max} \leq 24V$)

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_O (μ A)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UVP/LO/OTP)	Package	Notes
mEZD71201A-A	1	4.5 to 24	1	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-B	1	4.5 to 24	1.2	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-C	1	4.5 to 24	1.5	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-D	1	4.5 to 24	1.8	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-E	1	4.5 to 24	2.5	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-F	1	4.5 to 24	3.3	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71201A-G	1	6.5 to 24	5	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71202A-A	2	4.5 to 24	1	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71202A-B	2	4.5 to 24	1.2	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71202A-C	2	4.5 to 24	1.5	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71202A-D	2	4.5 to 24	1.8	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71202A-E	2	4.5 to 24	2.5	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71202A-F	2	4.5 to 24	3.3	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71202A-G	2	6.5 to 24	5	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71203A-A	3	5 to 16	1	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71203A-B	3	5 to 16	1.2	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71203A-C	3	5 to 16	1.5	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71203A-D	3	5 to 16	1.8	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71203A-E	3	5 to 16	2.5	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71203A-F	3	5 to 16	3.3	-	-	-	Int	OCP, OTP, OVP/UVP, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{SW}
mEZD71210A-A	10	4.5 to 17	1	✓	✓	✓	Int	OCP, OTP, SCP	SiP-10 (27x20)	400kHz f_{SW}

mEZ POWER MODULES | POWER MODULES

Buck Buck ($24V < V_{IN} \text{ Max} \leq 36V$)

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_o (µA)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UVLO/OTP)	Package	Notes
mEZD72401A-A	1	4.5 to 36	1	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-B	1	4.5 to 36	1.2	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-C	1	4.5 to 36	1.5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-D	1	4.5 to 36	1.8	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-E	1	4.5 to 36	2.5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-F	1	4.5 to 36	3.3	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-G	1	4.5 to 36	5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72401A-H	1	6.5 to 36	12	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72402A-A	2	4.5 to 36	1	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72402A-B	2	4.5 to 36	1.2	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72402A-C	2	4.5 to 36	1.5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72402A-D	2	4.5 to 36	1.8	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72402A-E	2	4.5 to 36	2.5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72402A-F	2	4.5 to 36	3.3	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZD72402A-G	2	6.5 to 36	5	-	-	-	Int	OCP, OTP, OVP/UV, SCP with Hiccup	SiP-3 (10x20)	400kHz f_{sw}
mEZS91202A	2.5	7 to 36	5	-	-	-	Int	OCP, OTP	SiP-4 (13x45)	USB charger, efficiency up to 95%
mEZDPD3603A-0001	3	4.5 to 36	3.3	-	-	✓	Int	OTP, SCP	SiP-12 (23x16)	Prog. DC/DC power supply
mEZDPD3603AS	3	4.5 to 36	0.6 to 12	-	✓	✓	Int	OTP, SCP	DIP (16x23)	Prog. DC/DC power supply with digital interface
mEZDPD4506A-0001	6	4 to 45	3.3	-	-	✓	Int	OCP, OTP, OVP/UV, SCP	DIP (18.8x18.8x8.54)	Prog. DC/DC power supply
mEZDPD1620A-0001	20	4 to 16	1.8	-	-	✓	Int	OCP, OTP, OVP/UV, SCP	DIP (16x23x14.14)	Prog. DC/DC power supply
mEZDPD4506AS-0001	6	4 to 45	3.3	-	-	✓	Int	OCP, OTP, OVP/UV, SCP	LGA (10x10x4.4)	Prog. DC/DC power supply
mEZDPD1620AS-0001	20	4 to 16	1.8	-	-	✓	Int	OCP, OTP, OVP/UV, SCP	QFN-59 (10x12x4)	Prog. DC/DC power supply

Buck

Buck (V_{IN} Max > 36V)

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_o (μ A)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UV/LD/OTP)	Package	Notes
mEZD74800A-A	0.3	4.5 to 75	3.3	-	-	-	Int	OCP, OTP, SCP with Hiccup	SiP-3 (10x20)	Power supply
mEZD74800A-B	0.3	4.5 to 75	5	-	-	-	Int	OCP, OTP, SCP with Hiccup	SiP-3 (10x20)	Power supply

PoE

Part Number	I_{OUT} (A)	V_{IN} (V)	V_{OUT} (V)	I_o (μ A)	Light-Load Efficiency	Power Good	Soft Start	Protection Features (OCP/SCP/UV/LD/OTP)	Package	Notes
mEZS84801A	1	37 to 57	12	-	-	✓	Int	OCP, OTP, OVP	SiP-20 (45x39)	12W, IEEE 802.3af-compliant, PoE powered device

STEP-UP & BUCK-BOOST MODULES WITH INTEGRATED INDUCTOR | POWER MODULES

Synchronous

(V_{IN} Max \leq 6V)

Part Number	Converter Type	I_{OUT} (A)	V_{IN} (V)	I_o (mA)	Power Good	Digital I ² C Interface	Soft Start	Protection Features (OCP/SCP/UV/LD/OTP)	Package	Notes
MPM4710	Buck-Boost	1	1.8 to 5.5	0.029	-	-	Int	✓	EC LGA (2.5x2.5x1.2)	High efficiency, 1MHz f_{SW} , internal compensation
MPM4730	Buck-Boost	1	3.0 to 22	4	✓	✓	Int	✓	EC LGA (3x3x1.86)	High efficiency
S MPM4720	Buck-Boost	2A	1.8 to 5.5	0.025	-	-	Int	✓	EC LGA (2.5x2.5x1.2)	High efficiency



BUCK REGULATORS | AUTOMOTIVE

Buck Regulators

5V Synchronous Buck

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _A (Typ) (µA)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	FCCM	AAM Mode	COT Control	100% Duty Cycle	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
MPM3805A-AEC1	2.6	6	0.6	1.2	485	3500	120/70	-	Int	-	✓	-	✓	✓	-	✓	QFN-12 (2.5x3x0.9)	Module with integrated inductor
MPM3805B-AEC1	2.5	6	0.6	2.1	485	3500	100/60	1.2	Int	-	✓	-	✓	✓	-	✓	QFN-12 (2.5x3x0.9)	Module with integrated inductor
MPM3808-AEC1	2.5	5.5	3	5	21	2400	65/35	1.2, 1.8	Ext	-	-	✓	✓	✓	✓	✓	QFN-15 (3x4x1.6)	Module with integrated inductor
MPM3808C-AEC1	2.5	5.5	3	5	460	2400	65/35	1.2, 1.8	Ext	-	✓	-	✓	✓	✓	✓	QFN-15 (3x4x1.6)	Module with integrated inductor
MPM3807-AEC1	2.5	5.5	2	3.5	21	2400	70/40	1.2, 1.8	Ext	-	-	✓	✓	✓	✓	✓	QFN-15 (3x4x1.6)	Module with integrated inductor
MPM3807C-AEC1	2.5	5.5	2	3.5	460	2400	70/40	1.2, 1.8	Ext	-	✓	-	✓	✓	✓	✓	QFN-15 (3x4x1.6)	Module with integrated inductor
MPM3806-AEC1	2.5	5.5	1	2.5	21	2400	75/45	1.2, 1.8	Ext	-	-	✓	✓	✓	✓	✓	QFN-15 (3x4x1.6)	Module with integrated inductor
MPM3806C-AEC1	2.5	5.5	1	2.5	460	2400	75/45	1.2, 1.8	Ext	-	✓	-	✓	✓	✓	✓	QFN-15 (3x4x1.6)	Module with integrated inductor
MPQ2171-AEC1	2.5	5.5	1	4	520	2600	90/50	-	Int	-	✓	-	✓	✓	-	-	TSOT23-8	Output discharge
MPQ2177-AEC1	2.5	5.5	1	2.5	460	2400	90/50	1.2, 1.8	Ext	-	✓	-	✓	✓	✓	✓	QFN-8 (1.5x2)	MPQ2177 scalable series, ultra-compact
MPQ2177A-AEC1	2.5	5.5	1	2.5	21	2400	90/50	-	Ext	-	-	✓	✓	✓	✓	✓	QFN-8 (1.5x2)	MPQ2177 scalable series, ultra-compact
MPM3810A-AEC1	2.6	6	1.2	2.1	485	3500	110/60	-	Int	-	✓	-	✓	✓	-	✓	QFN-12 (2.5x3x0.9)	Module with integrated inductor
MPQ2172-AEC1	2.5	5.5	2	4.5	520	2600	80/45	-	Int	-	✓	-	✓	✓	-	-	TSOT23-8	Output discharge
MPQ2178-AEC1	2.5	5.5	2	3.5	460	2400	80/40	1.2, 1.8	Ext	-	✓	-	✓	✓	✓	✓	QFN-8 (1.5x2)	MPQ2177 scalable series, ultra-compact
MPQ2178A-AEC1	2.5	5.5	2	3.5	21	2400	80/40	-	Ext	-	-	✓	✓	✓	✓	✓	QFN-8 (1.5x2)	MPQ2177 scalable series, ultra-compact
MPQ2123-AEC1	2.7	6	2	6.3	42	300 to 2200	35/25	-	Ext	✓	✓	✓	-	✓	✓	✓	QFN-11 (2x3)	MPQ2167 scalable series

Buck Regulators

5V Synchronous Buck

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(ON)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	FCCM	AAW Mode	COI Control	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
MPQ2143-AEC1	2.5	5.5	3	4.8	40	1200	65/40	-	Int	-	-	✓	✓	✓	-	-	TSOT23-8	Output discharge
MPQ2179-AEC1	2.5	5.5	3	5	460	2400	65/35	-	Ext	-	✓	-	✓	✓	✓	✓	QFN-8 (1.5x2)	MPQ2177 scalable series, ultra-compact
MPQ2179A-AEC1	2.5	5.5	3	5	21	2400	65/35	-	Ext	-	-	✓	✓	✓	✓	✓	QFN-8 (1.5x2)	MPQ2177 scalable series, ultra-compact
MPQ2124-AEC1	2.7	6	3	6.3	42	300 to 2200	35/25	-	Ext	✓	✓	✓	-	✓	✓	✓	QFN-11 (2x3)	MPQ2167 scalable series
MPQ2167-AEC1	2.7	6	4	6.7	42	300 to 2200	35/25	-	Ext	-	✓	✓	-	✓	✓	✓	QFN-11 (2x3)	MPQ2167 scalable series
MPQ2167B-AEC1	2.7	6	4	6.7	42	300 to 2200	35/25	-	Ext	✓	✓	✓	-	✓	✓	✓	QFN-11 (2x3)	MPQ2167 scalable series
MPQ2180-AEC1	2.7	6	6	12.7	285	850 to 2200	38/21	0.8, 1	Int	-	✓	✓	-	-	-	-	QFN-14 (2.5x3)	-
MPQ8847A-AEC1	2.7	6	6	12.7	285	850 to 2200	22/40	-	Int	-	✓	✓	-	-	-	-	QFN-14 (2.5x3)	-
MPQ2167A-AEC1	2.7	6	6	9	42	300 to 2200	35/25	-	Ext	✓	✓	✓	-	✓	✓	✓	QFN-14 (3x3)	MPQ2167 scalable series
S MPQ2176-4000-AEC1	2.4	6	4	6	8	2200	12/8	-	Int	-	-	✓	✓	✓	✓	✓	QFN-7 (1.5x2.5)	-
S MPQ2176-4001-AEC1	2.4	6	4	6	8	2200	12/8	-	Int	-	✓	-	✓	✓	✓	✓	QFN-7 (1.5x2.5)	-
S MPQ2176-5000-AEC1	2.4	6	5	7	8	2200	12/8	-	Int	-	-	✓	✓	✓	✓	✓	QFN-7 (1.5x2.5)	-
S MPQ2176-5001-AEC1	2.4	6	5	7	8	2200	12/8	-	Int	-	✓	-	✓	✓	✓	✓	QFN-7 (1.5x2.5)	-
S MPQ2176-6000-AEC1	2.4	6	6	8	8	2200	12/8	-	Int	-	-	✓	✓	✓	✓	✓	QFN-7 (1.5x2.5)	-
S MPQ2176-6001-AEC1	2.4	6	6	8	8	2200	12/8	-	Int	-	✓	-	✓	✓	✓	✓	QFN-7 (1.5x2.5)	-
MPQ2169A-AEC1	2.7	6	2.8 (Dual)	4	65	350 to 3000	60/25	-	Ext	✓	✓	✓	-	✓	✓	✓	QFN-18 (2.5x3.5), QFN-18 (2x3)	Dual-output, 2.8A total with 2A single-channel max
MPQ2169B-AEC1	2.7	6	2.8 (Dual)	4	65	350 to 3000	60/25	-	Ext	✓	✓	-	-	✓	✓	✓	QFN-18 (2.5x3.5), QFN-18 (2x3)	Dual-output, 2.8A total with 2A single-channel max, CCM only

BUCK REGULATORS | AUTOMOTIVE

Buck Regulators

5V Synchronous Buck

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _Q (Typ) (µA)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	FCCM	AAM Mode	COT Control	100% Duty Cycle	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
MPQ2166A-AEC1	2.7	6	4 (Dual)	4.5	65	350 to 3000	55/20	-	Ext	✓	✓	✓	-	✓	✓	✓	QFN-18 (2.5x3.5), QFN-18 (2x3)	Dual-output, 4A total with 3A single-channel max
MPQ2166B-AEC1	2.7	6	4 (Dual)	4.5	65	350 to 3000	55/20	-	Ext	✓	✓	-	-	✓	✓	✓	QFN-18 (2.5x3.5), QFN-18 (2x3)	Dual-output, 4A total with 3A single-channel max, CCM only
N MPQ2283-AEC1	2.7	6	6	7	-	Adj	6/4	-	Int	✓	✓	✓	-	-	✓	✓	QFN-18 (3x4)	Multi-page memory, selectable f _{SW} and V _{OUT}
N MPQ2284-AEC1	2.7	6	8	9.3	-	Adj	6/4	-	Int	✓	✓	✓	-	-	✓	✓	QFN-18 (3x4)	Multi-page memory, selectable f _{SW} and V _{OUT}
N MPQ2285-AEC1	2.7	6	10	12	-	Adj	6/4	-	Int	✓	✓	✓	-	-	✓	✓	QFN-18 (3x4)	Multi-page memory, selectable f _{SW} and V _{OUT}
MPQ2286-AEC1	2.7	6	12	15	-	Adj	6/4	-	Int	✓	✓	✓	-	-	✓	✓	QFN-18 (3x4)	Multi-page memory, selectable f _{SW} and V _{OUT}
S MPQ2287-AEC1	2.7	6	14	17	-	Adj	6/4	-	Int	✓	✓	✓	-	-	✓	✓	QFN-18 (3x4)	Multi-page memory, selectable f _{SW} and V _{OUT}
S MPQ2288-AEC1	2.7	6	16	19	-	Adj	6/4	-	Int	✓	✓	✓	-	-	✓	✓	QFN-18 (3x4)	Multi-page memory, selectable f _{SW} and V _{OUT}

Buck Regulators

18V to 24V Synchronous Buck

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _Q (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	FCCM	AAM Mode	COT Control	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
MPQ4409-AEC1	4	24	0.9	1	600	0.807	450 to 2200	90/50	-	Int	✓	✓	-	-	✓	✓	QFN-13 (2.5x3)	-
N MPQ3524-0500-AEC1	3.3	22	0.5	1	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	-	✓	-	-	✓	QFN-12 (2x3)	-
N MPQ3524-0501-AEC1	3.3	22	0.5	1	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	-	-	-	✓	QFN-12 (2x3)	-
N MPQ3524-1000-AEC1	3.3	22	1	1.5	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	-	✓	-	-	✓	QFN-12 (2x3)	-

Buck Regulators 18V to 24V Synchronous Buck

Part Number	V _{IN} (Min) (V)		V _{IN} (Abs Max) (V)		I _{OUT} (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (µA)	V _{FB} (V)	f _{sw} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start							Package	Notes
	External Sync	FCCM	AAM Mode	COT Control								Fixed Frequency	Wettable Flank	QFN Option						
MPQ3524-1001-AEC1	3.3	22	1	1.5	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	-	-	-	✓	QFN-12 (2x3)	-		
MPQ3524-1500-AEC1	3.3	22	1.5	1.8	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	-	✓	-	-	✓	QFN-12 (2x3)	-		
MPQ3524-1501-AEC1	3.3	22	1.5	1.8	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	-	-	-	✓	QFN-12 (2x3)	-		
MPQ3524-2000-AEC1	3.3	22	2	2.7	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	-	✓	-	-	✓	QFN-12 (2x3)	-		
MPQ3524-2001-AEC1	3.3	22	2	2.7	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	-	-	-	✓	QFN-12 (2x3)	-		
MPQ3524-3000-AEC1	3.3	22	3	4.4	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	-	✓	-	-	✓	QFN-12 (2x3)	-		
MPQ3524-3001-AEC1	3.3	22	3	4.4	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	-	-	-	✓	QFN-12 (2x3)	-		
MPQ8861-AEC1	2.85	18	12	14	420	0.6	500 to 1250	15/4.5	-	Ext	-	-	-	✓	✓	✓	QFN-14 (3x4)	Can be used for 5V/3.3V input or regulated 12V _{IN} , integrated telemetry for voltage and current readout		

Buck Regulators 40V to 50V Synchronous Buck with Frequency Spread Spectrum

Part Number	V _{IN} (Min) (V)		V _{IN} (Abs Max) (V)		I _{OUT} (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (µA)	V _{FB} (V)	f _{sw} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start							Package	Notes
	External Sync	Spread Spectrum	FCCM	AAM Mode								Zero-Delay PWM (ZDP™)	Wettable Flank	QFN Option						
MPQ4320-AEC1	3.3	42	0.5	1.2	20	0.8	350 to 2500	70/50	3.3, 5	Int	-	✓	✓	✓	-	✓	QFN-12 (2x3)	MPQ4320 series, ultra-compact		
MPQ4321-AEC1	3.3	42	1	2	20	0.8	350 to 2500	70/50	3.3, 5	Int	-	✓	✓	✓	-	✓	QFN-12 (2x3)	MPQ4320 series, ultra-compact		
MPQ4322-AEC1	3.3	42	2	3.4	20	0.8	350 to 2500	70/50	3.3, 5	Int	-	✓	✓	✓	-	✓	QFN-12 (2x3)	MPQ4320 series, ultra-compact		
MPQ4323-AEC1	3.3	42	3	5.8	20	0.8	350 to 2500	70/50	3.3, 5	Int	-	✓	✓	✓	-	✓	QFN-12 (2x3)	MPQ4320 series, ultra-compact		

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Buck Regulators

40V to 50V Synchronous Buck with Frequency Spread Spectrum

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _Q (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Spread Spectrum	FCCM	AAM Mode	Zero-Delay PWM (ZDF™)	Wettable Flank QFN Option	Package	Notes
MPQ4324E-AEC1	3.3	42	3 (4 Peak)	6.5	20	0.8	350 to 2500	70/50	3.3, 5	Int	-	✓	✓	✓	-	✓	QFN-12 (2x3)	MPQ4320 series, ultra-compact
MPQ4323M-AEC1	3.3	42	3	5.8	20	0.8	350 to 2500	70/50	3.3, 5	Int	-	✓	✓	✓	-	✓	QFN-12 (3.5x3.5)	MPQ4320 series, ultra-compact, int. input capacitors
S MPQ4334-OXYZ-AEC1	3	40	0.5	1.35	20	0.85	200 to 2500	55/35	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	✓	✓	✓	✓	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4324 series
S MPQ4334-1XYZ-AEC1	3	40	1	2	20	0.85	200 to 2500	55/35	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	✓	✓	✓	✓	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4324 series
S MPQ4334-2XYZ-AEC1	3	40	2	3.4	20	0.85	200 to 2500	55/35	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	✓	✓	✓	✓	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4324 series
S MPQ4334-3XYZ-AEC1	3	40	3	5.8	20	0.85	200 to 2500	55/35	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	✓	✓	✓	✓	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4324 series
S MPQ4334-4XYZ-AEC1	3	40	4	6.5	20	0.85	200 to 2500	55/35	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	✓	✓	✓	✓	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4324 series
N MPQ4324-0500-AEC1	3.3	40	0.5	1	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	-	✓	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4334 series
N MPQ4324-0501-AEC1	3.3	40	0.5	1	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	✓	-	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4334 series
N MPQ4324-1000-AEC1	3.3	40	1	1.5	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	-	✓	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4334 series

Buck Regulators

40V to 50V Synchronous Buck with Frequency Spread Spectrum

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _{sw} Limit (Typ) (A)	I _D (Typ) (μA)	V _{FB} (V)	f _{sw} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Spread Spectrum	FCCM	AAM Mode	Zero-Delay PWM (ZDP™)	Wettable Flank QFN Option	Package	Notes
N MPQ4324-1001-AEC1	3.3	40	1	1.5	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	✓	-	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4334 series
N MPQ4324-1500-AEC1	3.3	40	1.5	1.8	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	-	✓	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4334 series
N MPQ4324-1501-AEC1	3.3	40	1.5	1.8	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	✓	-	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4334 series
N MPQ4324-2000-AEC1	3.3	40	2	2.7	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	-	✓	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4334 series
N MPQ4324-2001-AEC1	3.3	40	2	2.7	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	✓	-	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4334 series
N MPQ4324-3000-AEC1	3.3	40	3	4.4	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	-	✓	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4334 series
N MPQ4324-3001-AEC1	3.3	40	3	4.4	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	✓	-	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4334 series
N MPQ4324-4000-AEC1	3.3	40	4 Peak	5	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	-	✓	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4334 series

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Buck Regulators

40V to 50V Synchronous Buck with Frequency Spread Spectrum

	Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _Q (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Spread Spectrum	FCCM	AAM Mode	Zero-Delay PWM (ZDP™)	Wettable Flank QFN Option	Package	Notes
N	MPQ4324-4001-AEC1	3.3	40	4 peak	5	20	0.8	350 to 2500	70/50	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	-	✓	✓	-	-	✓	QFN-12 (2x3), QFN-12 (3x4), QFN-14 (2.5x3.5)	Pin-compatible with MPQ4334 series
N	MPQ8883-AEC1	3.5	45	3	5	600	0.8	250 to 2500	95/50	-	Int	-	✓	✓	✓	-	-	QFN-16 (3x3)	Many features configurable via I ² C and memory
	MPQ4340-AEC1	3.3	42	4	7.7	2.5	-	350 to 2500	60/35	3.3, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Multi-phase, ultra-low I _Q
	MPQ4341-AEC1	3.3	42	5	7.7	3.0	-	350 to 2500	60/35	3.3, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Multi-phase, ultra-low I _Q
	MPQ4345-AEC1	3.3	42	2	5.8	3.0	-	350 to 2500	60/35	3.3, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Single-phase, ultra-low I _Q
	MPQ4346-AEC1	3.3	42	3	5.8	3.0	-	350 to 2500	60/35	3.3, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Single-phase, ultra-low I _Q
	MPQ4347-AEC1	3.3	42	4	7.7	3.0	-	350 to 2500	60/35	3.3, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Single-phase, ultra-low I _Q
	MPQ4348-AEC1	3.3	42	5	7.7	3.0	-	350 to 2500	60/35	3.3, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Single-phase, ultra-low I _Q
N	MPQ4340A-2XYZ-AEC1	3.3	42	2	4.4	3	0.6	350 to 2500	60/35	1, 1.1, 1.8, 2.5, 3, 3.3, 3.8, 4, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Multi-phase capable
N	MPQ4340A-3XYZ-AEC1	3.3	42	3	4.4	3	0.6	350 to 2500	60/35	1, 1.1, 1.8, 2.5, 3, 3.3, 3.8, 4, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Multi-phase capable
N	MPQ4340A-4XYZ-AEC1	3.3	42	4	5.9	3	0.6	350 to 2500	60/35	1, 1.1, 1.8, 2.5, 3, 3.3, 3.8, 4, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Multi-phase capable
N	MPQ4340A-5XYZ-AEC1	3.3	42	5	5.9	3	0.6	350 to 2500	60/35	1, 1.1, 1.8, 2.5, 3, 3.3, 3.8, 4, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Multi-phase capable
N	MPQ4340A-6XYZ-AEC1	3.3	42	6	7.2	3	0.6	350 to 2500	60/35	1, 1.1, 1.8, 2.5, 3, 3.3, 3.8, 4, 5	Ext	✓	✓	✓	✓	✓	✓	QFN-17 (3x4)	Multi-phase capable
	MPQ4312-AEC1	3.3	50	2	5.5	18	0.815	350 to 530	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 series
	MPQ4313-AEC1	3.3	50	3	5.5	18	0.815	350 to 530	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 series
	MPQ4314-AEC1	3.3	50	4	8	18	0.815	350 to 530	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 series
	MPQ4315-AEC1	3.3	50	5	8	18	0.815	350 to 530	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 series
	MPQ4316-AEC1	3.3	50	6	13	18	0.815	350 to 530	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 series

Buck Regulators 40V to 50V Synchronous Buck with Frequency Spread Spectrum

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _Q (Typ) (μA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Spread Spectrum	FCCM	AAM Mode	Zero-Delay PWM (ZDP™)	Wettable Flank QFN Option	Package	Notes
MPQ4317-AEC1	3.3	50	7	13	18	0.815	350 to 530	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	MPQ4312 series
MPQ4436A-AEC1	3.3	50	6	13	18	0.815	420	48/20	3.3, 5	Ext	✓	✓	✓	✓	-	✓	QFN-20 (4x4)	Multi-phase, low I _Q
MPQ4480-AEC1	4.2	40	6	17/22	1000	1	235 to 2200	20/15	-	Int	✓	✓	-	-	-	✓	QFN-25 (4x5)	Adjustable line drop compensation
N MPQ8856-AEC1 (Hybrid)	4	40	5	11	400	0.825	450/1000	20	-	Int	-	✓	-	-	-	✓	QFN-16 (3x3)	Low-side int., supports 100% duty cycle and PMBus interface
S MPQ8857-AEC1	4	40	5	11	400	0.825	450/1000	20/18	-	Int	-	✓	-	-	-	✓	QFN-16 (3x3)	Supports 100% duty cycle and PMBus interface
MPM3551-AEC1	3.3	42	3	5.8	20	0.8	2200	70/50	-	Int	-	✓	-	✓	-	✓	QFN-20 (4x6)	Module with integrated inductor
MPM3551C-AEC1	3.3	42	3	5.8	1200	0.8	2200	70/50	-	Int	-	✓	✓	-	-	✓	QFN-20 (4x6)	Module with integrated inductor
MPQ4325-AEC1	3.3	36	5	8.5	20	0.8	200 to 2500	45/25	-	Int	✓	✓	✓	✓	-	✓	QFN-14 (4x4)	Ultra-compact, low I _Q
MPQ4326-AEC1	3.3	36	6	10	20	0.8	200 to 2500	45/25	3.3	Int	✓	✓	✓	✓	-	✓	QFN-14 (4x4)	Ultra-compact, low I _Q
N MPQ4327-AEC1	3.3	36	7	11	20	0.8	200 to 2500	45/25	-	Int	✓	✓	✓	✓	-	✓	QFN-14 (4x4)	Ultra-compact, low I _Q
MPQ4328-AEC1	3.3	36	4	6.4	20	0.8	200 to 2500	45/25	-	Int	✓	✓	✓	✓	-	✓	QFN-14 (4x4)	Ultra-compact, low I _Q
N MPQ4326B-3000-AEC1	3.3	36	3	4.4	20	0.8	200 to 2500	45/25	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	✓	✓	✓	✓	-	✓	QFN-14 (4x4)	-
N MPQ4326B-4000-AEC1	3.3	36	4	5	20	0.8	200 to 2500	45/25	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	✓	✓	✓	✓	-	✓	QFN-14 (4x4)	-
N MPQ4326B-5000-AEC1	3.3	36	5	6	20	0.8	200 to 2500	45/25	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	✓	✓	✓	✓	-	✓	QFN-14 (4x4)	-
N MPQ4326B-6000-AEC1	3.3	36	6	7.5	20	0.8	200 to 2500	45/25	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	✓	✓	✓	✓	-	✓	QFN-14 (4x4)	-
N MPQ4326B-7000-AEC1	3.3	36	7	8	20	0.8	200 to 2500	45/25	1, 1.8, 2.5, 3, 3.3, 3.8, 5	Int	✓	✓	✓	✓	-	✓	QFN-14 (4x4)	-
N MPQ4371-6000-AEC1	3.3	42	6	7.2	3.5	0.6	200 to 2500	21.5 /10	1, 1.2, 1.8, 2.5, 3.3, 3.8, 5	Int	✓	✓	✓	✓	✓	✓	QFN-23 (4x5)	-
N MPQ4371-8000-AEC1	3.3	42	8	9.6	3.5	0.6	200 to 2500	21.5 /10	1, 1.2, 1.8, 2.5, 3.3, 3.8, 5	Int	✓	✓	✓	✓	✓	✓	QFN-23 (4x5)	-

BUCK REGULATORS | AUTOMOTIVE

Buck Regulators

40V to 50V Synchronous Buck with Frequency Spread Spectrum

	Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (µA)	V _{FB} (V)	f _{sw} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Spread Spectrum	FCCM	AAM Mode	Zero-Delay PWM (ZDP™)	Wettable Flank QFN Option	Package	Notes
N	MPQ4371-0000-AEC1	3.3	42	10	12	3.5	0.6	200 to 2500	21.5 /10	1, 1.2, 1.8, 2.5, 3.3, 3.8, 5	Int	✓	✓	✓	✓	✓	✓	QFN-23 (4x5)	-
N	MPQ4371-1000-AEC1	3.3	42	11	13.2	3.5	0.6	200 to 2500	21.5 /10	1, 1.2, 1.8, 2.5, 3.3, 3.8, 5	Int	✓	✓	✓	✓	✓	✓	QFN-23 (4x5)	-
S	MPQ4372-AEC1	3.3	42	11	13.2	3.5	0.6	200 to 2500	21.5 /10	1, 1.2, 1.8, 2.5, 3.3, 3.8, 5	Int	✓	✓	✓	✓	✓	✓	QFN-23 (4x5)	Multi-phase
S	MPQ4385-5XYZ-AEC1	3.3	40	25	37	14	0.8	200 to 2500	5.25/3.35	0.8, 1, 1.2, 1.8, 2.5, 3.3, 3.8, 5	Int	✓	✓	✓	✓	✓	✓	QFN-32 (5x6)	Multi-phase
S	MPQ4385-2XYZ-AEC1	3.3	40	22	33	14	0.8	200 to 2500	5.25/3.35	0.8, 1, 1.2, 1.8, 2.5, 3.3, 3.8, 5	Int	✓	✓	✓	✓	✓	✓	QFN-32 (5x6)	Multi-phase
S	MPQ4385-0XYZ-AEC1	3.3	40	20	30	14	0.8	200 to 2500	5.25/3.35	0.8, 1, 1.2, 1.8, 2.5, 3.3, 3.8, 5	Int	✓	✓	✓	✓	✓	✓	QFN-32 (5x6)	Multi-phase
S	MPQ4385-8XYZ-AEC1	3.3	40	18	27	14	0.8	200 to 2500	5.25/3.35	0.8, 1, 1.2, 1.8, 2.5, 3.3, 3.8, 5	Int	✓	✓	✓	✓	✓	✓	QFN-32 (5x6)	Multi-phase
S	MPQ4385-4XYZ-AEC1	3.3	40	15	22.5	14	0.8	200 to 2500	5.25/3.35	0.8, 1, 1.2, 1.8, 2.5, 3.3, 3.8, 5	Int	✓	✓	✓	✓	✓	✓	QFN-32 (5x6)	Multi-phase
S	MPQ4385-3XYZ-AEC1	3.3	40	12	18	14	0.8	200 to 2500	5.25/3.35	0.8, 1, 1.2, 1.8, 2.5, 3.3, 3.8, 5	Int	✓	✓	✓	✓	✓	✓	QFN-32 (5x6)	Multi-phase

Buck Regulators

40V to 50V Synchronous Buck without Frequency Spread Spectrum

	Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _{sw} Limit (Typ) (A)	I _Q (Typ) (µA)	V _{FB} (V)	f _{sw} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Spread Spectrum	FCCM	AAM Mode	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
	MPM3509B-AEC1	4	40	0.6	5	700	0.807	400	90/50	-	Int	✓	-	✓	-	✓	-	QFN-17 (3x5x1.6)	Ultra-compact module, int. inductor, BST/VCC capacitors
	MPQ9846-AEC1	3.3	40	0.6	1.2	14	0.8	350 to 2500	125/115	3.3, 5	Ext	✓	-	✓	✓	✓	-	QFN-16 (3x4)	Compact, low I _Q
	MPQ4418-AEC1	4	40	0.6	5.6	600	0.792	410	90/55	-	Int	✓	-	✓	-	✓	-	TSOT23-8	MPQ4420 series
	MPQ4418A-AEC1	4	40	0.6	1.7	600	0.792	410	90/55	-	Int	✓	-	✓	-	✓	-	TSOT23-8	MPQ4420 series

Buck Regulators

40V to 50V Synchronous Buck without Frequency Spread Spectrum

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (μA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(ON)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	Spread Spectrum	FCCM	AAM Mode	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
MPM3509-AEC1	4	40	0.9	3	600	0.807	2200	90/50	-	Int	✓	-	✓	-	✓	✓	QFN-17 (3x5x1.6)	Ultra-compact module, int. inductor, BST/VCC capacitors
MPQ4419-AEC1	4	40	1	5.6	600	0.792	410	90/55	-	Int	✓	-	✓	-	✓	-	TSOT23-8	MPQ4420 series
MPQ4431-AEC1	3.3	40	1	2.5	10	0.8	350 to 2500	90/80	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ4430 series, low I _O , low-dropout mode
MPQ9840-AEC1	3.3	40	1	5.6	14	0.8	350 to 2500	90/40	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ9840 series, low I _O , low-dropout mode
MPM3515-AEC1	4	40	1.5	4	600	0.807	2200	90/50	-	Int	✓	-	✓	-	✓	✓	QFN-17 (3x5x1.6)	Ultra-compact module, int. inductor, BST/VCC capacitors
MPQ4415M-AEC1	4	40	1.5	4	600	0.8	450 to 2200	90/50	-	Int	✓	-	✓	-	✓	✓	QFN-13 (2.5x3)	Integrated input capacitor
MPQ4415A-AEC1	4	40	1.5	4	600	0.8	450 to 2200	90/50	-	Int	✓	-	✓	-	✓	✓	QFN-13 (2.5x3)	-
MPQ4420H-AEC1	4	40	2	4.2	500	0.792	410	90/55	-	Int	✓	-	-	✓	✓	-	TSOT23-8	MPQ4420 series
MPQ4420A-AEC1	4	40	2	5.6	600	0.792	410	90/55	-	Int	✓	-	✓	-	✓	-	TSOT23-8	MPQ4420 series
MPQ4432-AEC1	3.3	40	2.2	5.2	10	0.8	350 to 2500	90/40	3.8, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ4430 series, low I _O , low-dropout mode
MPQ9841-AEC1	3.3	40	2.2	2.5	14	0.8	350 to 2500	90/80	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ9840 series, low I _O , low-dropout mode
MPQ4433-AEC1	3.3	40	3	5.8	10	0.8	350 to 2500	90/40	5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ4430 series, low I _O , low-dropout mode
MPQ9842-AEC1	3.3	40	3	5	14	0.8	350 to 2500	90/40	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ9840 series, low I _O , low-dropout mode
MPQ4423H-AEC1	4	40	3	4.4	500	0.792	410	85/55	-	Int	✓	-	-	✓	✓	✓	QFN-8 (3x3)	-
MPQ4423A-AEC1	4	40	3	5.7	600	0.792	410	85/55	-	Int	✓	-	✓	-	✓	-	QFN-8 (3x3)	-
MPQ4430-AEC1	3.3	40	3.5	5.8	10	0.8	350 to 2500	90/40	3.8, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ4430 series, low I _O , low-dropout mode
MPQ9843-AEC1	3.3	40	3.5	5.6	14	0.8	350 to 2500	125 /55	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-16 (3x4)	MPQ9840 series, low I _O , low-dropout mode
MPQ4473-AEC1	4.5	40	3.5	6.6	500	0.815	200 to 1000	40/20	-	Ext	✓	-	-	-	-	-	QFN-20 (3x4)	Constant-on-time (COT) control
MPQ4470-AEC1	4.5	40	5	8	500	0.815	100 to 1000	40/20	-	Ext	✓	-	-	-	-	-	QFN-20 (3x4)	Constant-on-time (COT) control
MPQ4470A-AEC1	4.5	40	5	8	500	0.815	100 to 1000	40/20	-	Ext	✓	-	-	-	-	-	QFN-20 (3x4)	Constant-on-time (COT) control
MPQ4436-AEC1	3.3	50	6	13	18	0.815	420	48/20	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-20 (4x4)	Multi-phase, low I _O
MPQ4436B-AEC1	3.3	50	6	13	18	0.815	2200	48/20	3.3, 5	Ext	✓	-	✓	✓	✓	✓	QFN-20 (4x4)	Multi-phase, low I _O

BUCK REGULATORS | AUTOMOTIVE

Buck Regulators 60V to 80V Synchronous Buck

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (µA)	V _{FBI} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions (V)	Soft Start	External Sync	FCCM	AAM Mode	Hysteretic Control	Fixed Frequency	Package	Notes
MPQ4569-AEC1	4.5	80	0.3	0.72	20	1	-	1200/450	-	Ext	-	-	✓	✓	-	QFN-10 (3x3), SOIC-8E	Prog. soft start
MPQ4569A-AEC1	4.5	80	0.3	0.72	20	1	-	1200/500	-	Ext	-	-	✓	✓	-	QFN-10 (3x3)	Prog. soft start, default enable on
MPQ2420-AEC1	4.5	80	0.3	0.72	20	1	-	1200/450	-	Ext	-	-	✓	✓	-	TSSOP-16EP	Int. separate windowed watchdog die
MPQ2420A-AEC1	4.5	80	0.3	0.72	20	1	-	1200/450	-	Ext	-	-	✓	✓	-	TSSOP-16EP	Int. separate windowed watchdog die, default enable on
MPQ4576-AEC1	4.5	65	0.6	1.95	40	0.8	200 to 2200	250/45	-	Int	-	✓	✓	-	✓	QFN-12 (2.5x3)	MPQ4572 series, low I _O , compact
MPQ4571-AEC1	4.5	65	1	1.95	40	0.8	200 to 2200	250/45	-	Int	-	✓	✓	-	✓	QFN-12 (2.5x3)	MPQ4572 series, low I _O , compact
MPQ4572-AEC1	4.5	65	2	3.5	40	0.8	200 to 2200	250/45	-	Int	-	✓	✓	-	✓	QFN-12 (2.5x3)	MPQ4572 series, low I _O , compact
MPQ4573-AEC1	4.5	65	2.5	3.5	40	0.8	200 to 2200	250/45	-	Int	-	✓	✓	-	✓	QFN-12 (2.5x3)	MPQ4572 series, low I _O , compact
MPQ4570-AEC1	4.5	60	3	5.7	520	1	100 to 1000	90/70	-	Ext	✓	-	✓	-	✓	TSSOP-20EP	Prog. soft-start time, external sync
N MPM3901-AEC1	4.5	65	1	1.95	40	0.8	200 to 2200	250/45	-	Int	-	✓	✓	-	✓	QFN-12 (2.5x3)	Low-I _O , compact module with an integrated inductor
N MPQ8880A-AEC1	4	60	4.5	5.5	8	0.15/0.6/0.999/1.5	150 to 2200	60/43	-	Int	✓	✓	✓	✓	✓	QFN-20 (4x5)	Prog. soft-start time, PG, multi-phase

Buck Regulators >100V Synchronous Buck

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _{SW} Limit (Typ) (A)	I _O (Typ) (µA)	V _{FBI} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Soft Start	External Sync	FCCM	AAM Mode	Hysteretic Control	Package	Notes
MPQ4590-AEC1	7.5	700	0.4	0.66	200	2.55	-	13.5	Int	-	✓	-	✓	SOIC-8	Primary-side CV control, supports buck, buck-boost, boost, and flyback topologies

Buck Regulators

Buck Controllers

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _O (Typ) (µA)	I _{SP} Limit (Typ) (A)	V _{FB} (V)	f _{SW} (kHz)	Fixed Output Versions	Soft Start	External Sync	FCCM	AAV Mode	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
MPQ2908A-AEC1	4	60	750	0.5	0.8	100 to 1000	-	Ext	✓	✓	✓	✓	✓	TSSOP-20EP, QFN-20 (3x4)	High max duty cycle (99.5%)
MPQ2918-AEC1	4	40	750	0.5	0.8	100 to 1000	-	Ext	✓	✓	✓	✓	✓	TSSOP-20EP, QFN-20 (3x4)	High max duty cycle (99.5%)
S MPQ2923-AEC1	3.6	42	20	2.2	1.2	200 to 2200	1.2, 1.8, 2.5, 3.3, 3.8, 5, 12, 15, 18	Ext	✓	✓	✓	✓	✓	QFN-24 (4x4)	Spread spectrum, multi-phase
S MPQ9934-AEC1	5.5	85	400	8 (Max)	0.17/0.5/ 0.667/ 1.2/1.6	100 to 1000	-	Ext	-	✓	✓	Prog.	✓	QFN-23 (4x4)	Multi-phase, GaN driver capability

Buck Regulators

Non-Synchronous Buck

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _{SP} Limit (Typ) (A)	I _O (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Fixed Output Versions	Soft Start	External Sync	FCCM	Fixed Frequency	Package	Notes
MPQ2459-AEC1	4.5	60	0.5	1.25	730	0.812	480	1000	-	Int	-	✓	✓	TSOT23-6	Superior light-load efficiency
MPQ2451-AEC1	3.3	40	0.6	1	130	0.794	2000	500	3.3, 5	Int	-	-	✓	TSOT23-6L, QFN-6L	Internal comp. and soft start
MPQ2454-AEC1	3.3	40	0.6	1.8	60	0.8	350 to 2300	200	-	Ext	✓	-	✓	QFN-10 (3x3), MSOP-10EP	Superior light-load efficiency
MPQ4558-AEC1	3.8	60	1	1.9	140	0.8	200 to 2000	250	-	Int	-	-	✓	QFN-10 (3x3), SOIC-8E	Superior light-load efficiency
MPQ4559-AEC1	3.8	60	1.5	2.3	140	0.8	200 to 2000	250	-	Int	-	-	✓	QFN-10 (3x3), SOIC-8E	Superior light-load efficiency
MPQ4561-AEC1	3.8	60	1.5	2.5	140	0.795	250 to 2000	300	-	Ext	-	-	✓	QFN-10 (3x3)	Superior light-load efficiency
MPQ4560-AEC1	3.8	60	2	3.2	140	0.797	250 to 2000	250	-	Int	-	-	✓	QFN-10 (3x3), SOIC-8E	Superior light-load efficiency
MPQ4462-AEC1	3.8	40	3.5	5.5	120	0.792	250 to 4000	150	-	Int	-	-	✓	QFN-10 (3x3), SOIC-8E	Superior light-load efficiency
MPQ4467-AEC1	3.3	40	2.5	5.8	10	0.8	350 to 2500	90	-	Ext	✓	-	✓	QFN-16 (3x4)	Low-dropout, selectable in-phase or 180° out-of-phase
MPQ4468-AEC1	3.3	40	3.5	5.8	10	0.8	350 to 2500	90	-	Ext	✓	-	✓	QFN-16 (3x4)	Low-dropout, selectable in-phase or 180° out-of-phase
MPQ4469-AEC1	3.3	40	5	7.7	10	0.8	350 to 2500	110	-	Ext	✓	-	✓	QFN-20 (4x5)	Low-dropout, selectable in-phase or 180° out-of-phase
MPQ2362-AEC1	4.75	25	Dual 2	3.4	2000	1.222	380	180	-	Int	✓	✓	✓	TSSOP-20	Dual output

BUCK-BOOST REGULATORS | AUTOMOTIVE

Buck-Boost Converters

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	I _{OUT} (Typ) (A)	I _O (Typ) (µA)	f _{SW} (kHz)	R _{DS(on)} (mΩ)	Interface	Spread Spectrum	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
MPQ8873-xxxx-AEC1	2.2	36	0.5 to 30	3	180	200 to 1000	2x 10/25	I ² C	✓	✓	✓	QFN-34 (4x5)	20W prog. 4-switch converter with advanced protections
MPQ8875A-xxxx-AEC1	2.2	36	0.5 to 30	5	180	200 to 1000	2x 10/25	I ² C	✓	✓	✓	QFN-34 (4x5)	30W prog. 4-switch converter with advanced protections
P MPQ8874-xxxx-AEC1	4	42	1 to 30	4	20	200 to 2200	Buck 20/40, Boost 40/20	I ² C	✓	✓	✓	QFN-22 (4x5)	-
S MPQ8872-xxxx-AEC1	4	42	1 to 30	2	20	200 to 2200	Buck 20/40, Boost 40/20	I ² C	✓	✓	✓	QFN-22 (4x5)	-
S MPQ8835A-xxxx-AEC1	3	40	1 to 24	6	130	280/420/600/1000	Buck 12/16, Boost 7/7	I ² C	✓	✓	✓	QFN-19 (4x5)	-
MPQ4262-AEC1 (Hybrid)	3.6	40	1 to 36	5	130	280/420/600	20/14	I ² C	✓	✓	✓	QFN-20 (3x5)	100W, two int. FETs, 98% peak efficiency
MPQ4263-AEC1	3.6	40	1 to 36	5	135	280/420/600	20/14	I ² C	✓	✓	✓	QFN-20 (3x5)	100W, two int. FETs, 98% peak efficiency, high-side current sense
N MPQ4232-AEC1	4.3	40	1 to 22	5	130	280/420/600/1000	10/14 /6/6	I ² C	✓	✓	✓	QFN-19 (4x5)	22V/5A, 4-switch converter with advanced protection
S MPQ4232A-AEC1	3	40	1 to 24	6	130	280/420/600/1000	Buck: 12/16 Boost: 7/7	I ² C	✓	✓	✓	QFN-19 (4x5)	36V/5A, 4-switch converter with advanced protection, P2P with MPQ4232-AEC1

BOOST REGULATORS | AUTOMOTIVE

Boost Regulators Synchronous Boost

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	I _{SP} Limit (Typ) (A)	I _O (Typ) (µA)	I _{SP} (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	Current Limit (A)	R _{DS(on)} (mΩ)	Output (V)	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
MPQ3410-AEC1	1.8	6	6	1.3	360	0.15	1.19	550	1.3	530/300	Adj	✓	-	TSOT23-5	Output to input disconnect
MPQ3413-AEC1	1.8	4	5	3.6	8	0.1	-	2.2	3.6	80/70	5	✓	-	TSOT23-5	-
MPQ3414B-AEC1	2.8	4	5	3.6	8	0.1	-	2.2	3.6	80/70	5	✓	-	TSOT23-5	Mode
S MPQ3414C-AEC1	2.8	4	5	3.6	8	0.1	-	2.2	3.6	80/70	5	✓	-	TSOT23-5	Sync/mode
MPQ3428A-AEC1	3	20	22	25	110	1	1.225	600	25	18	Adj	✓	-	QFN-22 (3x4)	Input disconnect function, external high-side gate drive
MPQ3431A-AEC1	0.8	13	16	21	450	25	1	450	25	6/9.5	Adj	✓	✓	QFN-13 (3x4)	Prog. input current limit, supports 40W peak power load from 3.3V, selectable PSM and FCCM, adaptive COT
MPQ3431C-AEC1	0.8	13	16	Adj	450	25	1	450	10	6/9.5	Adj	✓	✓	QFN-13 (3x4)	Prog. internal switch peak current limit, supports 40W peak power load
MPQ3432-AEC1	0.8	13	16	10	450	25	1	600	10	6/9.5	Adj	✓	✓	QFN-13 (3x4)	Prog. internal switch peak current limit, supports 40W peak power load

Boost Regulators Synchronous Boost

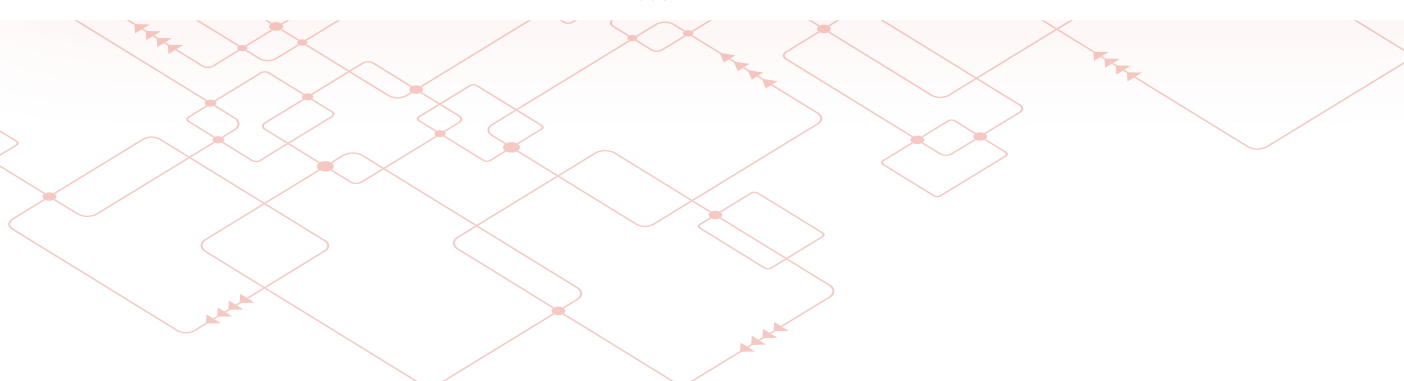
Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	I _{SW} Limit (Typ) (A)	I _Q (Typ) (µA)	I _{SP} (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	Current Limit (A)	R _{DS(ON)} (mΩ)	Output (V)	Fixed Frequency	Wettable Flank QFN Option	Package	Notes
N MPQ3433-AEC1	0.8	13	16	15	450	25	1	450	15	6/9.5	Adj	✓	✓	QFN-13 (3x4)	Prog. input current limit, supports 40W peak power load from 3.3V, selectable PSM and FCCM, adaptive COT
N MPQ3438-xxxx-AEC1	0.8	10	16	2	150	2	1	2600	2	6/9.5	Adj	✓	✓	QFN-8 (1.5x2)	-

Boost Regulators Boost Controllers

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _Q (Typ) (µA)	I _{SP} (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	Gate Drive (A)	Soft Start	Sync	OVP	Wettable Flank QFN Option	Package	Notes
MPQ3910A-AEC1	5	35	288	1	1.237	30 to 400	1	Ext	✓	✓	-	MSOP-10	Peak current mode, light-load operation, supports >10A, OVP, SCP, OTP
S MPQ3445-AEC1	3	45	40	15	Adj	250 to 2500	2	Adj	✓	✓	✓	QFN-21 (5x5)	Multi-phase capable, spread spectrum, digitally prog. I ² C/SPI
S MPQ3446-AEC1	6	60	60	15	Adj	250 to 2500	2	Adj	✓	✓	✓	QFN-21 (5x5)	Multi-phase capable, spread spectrum, digitally prog. I ² C/SPI
S MPQ3447-AEC1	6	85	60	15	Adj	250 to 2500	2	Adj	✓	✓	✓	QFN-21 (5x5)	Multi-phase capable, spread spectrum, digitally prog. I ² C/SPI

Boost Regulators Non-Synchronous Boost

Part Number	V _{IN} (Min) (V)	V _{SW} (Max) (V)	V _{OUT} (Max) (V)	I _{SW} Limit (Typ) (A)	I _Q (Typ) (µA)	V _{FB} (V)	f _{SW} (kHz)	R _{DS(ON)} (mΩ)	Soft Start	OVP	Wettable Flank QFN Option	Package	Notes
MPQ3426-AEC1	3.2	45	35	8.5	650	1.225	300 to 2000	90	Ext	✓	✓	QFN-14 (3x4)	Prog. UVLO and EN hysteresis
MPQ3425-AEC1	3.1	22	55	5	650	1.225	300 to 2000	90	Ext	✓	✓	QFN-14 (3x4)	Prog. UVLO and EN hysteresis
MPQ3452-AEC1	3.1	22	22	5	650	1.225	300 to 2000	90	Ext	✓	✓	QFN-14 (3x4)	Prog. UVLO and EN hysteresis



PMICS | AUTOMOTIVE

PMICs

40V PMICs

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Channels	Configuration	Current Ratings (A)	f _{sw} (Max) (MHz)	Adj Power Sequencing	Frequency Spread Spectrum	MPSafe™ (Functional Safety)	Interface	Wettable Flank QFN Option	Package	Notes
N	MPQ70430FS-AEC1	4.5	65	3	2 Bucks, 1 Boost	Buck: 2/1.5 Boost: 0.25	2.5	-	✓	✓	SPI	✓	QFN-34 (6x6)	ASIL-D independent voltage supervisor, power FET leakage monitoring, extensive protections, battery failure pre-warning
N	MPQ70331FS-AEC1	4.5	42	3	2 Bucks, 1 Boost	Buck: 2/1.5 Boost: 0.25	2.5	-	✓	✓	SPI	✓	QFN-34 (6x6)	ASIL-D independent voltage supervisor, power FET leakage monitoring, extensive protections, battery failure pre-warning
N	MPQ70332FS-AEC1	4.5	42	3	2 Bucks, 1 Boost	Buck: 2/1.5 Boost: 0.25	2.5	-	✓	✓	SPI	✓	QFN-34 (6x6)	ASIL-B independent voltage supervisor, power FET leakage monitoring, extensive protections, battery failure pre-warning
N	MPQ7902-AEC1	4.5	42	3	2 Bucks, 1 Boost	Buck: 2/1.5 Boost: 0.25	2.5	-	✓	✓	SPI	✓	QFN-34 (6x6)	Independent voltage supervisor, power FET leakage monitoring, extensive protections, battery failure pre-warning
S	MPQ70336FS-AEC1	3.1	42	5	1 Buck, 4 Voltage Monitors	Buck: 4	2.5	✓	✓	✓	I ² C	✓	TQFN-25 (3x6)	ASIL-D, 4x voltage monitors with 2 single-ended and 2 differential inputs
S	MPQ70340FS-AEC1	3.5	40	3	3 Bucks	Buck: 0.6/0.6/1	2.2	✓	✓	✓	I ² C	✓	QFN-15 (2.5x3.5)	ASIL-B, for camera modules powered off-battery
S	MPQ73350FS-AEC1	4	40	2	2 Bucks	Buck: 7/10 (w/ Heatsink)	2.2	✓	✓	✓	SPI/I ² C	✓	QFN-28 (5x6)	ASIL-B, digital, dual outputs, ADC for diagnostics
S	MPQ73351FS-AEC1	4	40	2	2 Bucks	Buck: 7/10 (w/ Heatsink)	2.2	✓	✓	✓	SPI/I ² C	✓	QFN-28 (5x6)	ASIL-D, digital, dual outputs, ADC for diagnostics
	MPQ2026A-AEC1	3	40	3	2 LDOs, 1 Pre-Boost	LDO: 0.3/0.3 Pre-Boost: 2.5	2.2	✓	✓	-	I ² C	✓	QFN-16 (4x4)	Powers phantom active antenna supplies and ADAS modules, pre-boost enables cold/warm crank operation, digitally prog. V _{OUT}
	MPQ2024A-AEC1	3	40	2	2 LDOs	LDO: 0.3/0.3	2.2	✓	✓	-	I ² C	✓	QFN-16 (4x4)	Digitally programmable V _{OUT}
	MPQ2022A-AEC1	3	40	2	1 LDO, 1 Pre-Boost	LDO: 0.3 Pre-Boost: 2.5	2.2	✓	✓	-	I ² C	✓	QFN-16 (4x4)	Powers phantom active antenna supplies and ADAS modules, pre-boost enables cold/warm crank operation, digitally prog. V _{OUT}

PMICs

18V PMICs

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Channels	Configuration	Current Ratings (A)	f _{sw} (Max) (MHz)	Adj Power Sequencing	Frequency Spread Spectrum	MPSafe™ (Functional Safety)	Interface	Wettable Flank QFN Option	Package	Notes
N	MPQ70240FS-AEC1	3.5	18	4	3 Bucks, 1 LDO	Buck: 0.6/0.6/1 LDO: 0.2	2.2	✓	✓	✓	I ² C	✓	QFN-15 (2.5x3.5)	ASIL-B, for camera modules powered over coaxial cable
N	MPQ70241FS-AEC1	3.5	18	4	3 Bucks, 1 LDO	Buck: 1/0.6/1.2 LDO: 0.2	2.2	✓	✓	✓	I ² C	✓	QFN-15 (2.5x3.5)	ASIL-B, for camera modules, uprated current, powered over coaxial cable
N	MPQ7929-AEC1	3.5	18	4	3 Bucks, 1 LDO	Buck: 1/0.6/1.2 LDO: 0.2	2.2	✓	✓	✓	I ² C	✓	QFN-15 (2.5x3.5)	For camera modules, uprated current, powered over coaxial cable
N	MPQ7928-AEC1	3.5	18	4	3 Bucks, 1 LDO	Buck: 0.6/0.6/1 LDO: 0.2	2.2	✓	✓	-	I ² C	✓	QFN-15 (2.5x3.5)	For camera modules powered over coaxial cable

N - New Product S - Sampling Product

PMICs 5V PMICs

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Channels	Configuration	Current Ratings (A)	f _{SW} (Max) (MHz)	Multi-Phase Outputs	Frequency Spread Spectrum	MPSafe™ (Functional Safety) Interface	Wettable Flank QFN Option	Package	Notes
N	MPQ70160FS-AEC1	2.7	5.5	6	6 Bucks	Buck: 3/3/4/4/1/1	2	✓	✓	✓	I ² C	QFN-32 (5x5)	ASIL-D, Q&A watchdog timer, prog. sequencing, ext. voltage monitoring, hiccup UVP/OVP and OCP, thermal shutdown
N	MPQ70161FS-AEC1	2.7	5.5	6	6 Bucks	Buck: 1/1/2/2/1/1	2	✓	✓	✓	I ² C	QFN-32 (5x5)	ASIL-D, Q&A watchdog timer, prog. sequencing, ext. voltage monitoring, hiccup UVP/OVP and OCP, thermal shutdown
N	MPQ70165FS-AEC1	2.7	5.5	6	6 Bucks	Buck: 3/3/4/4/1/1	2	✓	✓	✓	I ² C	QFN-32 (5x5)	ASIL-B, Q&A watchdog timer, prog. sequencing, ext. voltage monitoring, hiccup UVP/OVP and OCP, thermal shutdown
N	MPQ70166FS-AEC1	2.7	5.5	6	6 Bucks	Buck: 1/1/2/2/1/1	2	✓	✓	✓	I ² C	QFN-32 (5x5)	ASIL-B, Q&A watchdog timer, prog. sequencing, ext. voltage monitoring, hiccup UVP/OVP and OCP, thermal shutdown
S	MPQ70170FS-AEC1	2.8	5.5	9	5 Bucks, 4 LDOs	Buck: 4/4/4/4/2 LDO: 0.35/0.35/0.35/0.35	2	✓	✓	✓	I ² C	QFN-56 (8x8)	ASIL-D, 13x GPIOs, user-configurable state machine system OVP, DrMOS mode, Q&A watchdog timer
S	MPQ70171FS-AEC1	2.8	5.5	9	5 Bucks, 4 LDOs	Buck: 4/4/4/4/2 LDO: 0.35/0.35/0.35/0.35	2	✓	✓	✓	I ² C	QFN-56 (8x8)	ASIL-B, 13x GPIOs, user-configurable state machine system OVP, DrMOS mode, Q&A watchdog timer
S	MPQ7907-AEC1	2.8	5.5	9	5 Bucks, 4 LDOs	Buck: 4/4/4/4/2 LDO: 0.35/0.35/0.35/0.35	2	✓	✓	✓	I ² C	QFN-56 (8x8)	QM, 13x GPIOs, user-configurable state machine system OVP, DrMOS mode, Q&A watchdog timer
S	MPQ70700FS-AEC1	2.8	5.5	5	5 LDOs	LDO: 0.35/0.35/0.35/0.35/0.35	-	-	-	✓	I ² C	TQFN-24 (5x5)	ASIL-D, Q&A watchdog timer, 2x ext. voltage monitoring, 4x GPIOs, prog. sequencing, adj. V _{OUT} , UVP/OVP and OCP, thermal shutdown
S	MPQ70701FS-AEC1	2.8	5.5	5	5 LDOs		-	-	-	✓	I ² C	TQFN-24 (5x5)	ASIL-B, Q&A watchdog timer, 2x ext. voltage monitoring, 4x GPIOs, prog. sequencing, adj. V _{OUT} , UVP/OVP and OCP, thermal shutdown
S	MPQ7970-AEC1	2.8	5.5	5	5 LDOs	LDO: 0.35/0.35/0.35/0.35/0.35	-	-	-	✓	I ² C	TQFN-24 (5x5)	Q&A watchdog timer, 2x ext. voltage monitoring, 4x GPIOs, prog. sequencing, adj. V _{OUT} , UVP/OVP and OCP, thermal shutdown
S	MPQ70150FS-AEC1	3	6	4	3 Bucks, 1 Boost	Buck: 3/3/3 Boost: 0.5	18	-	✓	✓	I ² C	QFN-28 (5x5)	ASIL-B, ultra-low noise optimized for radars, advanced spread spectrum, window or Q&A watchdog timer, mount ID, ext. voltage monitoring
S	MPQ70152FS-AEC1	3	6	4	2 Bucks, 1 Boost	Buck: 3/3 Boost: 0.5	18	-	✓	✓	I ² C	QFN-28 (5x5)	ASIL-B, ultra-low noise optimized for radars, advanced spread spectrum, window or Q&A watchdog timer, mount ID, ext. voltage monitoring
S	MPQ70153FS-AEC1	3	6	4	3 Bucks	Buck: 3/3/3	18	-	✓	✓	I ² C	QFN-28 (5x5)	ASIL-B, ultra-low noise optimized for radars, advanced spread spectrum, window or Q&A watchdog timer, mount ID, ext. voltage monitoring
	MPQ7920-AEC1	2.7	5.5	9	4 Bucks, 5 LDOs	Buck: 4.5/4/2.5/2 LDO: 0.3/0.3/0.3/0.3/0.01	2.75	-	-	-	I ² C	QFN-16 (4x4)	MTP prog., selectable time slot sequencing, extensive adj. and protections for bucks, dedicated RTC for LDOs, COT

PMICS | AUTOMOTIVE

PMICs 5V PMICs

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Channels	Configuration	Current Ratings (A)	f _{SW} (Max) (MHz)	Multi-Phase Outputs	Frequency Spread Spectrum	MPSafe™ (Functional Safety)	Interface	Wettable Flank QFN Option	Package	Notes
S	MPQ74201-AEC1	2.7	5.5	6	4 BUCKs, 2 LDOs	Buck: 6/6/6/6 LDO: 0.4/0.4	3	✓	-	✓	I ² C	✓	QFN-29 (5x5)	ASIL-D, watchdog, MOTP memory with 4 user-selectable OTP pages via PRESET pin
	MPQ7930-AEC1	2.7	5.5	6	6 BUCKs	Buck: 3/3/4/4/1/1	2	✓	✓	-	I ² C	✓	QFN-32 (5x5)	Prog. sequencing, integrated adj. compensation network, hiccup UVP/OVP and OCP, thermal shutdown
N	MPQ7931-AEC1	2.7	5.5	6	6 BUCKs	Buck: 1/1/2/2/1/1	2	✓	✓	-	I ² C	✓	QFN-32 (5x5)	Prog. sequencing, integrated adj. compensation network, hiccup UVP/OVP and OCP, thermal shutdown
S	MPQ7932-AEC1	2.7	5.5	6	6 BUCKs	Buck: 3/3/4/4/1/1	2	✓	✓	-	I ² C	✓	QFN-32 (5x5)	Q&A watchdog timer, prog. sequencing, ext. voltage monitoring, hiccup UVP/OVP and OCP, thermal shutdown
S	MPQ7933-AEC1	2.7	5.5	6	6 BUCKs	Buck: 1/1/2/2/1/1	2	✓	✓	-	I ² C	✓	QFN-32 (5x5)	Q&A watchdog timer, prog. sequencing, ext. voltage monitoring, hiccup UVP/OVP and OCP, thermal shutdown

AUTOMOTIVE COMPUTE SOC CORE POWER | AUTOMOTIVE

Automotive Compute SoC Core Power Multi-Phase Digital Controllers

	Part Number	Control Method	System Interface	Memory Type	# of Rails	# of Phases	V _{CC} (Typ) (V)	I ₀ (Typ) (mA)	f _{SW} (Max) (kHz)	Wettable Flank QFN Option	Package	Notes
	MPQ2977-AEC1	Digital	Digital Interface/I ² C	MTP	2	6	5	15	1250	✓	TQFN-40 (6x6)	-
	MPQ2967-AEC1	Digital	Digital Interface/I ² C	MTP	2	4	5	20	2000	✓	TQFN-40 (6x6)	MPSafe™, ASIL-D
	MPQ2946-AEC1	Digital	Digital Interface/I ² C	MTP	3	8	5	20	2000	✓	TQFN-48 (7x7)	-
S	MPQ29125-AEC1	Digital	Digital Interface/I ² C	MTP	3	8	3.3	13	2000	-	TQFN-52 (6x6)	-
S	MPQ29164-AEC1	Digital	Digital Interface/I ² C	MTP	2	6	3.3	8	2000	✓	TQFN-48 (6x6)	-
S	MPQ72957-AEC1	Digital	Digital Interface/I ² C	MTP	4	8	5	20	2000	✓	TQFN-48 (7x7)	MPSafe™, ASIL-D
S	MPQ72963-AEC1	Digital	Digital Interface/I ² C	MTP	3	9	5	25	2000	✓	TQFN-48 (7x7)	MPSafe™, ASIL-D
S	MPQ29270-AEC1	Digital	Digital Interface/I ² C	MTP	3	11	5	35	2000	✓	TQFN-56 (8x8)	-

Automotive Compute SoC Core Power Intelli-Phase™ DrMOS

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (A)	V _{CC} (Typ) (V)	I ₀ (Typ) (mA)	Integrated Current Sense	Integrated Temp Sense	Fault Indicator	Wettable Flank QFN Option	Package
	MPQ86940-AEC1	3	22	40	3.3	25	✓	✓	✓	✓	QFN-21 (4x5)
N	MPQ86960-A-AEC1	3	22	50	5	25	✓	✓	✓	-	LGA-38 (5x6)
N	MPQ86760-AEC1	3	6	45	3.3	25	✓	✓	✓	✓	QFN-21 (4x5)
S	MPQ86970-AEC1	3	22	50	5	25	✓	✓	✓	-	LGA-41 (5x6)
S	MPQ86761-AEC1	3	6	60	3.3	25	✓	✓	✓	✓	QFN-21 (3.5x6)
S	MPQ86725-AEC1	3	6	25	3.3	25	✓	✓	✓	✓	QFN-17 (3.5x6)
S	MPQ86770-AEC1	3	6	45	3.3	25	✓	✓	✓	-	LGA-30 (4x5)
S	MPQ86771-AEC1	3	6	45	3.3	25	✓	✓	✓	-	LGA-38 (5x6)

Automotive Compute SoC Core Power Intelli-Phase™ PoLs

Part Number	Control Method	System Interface	Memory Type	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Load Current (A)	V _{CC} (Typ) (V)	I _Q (Typ) (mA)	Integrated Current Sense	Integrated Temp Sense	I _{SW} (Max) (kHz)	Wettable Flank QFN Option	Package	Notes
S MPQ29240-AEC1	Digital	Digital Interface/I ² C	MTP	4	22	40	3.3	25	✓	✓	1000	✓	QFN-27 (5x6)	-
S MPQ29230-AEC1	Digital	Digital Interface/I ² C	MTP	4	22	30	3.3	25	✓	✓	1000	✓	QFN-27 (5x6)	-
S MPQ29261-AEC1	Digital	-	-	4.5	22	18	3.3	20	✓	✓	800	✓	QFN-19 (3x4)	-
S MPQ81811-AEC1	Digital	-	-	2.5	22	8	3.3	4	✓	✓	900	-	QFN-13 (2x3)	-

LINEAR REGULATORS | AUTOMOTIVE

Linear Regulators 5V LDO

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (mA)	Load Reg (%/mA)	PSRR @ 1kHz (dB)	V _{FB} (V)	I _Q (Typ) (µA)	Enable Pin	Adjustable Option (V)	Fixed-Output Versions (V)	Power Good	Package
MPQ20056-AEC1	2.5	5.5	250	0.0003	63	0.8	150	✓	0.8 to 5	1.8, 2.5, 3.3	-	QFN-8 (2x2), TSOT23-5
P MPQ20033-AEC1	1.6	5.5	300	0.002	70	0.5	26	✓	0.5 to 5	0.75, 0.8, 0.85, 1, 1.2, 1.8, 2.5, 2.8, 3.3	✓	QFN-8 (3x3), QFN-8 (2x2), QFN-6 (2x2), TSOT23-5, SOT563
MPQ8904-AEC1	2.5	6.5	500	0.005	26	0.5	140	✓	0.5 to 5	-	✓	QFN-8 (2x3)
P MPQ20032-AEC1	1.6	5.5	500	0.002	70	0.5	26	✓	0.5 to 5	0.75, 0.8, 0.85, 1, 1.2, 1.8, 2.5, 2.8, 3.3	✓	QFN-8 (3x3), QFN-8 (2x2), QFN-6 (2x2), TSOT23-5, SOT563
P MPQ20031-AEC1	1.6	5.5	1000	0.002	70	0.5	26	✓	0.5 to 5	0.75, 0.8, 0.85, 1, 1.2, 1.8, 2.5, 2.8, 3.3	✓	QFN-8 (3x3), QFN-8 (2x2), QFN-6 (2x2)
MPQ20051-AEC1	2.5	5.5	1000	0.0003	63	0.8	130	✓	0.8 to 5	-	-	QFN-8 (3x3)

Linear Regulators 40V LDO

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (mA)	Load Reg (%/mA)	PSRR @ 1kHz (dB)	V _{FB} (V)	I _Q (Typ) (µA)	Enable Pin	Adjustable Option (V)	Fixed-Output Versions (V)	Power Good	Package
MPQ2016-AEC1	4	40	30	0.003	65	1.23	12	✓	1.2 to 24	-	-	QFN-8 (2x3)
MPQ2013A-AEC1	2.5	40	150	0.005	41	1.215	3.2	✓	1.215 to 15	QFN-8: 3.3, 2.5, 5, 1.8 QFN-6: 3.3, 5	-	QFN-6 (2x2), QFN-8 (3x3)
MPQ2013D-AEC1	2.5	40	100	0.005	41	1.215	3.2	✓	1.215 to 15	2.5, 3.3, 5	-	TSOT23-4
MPQ2019-AEC1	3	40	300	0.04	45	1.25	10	✓	1.2 to 15	3.3, 5	✓	SOIC-8EP
N MPQ2019A-AEC1	3	40	300	0.04	45	1.25	10	✓	1.2 to 36	-	✓	SOIC-8EP
MPQ2022A-AEC1	3	40	300	0.3	53	1	35	✓	1 to 13.6	-	✓	QFN-16 (4x4)
S MPQ2023-AEC1	4.5	40	300	0.3	80	1	20	✓	1 to 13.6	-	✓	QFN-16 (4x4), QFN-14 (3x3)
MPQ2024A-AEC1	3	40	300	0.3	53	1	35	✓	1 to 13.6	-	✓	QFN-16 (4x4)
MPQ2026A-AEC1	3	40	300	0.3	53	1	35	✓	1 to 13.6	-	✓	QFN-16 (4x4)
S MPQ71000FS-AEC1	4.5	40	300	0.3	80	1	20	✓	1 to 13.6	-	✓	QFN-16 (4x4), QFN-14 (3x3)
S MPQ20082-AEC1	3	40	300	0.04	45	1.25	10	✓	1.2 to 15	3.3, 5	✓	MSOP-8EP
MPQ2029-AEC1	3	40	450	0.04	45	1.25	10	✓	1.2 to 15	-	✓	SOIC-8EP

DDR MEMORY POWER | AUTOMOTIVE

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (mA)	Accuracy for VTT _{REF} (mV)	Driver (V)	Package	Notes
MPQ20073-AEC1	1.3	6	2	30	3.3	MSOP-8E	DDR2/3 termination regulator

DISPLAY POWER & CONTROL | AUTOMOTIVE

Backlighting

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Topology	# of Channels	I _{OUT} per Channel (mA)	f _{SW} (kHz)	Dimming Modes	LED Protection	Channel Current Matching (%)	Interface	Wettable Flank QFN Option	Package	Notes
MPQ3362-AEC1	3	42	Boost	1	-	200 to 2200	PWM, Analog	Open, Short	-	-	-	TSOT23-8	4A current limit, low R _{DS(ON)} soft start
N MPQ3359-AEC1	3.5	42	Boost/SEPIC	4	150	200 to 2200	PWM, Analog, Mixed	Open, Short	2.5%	PWM	✓	QFN-20 (3x4)	Separated PWM and analog dimming pin
N MPQ3359A-AEC1	3.5	42	Boost/SEPIC	1/2 / 3/4	150	200 to 2200	PWM, Analog, Mixed	Open, Short	2.5%	PWM	✓	QFN-20 (3x4)	Separated PWM and analog dimming pin
MPQ3364-AEC1	3.5	42	Boost/SEPIC	4	150	200 to 2200	PWM, Analog, Mixed	Open, Short	2.5%	I ² C	✓	QFN-24 (4x4)	Three selectable IC addresses
S MPQ3365-AEC1	3.5	42	Boost/SEPIC	4	150	200 to 2200	PWM, Analog, Mixed	Open, Short	2.5%	I ² C	✓	QFN-24 (4x4)	Three selectable IC addresses, I ² C dimming
S MPQ3365A-AEC1	3.5	42	Boost/SEPIC	5	150	200 to 2200	PWM, Analog, Mixed	Open, Short	2.5%	I ² C	✓	QFN-24 (4x4)	Three selectable IC addresses, I ² C dimming
MPQ3386-AEC1	4.5	30	Boost	6	30	625 or 1250	PWM, Analog	Open, Short	3%	-	✓	QFN-24 (4x4)	-
MPQ3387L-AEC1	3	30	Boost	6	45	500 or 1250	PWM, Mixed	Open, Short	3%	-	-	QFN-24 (4x4)	-
MPQ3369-AEC1	3.5	42	Boost/SEPIC	6	100	200 to 2200	PWM, Analog, Mixed	Open, Short	2.5%	I ² C	✓	QFN-24 (4x4), TSSOP-28EP	Spread spectrum, thermal derating, fault pin, rich protection features
MPQ3367-AEC1	3.5	42	Boost/SEPIC	6	150	200 to 2200	PWM, Analog, Mixed	Open, Short	2.5%	I ² C	✓	QFN-24 (4x4), TSSOP-28EP	Spread spectrum, thermal derating, fault pin, rich protection features
MPQ3367A-AEC1	3.5	42	Boost/SEPIC	6	150	200 to 2200	PWM, Analog, Mixed	Open, Short	2.5%	I ² C	✓	QFN-24 (4x4)	MPQ3367-AEC1 features, three prog. addresses
S MPQ3359C-AEC1	3.5	42	Boost/SEPIC	4	160	200 to 2200	PWM, Analog, Mixed	Open, Short	2.5%	PWM	✓	QFN-20 (3x4)	External FET, separated PWM and analog dimming
S MPQ3366C-AEC1	3.8	42	Boost/SEPIC	6	200	200 to 2200	PWM, Analog, Mixed	Open, Short	2.5%	I ² C	✓	QFN-24 (4x4)	External FET, four selectable IC addresses, I ² C dimming
S MPQ3368-AEC1	3.8	42	Boost/SEPIC	8	200	200 to 2200	PWM, Analog, Mixed	Open, Short	2.5%	I ² C	✓	QFN-24 (4x4)	External FET, four selectable IC addresses, I ² C dimming

RGB LED Drivers

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Topology	# of Channels	I _{OUT} per Channel (mA)	Dimming Modes	LED Protection	Channel Current Matching (%)	Interface	Wettable Flank QFN Option	Package	Notes
MPQ3323B-AEC1	4.5	16	Linear	4	320	PWM, Analog	Open, Short	2%	I ² C	✓	QFN-24 (4x4)	Independent channel control, daisy-chainable, digital config.
MPQ3324-AEC1	4	16	Linear	8	100	PWM, Analog	Open, Short	2%	I ² C	✓	QFN-24 (4x4)	Independent channel control, daisy-chainable, digital config.

RGB LED Drivers

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Topology	# of Channels	I _{OUT} per Channel (mA)	Dimming Modes	LED Protection	Channel Current Matching (%)	Interface	Wettable Flank QFN Option	Package	Notes
MPQ3326-AEC1	4	16	Linear	16	50	PWM, Analog	Open, Short	2%	I ² C	✓	QFN-24 (4x4)	I ² C input logic voltage: (V _{IL_MAX} : 0.4V, V _{IH_MIN} : 1.3V)
MPQ3326-AEC1-C03Q	4	16	Linear	16	50	PWM, Analog	Open, Short	2%	I ² C	✓	QFN-24 (4x4)	I ² C input logic voltage: (V _{IL_MAX} : 0.4V, V _{IH_MIN} : 1.3V)
MPQ3326A-AEC1	4.5	16	Linear	16	80	PWM, Analog	Open, Short	2%	I ² C	✓	QFN-24 (4x4)	I ² C input logic voltage: (V _{IL_MAX} : 0.4V, V _{IH_MIN} : 1.3V)
MPQ3326B-AEC1	4.5	16	Linear	16	80	PWM, Analog	Open, Short	2%	I ² C	✓	QFN-24 (4x4)	I ² C input logic voltage: (V _{IL_MAX} : 0.8V, V _{IH_MIN} : 1.5V)
S MPQ3322-AEC1	3.5	22	Linear	24	100	PWM, Analog	Open, Short	3%	CAN	✓	QFN-24 (4x4)	LED current slew rate, phase shift, adaptive voltage feedback, failsafe mode
S MPQ3621-AEC1	3	11	Linear	48	50	PWM, Analog	Open, Short	3%	SPI	✓	QFN-24 (4x4)	LED current slew rate, phase shift, adaptive voltage feedback
S MPQ3321-AEC1	3	22	Linear	48	80	PWM, Analog	Open, Short	3%	SPI	✓	QFN-24 (4x4)	LED current slew rate, phase shift, adaptive voltage feedback
S MPQ3327-AEC1	3.5	20	Switch	-	-	-	-	-	SPI, GPIO	✓	QFN-14 (3x3)	BA, 4 switching line scan driver for local dimming, combined with the MPQ3321 for scanning scheme

LED Drivers for Illumination & Signaling

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Topology	Max Current (A)	Current Limit (Typ) (A)	R _{DS(on)} (mΩ)	Dimming Modes	f _{SW} (kHz)	LED Protection	Spread Spectrum	Fault Pin	Wettable Flank QFN Option	Package	Notes
MPQ2489-AEC1	6	55	Low-Side Buck	1.4	Adj	500	PWM, Analog	200 to 600	Open, Short	-	-	-	QFN-6 (3x3)	-
MPQ2483A-AEC1	4.5	55	Buck, Buck-Boost	2.5	3	280	PWM, Analog	250 to 1350	Open, Short	-	-	-	QFN-10 (3x3), SOIC-14	Output SCP
MPQ24833-B-AEC1	4.5	55	Buck, Buck-Boost, Boost	3	6	150	PWM, Analog	420	Open, Short	-	-	-	SOIC-8E	Output SCP
MPM6010-AEC1	4	40	Buck	1.5	4	85/50	PWM	2200	Open, Short	-	✓	✓	QFN-17 (3x5x1.6)	Module with int. inductor and BST/VCC capacitors, sync operation, output OCP
MPQ4425A-AEC1	4	40	Buck	1.5	4	85/50	PWM	2200	Open, Short	-	✓	✓	QFN-13 (2.5x3)	Synchronous operation, output OCP
MPQ4425B-AEC1	4	40	Buck	1.5	4	85/50	PWM	410	Open, Short	-	✓	✓	QFN-13 (2.5x3)	Synchronous operation, output OCP
MPQ4425C-AEC1	4	40	Buck	1.5	4	85/50	PWM	2200	Open, Short	-	✓	✓	QFN-13 (2.5x3)	Alternative fault indicator behavior at EN off and soft-start time
MPQ7200-AEC1	6	42	Buck, Buck-Boost	3 (Buck) 1.2 (Buck-Boost)	6	44/40	PWM	2300 Buck, 1500 Buck-Boost	Open, Short	✓	✓	✓	QFN-19 (3x4)	Int. current-sense resistor, band-band control loop, OCP with latch, OVP, thermal shutdown
MPQ7200A-AEC1	6	42	Buck, Buck-Boost	3 (Buck) 1.2 (Buck-Boost)	6	44/40	PWM	410	Open, Short	✓	✓	✓	QFN-19 (3x4)	Int. current-sense resistor, band-band control loop, OCP with latch, OVP, thermal shutdown
MPQ2484-AEC1	4.5	45	Buck, Boost, Buck-Boost	Controller	Adj	-	PWM, Analog	100 to 2200	Open, Short	✓	-	-	TSSOP-28EP	Cycle-by-cycle current limit, output OVP, fault flag output

DISPLAY POWER & CONTROL | AUTOMOTIVE

LED Drivers for Illumination & Signaling

	Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Topology	Max Current (A)	Current Limit (Typ) (A)	R _{DS(on)} (mΩ)	Dimming Modes	f _{sw} (kHz)	LED Protection	Spread Spectrum	Fault Pin	Wettable Flank QFN Option	Package	Notes
N	MPQ7210-AEC1	4.5	65	Dual Buck	2	3.5	235/235	PWM, Analog	220, 420, 1000	Short	✓	✓	✓	QFN-26 (5x5)	Dual outputs, UVP, OCP, failsafe (FS) pin, SPI interface
P	MPQ7212-AEC1	4.5	70	Dual Buck	2	3.5	200/150	PWM, Analog	220, 420, 800, 1100, 2200	Open, Short	✓	✓	-	TQFP-48 (7x7)	Dual outputs, UVP, OCP, up to 7x MPIO pins, SPI or UART interface, top-side cooling, 48V compatible
P	MPQ7213-AEC1	4.5	70	Triple Buck	3	3.5	200/150	PWM, Analog	220, 420, 800, 1100, 2200	Open, Short	✓	✓	-	TQFP-48 (7x7)	Triple outputs, UVP, OCP, up to 6x MPIO pins, SPI or UART interface, top-side cooling, 48V compatible
P	MPQ76100FS-AEC1	4.5	70	Dual Buck	2	3.5	200/150	PWM, Analog	220, 420, 800, 1100, 2200	Open, Short	✓	✓	-	TQFP-48 (7x7)	MPSafe™, ASIL-B, dual outputs, UVP, OCP, up to 7x MPIO pins, SPI or UART interface, top-side cooling, 48V compatible
P	MPQ76130FS-AEC1	4.5	70	Triple Buck	3	3.5	200/150	PWM, Analog	220, 420, 800, 1100, 2200	Open, Short	✓	✓	-	TQFP-48 (7x7)	MPSafe™, ASIL-B, triple outputs, UVP, OCP, up to 6x MPIO pins, SPI or UART interface, top-side cooling, 48V compatible
S	MPQ76350FS-AEC1	4	40	Dual Buck	7	13	21/9	-	410, 1000, 2200	-	✓	✓	✓	QFN-28 (5x6)	MPSafe™, ASIL-B, digital, constant-voltage dual outputs, ADC for diagnostics, UART or SPI digital interface
S	MPQ76352FS-AEC1	4	40	Buck	7	13	21/9	-	410, 1000, 2200	-	✓	✓	✓	QFN-28 (5x6)	MPSafe™, ASIL-B, digital, constant-voltage single output, ADC for diagnostics, UART or SPI digital interface

Multi-Channel LED Drivers & Matrix Managers for Dynamic Lighting

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Topology	# of Channels	I _{out} per Channel (mA)	f _{sw} (kHz)	Dimming Modes	LED Protection	Spread Spectrum	Channel-to-Channel Current Accuracy (%)	Interface	Wettable Flank QFN Option	Package	Notes
	MPQ7220-AEC1	3.5	40	Boost + Linear	6	100	200, 400, 1000, 2200	PWM, Analog	Open, Short	✓	2.5%	-	-	QFN-24 (4x4), TSSOP-28EP	External sync SW function disconnects V _{out} from V _{IN} cycle-by-cycle current limit
	MPQ7221-AEC1	4	18	Linear	16	80	-	PWM, Analog	Open, Short	-	2%	I ² C	✓	QFN-24 (4x4)	6-bit analog dimming per channel, 12-bit PWM dimming per channel, refresh signal output
S	MPQ7222-AEC1	3.5	22	Linear	24	100	-	PWM, Analog	Open, Short	✓	3%	Differential Interface	✓	QFN-40 (6x6)	Current sink LED driver, adaptive feedback control (AFC), 12-bit PWM or 6-bit analog dimming, safety suite
	MPQ7225-AEC1	2.5	20	Linear	16	200	-	PWM, Analog	Open, Short	✓	5%	Differential Interface	✓	QFN-32 (5x6)	Current sink LED driver, adaptive feedback control (AFC), 12-bit PWM or 6-bit analog dimming, safety suite
S	MPQ7250-AEC1	4.5	40	Linear	3	200	-	PWM	Open, Short	-	5%	-	✓	QFN-20 (4x4)	Current sink LED driver, 3x independent PWM pins, shunt resistors for thermal sharing, single LED short, LED binning resistor input
P	MPQ76300FS-AEC1	3.5	28	Linear	24	100	-	PWM, Analog	Open, Short	✓	3%	UART	-	TQFP-48 (7x7)	MPSafe™, ASIL-B current sink LED driver, adaptive digital feedback control, limp home mode, ADC, enhanced UART protocol

Multi-Channel LED Drivers & Matrix Managers for Dynamic Lighting

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Topology	# of Channels	I _{OUT} per Channel (mA)	f _{SW} (kHz)	Dimming Modes	LED Protection	Spread Spectrum	Channel-to-Channel Current Accuracy (%)	Interface	Wettable Flank QFN Option	Package	Notes
P MPQ7241U -AEC1	4.5	65	Matrix Manager	12	1500	-	PWM, Analog	Open, Short	-	-	Differential Interface	✓	QFN-40 (6x6)	12 dimming switches, 10-bit or 8-bit PWM dimming, LED open/short protection, thermal shutdown
P MPQ76400FS -AEC1	4.5	65	Matrix Manager	16	1600	-	PWM, Analog	Open, Short	-	-	UART	-	TQFP-48 (7x7)	MPSafe™, ASIL-B, 16 dimming switches, built-in charge pump, 20V switch to switch handling, 4x LED groupings, limp home mode

Infrared (IR) LED Drivers for Driver Monitoring Systems

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Topology	Max Current (A)	LED Current Accuracy (%)	R _{DS(on)} (mΩ)	Dimming Modes	f _{SW} (kHz)	LED Protection	Spread Spectrum	Fault Pin	Wettable Flank QFN Option	Package	Notes
P MPQ7230 -AEC1	6	50	Buck, Buck-Boost	3 (Buck) 2.4 (Buck-Boost)	5%	44/40	PWM	410	Open, Short	✓	✓	✓	QFN-19 (3x4)	Integrated current-sense resistor, fast transient response
P MPQ7231 -AEC1	6	50	Buck, Buck-Boost	3 (Buck) 2.4 (Buck-Boost)	5%	44/40	PWM	1150, 2400	Open, Short	✓	✓	✓	QFN-19 (3x4)	Dimming on-time limit (1ms/3ms/5ms) for eye safety, low dimming frequency to 10Hz, int. current-sense resistor
S MPQ7232 -AEC1	4.2	40	Buck	6	5%	45/30	PWM	2400	Open, Short	✓	✓	✓	QFN-15 (3x4)	10Hz to 2kHz PWM dimming frequency, compatible with 30FPS/60FPS/120FPS dimming
S MPQ7235 -AEC1	4	40	Buck	3	5%	85/50	PWM	2200	Open, Short	-	✓	✓	QFN-13 (2.5x3)	10Hz to 2kHz PWM dimming frequency, compatible with 30FPS/60FPS/120FPS dimming
S MPQ76230FS -AEC1	4.5	40	Pre-Boost + Buck	10	5%	25/25	PWM	420, 2200	Open, Short	✓	✓	✓	QFN-21 (4x4)	MPSafe™, ASIL-C, ADC for diagnostics, 2-stage design enables device to be powered off, power over coaxial DMS application

Display PMICs

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Regulator Blocks	Output Voltage (V)	Current Limit (Typ) (A)	Interface	Package	Notes
S MPQ5613A-AEC1	2.7	12	1x Boost for V _{DDP} ; 1x 0.05A Pos Charge Pump for V _{GH} ; 1x 0.05A Neg Charge Pump for V _{GL} ; 1x 0.025A V _{COM} Buffer	V _{DDP} : 2.7V to 21.9V Configurable; V _{GH} : 5V to 43.2V Configurable; V _{GL} : -15.9V to 0V Configurable; V _{COM} : 0V to 19.8V Configurable	V _{DDP} : 2.5A	I ² C (1x OTP)	QFN-28 (4x5)	LCD bias power supply
S MPQ5613B-AEC1	2.7	5.7	1x Boost for V _{DDP} ; 1x Buck-Boost for V _{DDN} ; 1x 0.05A Positive Charge Pump for V _{GH} ; 1x 0.05A Negative Charge Pump for V _{GL} ; 1x 0.025A V _{COM} Buffer	V _{DDP} : 2.7V to 9V Configurable; V _{DDN} : -10.3V to -0.7V Configurable; V _{GH} : 5V to 32V Configurable; V _{GL} : -15.9V to 0V Configurable; V _{COM} : -5V to +9.67V Configurable	V _{DDP} : 1.8A V _{DDN} : 1.8A	I ² C (1x OTP)	QFN-28 (4x5)	LCD bias power supply
S MPQ5613-AEC1	2.7	12	1x Boost for V _{DDP} ; 1x Buck-Boost for V _{DDN} ; 1x 0.05A Positive Charge Pump for V _{GH} ; 1x 0.05A Negative Charge Pump for V _{GL} ; 1x 0.025A V _{COM} Buffer	V _{DDP} : 2.7V to 21.9V Configurable; V _{DDN} : -16.6V to -0.7V Configurable; V _{GH} : 5V to 43.2V Configurable; V _{GL} : -15.9V to 0V Configurable; V _{COM} : -13.21V to +19.8V Configurable	V _{DDP} : 2.5A V _{DDN} : 2.5A	I ² C (1x OTP)	QFN-28 (4x5)	LCD bias power supply

MONITORING & SUPERVISION | AUTOMOTIVE

Voltage Supervisors & Monitors (Reset ICs)

Part Number	# of Channels	V_{IH} (Min) (V)	V_{IH} (Max) (V)	Reset Threshold (V)	Threshold Accuracy (%)	I_q (Typ) (μ A)	Reset Delay	Package	Notes
MPQ6400-33-AEC1	1	1.8	5.5	2.93	± 1.0	1.6	2ms to 10s	QFN-6 (2x2)	Capacitor-set delay, reset output to MCU
MPQ6400-01-AEC1	1	1.8	5.5	Adj	± 1.0	1.6	2ms to 10s	QFN-6 (2x2)	Capacitor-set delay, reset output to MCU
N MPQ79500FS-AEC1	6	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™, ASIL-D voltage monitor with prog. features via I ² C
N MPQ79501FS-AEC1	6	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™, ASIL-B voltage monitor with prog. features via I ² C
S MPQ79504FS-AEC1	6	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™, ASIL-B voltage monitor with prog. features via I ² C, watchdog timer
S MPQ79505FS-AEC1	6	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™, ASIL-D voltage monitor with prog. features via I ² C, watchdog timer
S MPQ79520FS-AEC1	5	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™, ASIL-D voltage monitor with prog. features via I ² C
S MPQ79521FS-AEC1	5	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™, ASIL-B voltage monitor with prog. features via I ² C
S MPQ79524FS-AEC1	5	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™, ASIL-B voltage monitor with prog. features via I ² C, watchdog timer
S MPQ79525FS-AEC1	5	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™, ASIL-D voltage monitor with prog. features via I ² C, watchdog timer
S MPQ79530FS-AEC1	3	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™ ASIL-D voltage monitor with prog. features via I ² C
S MPQ79531FS-AEC1	3	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™ ASIL-B voltage monitor with prog. features via I ² C
S MPQ79534FS-AEC1	3	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™ ASIL-B voltage monitor with prog. features via I ² C, watchdog timer
S MPQ79535FS-AEC1	3	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™ ASIL-D voltage monitor with prog. features via I ² C, watchdog timer
S MPQ79540FS-AEC1	1	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™ ASIL-D voltage monitor with prog. features via I ² C
S MPQ79541FS-AEC1	1	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™ ASIL-B voltage monitor with prog. features via I ² C
S MPQ79544FS-AEC1	1	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™ ASIL-B voltage monitor with prog. features via I ² C, watchdog timer
S MPQ79545FS-AEC1	1	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	MPSafe™ ASIL-D voltage monitor with prog. features via I ² C, watchdog timer
S MPQ7940-AEC1	6	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	QM voltage monitor with prog. features via I ² C
S MPQ7940W-AEC1	6	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	QM voltage monitor with prog. features via I ² C, watchdog timer
S MPQ7942-AEC1	5	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	QM voltage monitor with prog. features via I ² C
S MPQ7942W-AEC1	5	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	QM voltage monitor with prog. features via I ² C, watchdog timer
S MPQ7943-AEC1	3	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	QM voltage monitor with prog. features via I ² C
S MPQ7943W-AEC1	3	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	QM voltage monitor with prog. features via I ² C, watchdog timer
S MPQ7944-AEC1	1	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	QM voltage monitor with prog. features via I ² C
S MPQ7944W-AEC1	1	2.7	5.5	Adj	± 0.5	560	Adj	QFN-16 (3x3)	QM voltage monitor with prog. features via I ² C, watchdog timer

Watchdog Timers

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Reset Threshold (V)	Short Window Mode	Long Window Mode	Disable Input	I _O (Typ) (µA)	Package
MPQ6411-AEC1	4.5	5.5	4.5	✓	✓	✓	16	SOIC-8
MPQ6411-33-AEC1	3	3.6	2.9	✓	✓	✓	10	SOIC-8

Power Sequencers

Part Number	# of Channels	V _{IN} (Min) (V)	V _{IN} (Max) (V)	32kHz Crystal Oscillator Driver	RTC	System Reset Signal	Watchdog Timer	Package	Notes
N MPQ79700FS-AEC1	12	2.7	5.5	✓	✓	✓	✓	QFN-24 (4x4)	MPSafe™, ASIL-D, prog. features via I ² C
S MPQ79701FS-AEC1	12	2.7	5.5	✓	✓	✓	✓	QFN-24 (4x4)	MPSafe™, ASIL-B, prog. features via I ² C
S MPQ79710FS-AEC1	10	2.7	5.5	✓	✓	✓	✓	QFN-24 (4x4)	MPSafe™, ASIL-D, prog. features via I ² C
S MPQ79711FS-AEC1	10	2.7	5.5	✓	✓	✓	✓	QFN-24 (4x4)	MPSafe™, ASIL-B, prog. features via I ² C
S MPQ79720FS-AEC1	8	2.7	5.5	✓	✓	✓	✓	QFN-24 (4x4)	MPSafe™, ASIL-D, prog. features via I ² C
S MPQ79721FS-AEC1	8	2.7	5.5	✓	✓	✓	✓	QFN-24 (4x4)	MPSafe™, ASIL-B, prog. features via I ² C
S MPQ79730FS-AEC1	6	2.7	5.5	✓	✓	✓	✓	QFN-24 (4x4)	MPSafe™, ASIL-D, prog. features via I ² C
S MPQ79731FS-AEC1	6	2.7	5.5	✓	✓	✓	✓	QFN-24 (4x4)	MPSafe™, ASIL-B, prog. features via I ² C
S MPQ7960-AEC1	12	2.7	5.5	✓	✓	✓	✓	QFN-24 (4x4)	QM, prog. features via I ² C
S MPQ7961-AEC1	10	2.7	5.5	✓	✓	✓	✓	QFN-24 (4x4)	QM, prog. features via I ² C
S MPQ7962-AEC1	8	2.7	5.5	✓	✓	✓	✓	QFN-24 (4x4)	QM, prog. features via I ² C
S MPQ7963-AEC1	6	2.7	5.5	✓	✓	✓	✓	QFN-24 (4x4)	QM, prog. features via I ² C

Current-Sense Monitors

Part Number	Common-Mode Voltage (Max) (V)	Common-Mode Voltage (Min) (V)	Supply Voltage (Max) (V)	Supply Voltage (Min) (V)	Input Offset (±) (Max) (mV)	Voltage Gain (V/V)	Gain Error (Max) (%)	Common-Mode Rejection (Min) (dB)	Bandwidth (Typ) (kHz)	I _O (Max) (µA)	Package	Notes
MPQ8112-AEC1	60	2.7	60	2.7	1	50	2	65	300	360	TSOT-23-6	-
MPQ8112A-AEC1	60	2.7	60	2.7	1	Adjustable	2	65	300	360	TSOT-23-6	-
MPQ8113-AEC1	60	2.7	60	2.7	1	50	2	65	300	360	TSOT-23-6	Adjustable maximum output voltage
MPQ8113A-AEC1	60	2.7	60	2.7	1	Adjustable	2	65	300	360	TSOT-23-6	Adjustable maximum output voltage

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USB PD Solutions

Buck-Boost for USB PD

	Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _Q (Typ) (mA)	f _{SW} (kHz)	USB PD	Battery Short Protection	Frequency Spread Spectrum	Int USB Switch	Line Drop Compensation	I ² C	EM Shutdown Discharge	Load-Shedding Send Alert	Package	Notes
	MPQ4214-AEC1 (Controller)	4	45	-	-	Selectable	✓	✓	✓	-	✓	✓	-	QFN-27 (5x5)	Sync, FCCM	
	MPQ4210-AEC1 (Controller)	4	45	-	-	Selectable	✓	✓	✓	-	✓	✓	-	QFN-27 (5x5)	Output current monitoring	
	MPQ4262-AEC1 (Hybrid)	3.6	40	5	0.13	Selectable	✓	✓	✓	-	✓	✓	✓	QFN-20 (3x5)	36V, 100W, two int. FETs, 98% peak efficiency	
	MPQ4263-AEC1 (Hybrid)	3.6	40	5	0.135	Selectable	✓	✓	✓	-	✓	✓	✓	QFN-20 (3x5)	36V, 100W, two int. FETs, 98% peak efficiency, high-side current sense	
N	MPQ4232-AEC1	4.3	40	5	0.13	Selectable	✓	✓	✓	-	✓	✓	✓	QFN-19 (4x5)	22V, 60W, 4-switch converter with advanced protection, 1V to 22V V _{OUT} range	
S	MPQ4232A-AEC1	3	40	6	0.13	Selectable	✓	✓	✓	-	✓	✓	✓	QFN-19 (4x5)	36V, 60W, 4-switch converter, 1V to 24V V _{OUT} range, P2P with MPQ4232-AEC1	

USB PD Solutions

Buck for USB PD

	Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _Q (Typ) (mA)	f _{SW} (kHz)	USB PD	Battery Short Protection	Frequency Spread Spectrum	Int USB Switch	Line Drop Compensation	I ² C	EM Shutdown Discharge	Load-Shedding Send Alert	Package	Notes
	MPQ4272-AEC1 (Dual)	1	40	6 2x (3A)	0.3	Selectable	✓	✓	✓	✓	✓	✓	✓	QFN-21 (4x5)	Dual-channel	
N	MPQ8880A-AEC1	4	60	4.5	0.093/ 0.008	Adjustable	✓	-	✓	-	✓	✓	-	QFN-20 (4x5)	Supports PD3.1 EPR 240W and AVS	
S	MPQ4583-AEC1	4.5	95	0.8	0.009	400	✓	-	✓	-	-	✓	-	QFN-19 (3x5)	Ultra-low I _Q	
S	MPQ9934-AEC1 (Controller)	5.5	85	30	0.4	Adjustable	✓	-	✓	-	✓	✓	-	QFN-23 (4x4)	GaN driver capability	

USB PD Solutions

Controllers for USB PD

	Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Dual/Single Ports	I _{OUT} (A)	I _Q (Typ) (mA)	BC 1.2 DCP (Data)	BC 1.2 DCP (Power)	1.2V/1.2V Mode	Divider Mode 3	QC2.0/QC3.0	Type-C DFP (w/o PD)	Type-A Mode	Load-Shedding	Battery Short Protection	Int USB Switch	Line Drop Compensation	USB Discharge	Fault Indication	Client Mode	Wettable Flank QFN Option	Package	Notes
	MPQ5031-AEC1 (PD)	4.5	5.5	Single	5	0.1	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	-	-	✓	QFN-20 (4x4)	USB PD 3.0+ PPS controller, meets PowerShare specs	
N	MPQ5038-AEC1 (PD)	4.5	5.5	Single	5	0.1	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	-	-	✓	QFN-20 (4x4)	USB PD 3.0+ PPS controller, 7 LDOs, P2P with MPQ5031, meets PowerShare specs	
N	MPF52000-AEC2	4.6	5.5	Dual	-	0.007	✓	✓	✓	✓	✓	✓	✓	✓	-	-	✓	✓	-	✓	QFN-24 (4x4)	USB PD3.1, MCU-based controller	
N	MPF52001-AEC2	4.6	5.5	Single	-	0.007	✓	✓	✓	✓	✓	✓	✓	✓	-	-	✓	✓	-	✓	QFN-24 (4x4)	USB PD3.1, MCU-based controller, supports DP	
N	MPF52003-AEC2	4.6	5.5	Triple	-	0.007	✓	✓	✓	✓	✓	✓	✓	✓	-	-	✓	✓	-	✓	QFN-40 (5x5)	USB PD3.1, MCU-based controller	

USB PD Solutions

All-in-One USB PD Solutions

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Dual/Single Ports	I _{OUT} (A)	I _O (Typ) (mA)	f _{SW} (kHz)	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode 3	QC2.0/QC3.0 FCP Mode	Type-C DFP (w/o PD)	Type-A Mode	Load-Shedding	Battery Short Protection	Int USB Switch	Line Drop Compensation	USB Discharge	Package	Notes
MPQ4242-AEC1	4	40	Single	3	0.1	Selectable	✓	✓	✓	✓	-	✓	✓	-	✓	✓	QFN-22 (4x5)	Buck-boost int., supports PD3.0/QC4+ BC1.2/QC3+FCP protocols	
N MPQ4242B-AEC1	4	40	Single	3	0.1	Selectable	✓	✓	✓	✓	-	✓	✓	-	✓	✓	QFN-22 (4x5)	Buck-boost int., supports PD3.1/QC4+ BC1.2/QC3+FCP protocols	
N MPQ4241-AEC1	4.5	24	Single	3	0.15	Selectable	✓	✓	✓	✓	-	✓	✓	-	✓	✓	QFN-21 (3x4)	Buck int., supports PD3.1/QC4+ BC1.2/QC3+FCP protocols	

All-In-One USB Type-C/A Charging-Only Port Solutions

Dual USB Type-C/A Charging Port Solutions (Buck with Integrated CLS, Protocol Detection)

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Dual/Single Ports	I _{OUT} (A)	I _O (Typ) (mA)	f _{SW} (kHz)	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode 3	Type-C DFP (w/o PD)	Type-A Mode	Load-Shedding	Frequency Spread Spectrum	Int USB Switch	Line Drop Compensation	USB Discharge	Package	Notes
MPQ4487A-AEC1	6	40	Dual	3 (x2)	1	Selectable	-	-	-	✓	✓	✓	✓	✓	✓	✓	QFN-26 (5x5)	Meets latest MFI3.3 specs
MPQ4488B-AEC1	6	40	Dual	3 (x2)	1	Adjustable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-26 (5x5)	Meets latest MFI3.3 specs
N MPQ4253-AEC1	6	40	Dual	3 (x2)	0.054	Selectable	✓	✓	✓	✓	(Type-C)	-	✓	✓	✓	✓	QFN-26 (5x5)	Low I _O
N MPQ4276-AEC1	6	40	Dual	3 (x2)	0.8	Adjustable	-	-	-	✓	-	✓	-	✓	✓	✓	QFN-26 (5x5)	USB 1/2 fault indication, PFM mode, EN and FAULT pins for USB 1/2
MPQ4253B-AEC1	6	40	Dual	3 (x2)	0.054	Selectable	✓	✓	✓	✓	(Type-C)	-	✓	✓	✓	✓	QFN-26 (5x5)	MFI OCP current > 4.8A
S MPQ4252-AEC1	6	36	Dual	3 (x2)	0.3	420	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-19 (3x5)	Smaller size, cost-effective
S MPQ4257	6	36	Dual	3 (x2)	0.3	420	-	-	-	✓	✓	✓	✓	✓	✓	✓	QFN-16 (3x4)	Separate enable control and fault indication, smaller size, cost-effective

All-In-One USB Type-C/A Charging-Only Port Solutions

Single USB Type-C/A Charging Port Solutions (Buck with Integrated CLS, Protocol Detection)

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Dual/Single Ports	I _{OUT} (A)	I _O (Typ) (mA)	f _{SW} (kHz)	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode 3	QC2.0	QC3.0	Type-C DFP (w/o PD)	Type-A Mode	Load-Shedding	Battery Short Protection	Low-Dropout Mode	Frequency Spread Spectrum	Int USB Switch	Line Drop Compensation	EN Shutdown Compensation	USB Discharge	Fault Indication	Wettable Flank QFN Option	Package	Notes
MPQ4475E-AEC1	7	40	Single	2.5	1.6	Selectable	✓	✓	✓	-	-	✓	-	-	✓	✓	✓	✓	✓	✓	✓	-	QFN-25 (4x4)	Prog. line drop compensation	
MPQ4228-AEC1	4.2	40	Single	3	-	Selectable	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-22 (4x4)	Type-C 5V/3A, DFP port
MPQ4228Q-AEC1	4.2	40	Single	3	-	Selectable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-22 (4x4)	-
S MPQ4251-AEC1	6	36	Single	3	0.3	420	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	✓	QFN-19 (3x5)	Smaller size, cost-effective

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All-In-One Data Port Products

Dual USB Type-C/A Charging Data Ports (Buck with Integrated CLS, USB 2.0 Data Switch, Protocol Detection)

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Dual/Single Ports	I _{OUT} (A)	I _O (Typ) (mA)	BC 1.2 CDP (Data)	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode	QC2.0/QC3.0	Type-C DFP (w/o PD)	Type-A Mode	Load-Shedding	Int USB Switch	Line Drop Compensation	USB Discharge	Package	Notes
MPQ4485-AEC1	6	40	Dual	3 (x2)	-	450	(USB2)	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-26 (5x5)	FCCM

All-In-One Data Port Products

Single USB Type-C/A Charging Data Ports (Buck + Integrated CLS, USB 2.0 Data Switch, Protocol Detection)

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Dual/Single Ports	I _{OUT} (A)	I _O (Typ) (mA)	f _{SW} (kHz)	BC 1.2 CDP (Data)	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode	Type-C DFP (w/o PD)	Type-A Mode	Load-Shedding	Battery Short Protection	Low-Dropout Mode	Frequency Spread Spectrum	Int USB Switch	Line Drop Compensation	EN Shutdown Discharge	USB Discharge	Wettable Flank QFN Option	Package	Notes
MPQ4228-C-AEC1	4.2	40	Single	3	-	Selectable	✓	-	-	-	✓	✓	✓	-	✓	✓	(Adj)	✓	✓	✓	✓	QFN-22 (4x4)	Supports CDP mode
MPQ4483-AEC1	4.2	40	Single	3	-	Selectable	✓	✓	-	-	-	✓	✓	-	✓	✓	(Adj CC Limit)	✓	✓	-	✓	QFN-25 (4x5)	Supports BC1.2 DCP and CDP modes, bidirectional USB 2.0 high-speed data switch, 3.55A/3.75A CC I _{OUT} limit
MPQ4483-FD-AEC1	4.2	40	Single	3	-	Adjustable	✓	✓	-	-	-	✓	✓	✓	✓	✓	(Adj CC Limit)	✓	✓	-	✓	QFN-25 (4x5)	Supports BC1.2 DCP and CDP modes, bidirectional USB 2.0 high-speed data switch, 3.55A/3.75A CC I _{OUT} limit
S MPQ4229-C-AEC1	4.2	40	Single	3	-	Selectable	✓	-	-	-	✓	✓	✓	-	✓	✓	(Adj)	✓	✓	✓	✓	QFN-22 (4x4)	P2P with MPQ4228-C, up to 1.5V line drop comp.

USB Type-C/A Port Controllers and Buck Products

Buck Only

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _O (Typ) (mA)	f _{SW} (kHz)	Battery Short Protection	Low-Dropout Mode	Int USB Switch	Line Drop Compensation	EN Shutdown Discharge	Wettable Flank QFN Option	Package	Notes
MPQ4480-AEC1	4.2	40	6	1	Selectable	✓	✓	✓ (Adj CC Limit)	✓	✓	✓	QFN-25 (4x5)	-
MPQ4423C-AEC1	4	40	6	0.75	Selectable	-	-	-	-	✓	✓	QFN-16 (3x4)	-

USB Type-C/A Port Controllers and Buck Products

USB Type-C/A Charging Port Controllers

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	Dual/Single Ports	I _{OUT} (A)	I _O (Typ) (mA)	BC 1.2 CDP (Data)	BC 1.2 DCP	1.2V/1.2V Mode	Divider Mode	QC2.0/QC3.0	Type-C DFP (w/o PD)	Type-A Mode	Load-Shedding	Battery Short Protection	Int USB Switch	Line Drop Compensation	USB Discharge	Fault Indication	Client Mode	Wettable Flank QFN Option	Package	Notes
MPQ5029-AEC1	2.7	24	Single	3	0.155	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	(Adj)	(Adj)	✓	-	✓	QFN-14 (2x3)	NTC pin for thermal management, adj. OVP threshold, input OV shutdown protection
MPQ5029-C-AEC1	3	24	Single	3	0.175	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	QFN-14 (2x3)	-

Wireless Charging Solutions

Step-Down/Step-Up Converters

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	I _{OUT} (A)	I _Q (Typ) (mA)	f _{SW} (kHz)	Battery Short Protection	Frequency Spread Spectrum	Line Drop Compensation	I ² C	EN Shutdown Discharge	Load-Shedding Send Alert	Package	Notes
MPQ4262-AEC1 (Hybrid)	3.6	40	5	0.13	Selectable	✓	✓	✓	✓	✓	✓	QFN-20 (3x5)	36V, 100W, two int. FETs, 98% peak efficiency
MPQ4263-AEC1 (Hybrid)	3.6	40	5	0.13	Selectable	✓	✓	✓	✓	✓	✓	QFN-20 (3x5)	36V, 100W, two int. FETs, 98% peak efficiency, high-side current sense
N MPQ4232-AEC1	4.3	40	5	0.13	Selectable	✓	✓	✓	✓	✓	✓	QFN-19 (4x5)	22V/5A, 60W, 4-switch converter with advanced protection
S MPQ4232A-AEC1	3	40	6	0.13	Selectable	✓	✓	✓	✓	✓	✓	QFN-19 (4x5)	36V/6A, 60W, 4-switch converter, P2P with MPQ4232-AEC1

Wireless Charging Solutions

Full-Bridge Power Stages for Highly Integrated Wireless Power Transmitters

Part Number	H-Bridge V _{IN} (Min) (V)	H-Bridge V _{IN} (Abs Max) (V)	H-Bridge I _{OUT} (A)	H-Bridge f _{SW} (kHz)	I _Q (Typ) (mA)	Buck V _{IN} (Min) (V)	Buck V _{IN} (Abs Max) (V)	Buck I _{OUT} (A)	Amplifier Accuracy	Frequency Spread Spectrum	Package	Notes
N MPQ4280-AEC1	4.7	40	15	Selectable	0.9	1	40	0.5	1%	-	QFN-22 (4x5)	Integrated 36V buck and 5V/65mA LDO
S MPQ4282-AEC1	1	32	20	Selectable	0.08	4.5	40	1.5	1%	✓	QFN-27 (4x5)	Integrated 1.5A buck

MOTOR DRIVERS | AUTOMOTIVE

Pre-Drivers

Part Number	Supply Voltage (Min) (V)	Supply Voltage (Max) (V)	V _{SW} (Max) (V)	# of Half-Bridges	Source Current (A)	Sink Current (A)	Input Control Interface	Wettable Flank Option	Package	Notes
S MPQ6590A-AEC1	7.5	80	80	-	1	1	ENBL/ON	✓	QFN-11 (3x4)	High-side MOSFET driver
MPQ1922-AEC1	5	15	100	1	3	4	INH/INL	✓	QFN-22 (4x5)	Gate driver, int. current-sense amp, interlock function
MPQ1923-AEC1	5	17	100	1	7	8	INH/INL	-	QFN-10 (4x4), QFN-8 (4x4)	High-frequency gate driver, 7.2ns/5.5ns rise/fall (1nF load)
MPQ6528-AEC1	5	60	60	2	0.8	1	EN/PWM	✓	QFN-28 (4x5)	H-bridge gate driver
N MPQ6641-AEC1	6	40	40	2	0.8	1	EN/IN, SPI	✓	QFN-32 (5x5)	H-bridge pre-driver with SPI and internal current-sense amp
N MPQ6530-AEC1	5	60	60	3	0.8	1	EN/PWM	✓	QFN-28 (4x5)	For BLDC motors
MPQ6531-AEC1	5	60	60	3	0.8	1	HS/LS	✓	QFN-28 (4x5)	For BLDC motors
MPQ6532-AEC1	5	60	60	3	0.8	1	PWM/DIR, 3 Hall Inputs	✓	QFN-28 (4x5)	Hall inputs, for BLDC
MPQ6533-AEC1	6	40	40	3	0.8	1	EN/IN, SPI	✓	QFN-32 (5x5)	Three-channel LDO regulator, current-sense amp
S MPQ6633A-AEC1	5	50	50	3	0.7	1.1	HS/LS	✓	QFN-34 (4x5)	Integrated 50mA, 2% accurate LDO and 1-channel current-sense amp

MOTOR DRIVERS | AUTOMOTIVE

Pre-Drivers

	Part Number	Supply Voltage (Min) (V)	Supply Voltage (Max) (V)	V _{sw} (Max) (V)	# of Half-Bridges	Source Current (A)	Sink Current (A)	Input Control Interface	Wettable Flank Option	Package	Notes
S	MPQ6633B-AEC1	5	50	50	3	0.7	1.1	HS/LS	✓	QFN-48 (6x6)	Integrated 50mA, 2% accurate LDO and 3-channel current-sense amp
N	MPQ6539-AEC1	8	80	80	3	0.8	1	HS/LS	-	QFN-28 (4x5)	Internal LDO for external NPN, 1-channel current-sense amp, prog. OCP
S	MPQ6632-AEC1	6	50	55	3	1	1	PWM/DC	✓	QFN-32 (4x4)	Prog. speed curve, open-/closed-loop control, 1/3 channel Hall inputs
S	MPQ6635-AEC1	6	35	40	3	1	1	PWM/DC	✓	QFN-28 (5x5)	Prog. speed curve, open-/closed-loop control, sensorless

Single/Multi Half-Bridge Drivers (Integrated MOSFET)

	Part Number	Supply Voltage (Min) (V)	Supply Voltage (Max) (V)	# of Half-Bridges	R _{DS(on)} ((HS + LS) (mΩ)	Typ Shutdown I _o (µA)	Peak Output Current (A)	Input Control Interface	Wettable Flank Option	Package	Notes
	MPQ6610-AEC1	4	55	1	220	1300	3	EN/IN	-	TSOT23-8, SOIC-8	Power driver
	MPQ8039-AEC1	7.5	28	1	100	2.5	9	PWM	-	SOIC-8E	General-purpose, high frequency, for audio amps wireless charging, etc.
	MPQ6614-AEC1	5	35	2	500	0.1	3	IN1/IN2	✓	QFN-8 (2x3)	H-bridge DC motor driver
	MPQ6519-AEC1	3	28	2	130	2	5	PWM	-	QFN-19 (4x4)	H-bridge current regulator
N	MPQ6619-AEC1	2.7	28	2	130	1	5	IN1/IN2	✓	QFN-19 (4x4)	H-bridge DC motor driver
N	MPQ6612A-AEC1	4	40	2	103	2.8	5 (RMS)	IN1/IN2	✓	QFN-18 (3x4)	H-bridge with current sense, IN1 and IN2 inputs
N	MPQ6612A-D-AEC1	4	40	2	103	2.8	5 (RMS)	ENBL/DIR	✓	QFN-18 (3x4)	H-bridge with current sense, ENBL and DIR inputs
S	MPQ6611-AEC1	2.7	32	2	40	1	8 (RMS)	SPI	✓	QFN-20 (4x4)	H-bridge with programmable slew rate
S	MPQ6611H-AEC1	2.7	32	2	40	1	8 (RMS)	Prog Control Modes	✓	QFN-20 (4x4)	H-bridge with 3 configurable input logics and programmable slew rate
	MPQ6615-AEC1	4.75	40	2	22	1	8 (RMS)	Prog Control Modes	✓	TQFN-26 (6x6)	H-bridge motor driver, int. current sense amp
	MPQ6523-AEC1	7	28	3	1100	1.5	0.9	SPI	✓	QFN-24 (4x4)	Independent half-bridge control, comprehensive protections, serial data interface up to 3MHz
	MPQ6524-AEC1	7	28	4	1100	1.5	0.9	SPI	✓	QFN-24 (4x4)	Independent half-bridge control, comprehensive protections
	MPQ6526-AEC1	7	28	6	1100	1.8	0.9	SPI	✓	QFN-24 (4x4), QFN-24 (5x5)	Independent half-bridge control, comprehensive protections
	MPQ6626-AEC1	5.5	40	6	1300	1	0.8	SPI	-	TSSOP-28EP	Independent half-bridge control, comprehensive protections, SPI interface up to 5MHz
	MPQ6628-AEC1	5.5	40	8	1300	1	0.8	SPI	-	TSSOP-28EP	Independent half-bridge control, comprehensive protections, SPI interface up to 5MHz
	MPQ6527-AEC1	5.5	40	10	1300	1	0.8	SPI	-	TSSOP-28EP	Independent half-bridge control, comprehensive protections, SPI interface up to 5MHz

Integrated BLDC Motor Drivers

Part Number	Supply Voltage (Min) (V)	Supply Voltage (Max) (V)	# of Half-Bridges	$R_{DS(on)}$ (HS + LS) (mΩ)	Typ Shutdown I_o (μA)	Peak Output Current (A)	Input Control Interface	Wettable Flank Option	Package	Notes
MPQ6517B-AEC1	3.3	16	2	850	-	2	PWM	-	TSOT23-6, TSOT23-6-SL	Single-phase BLDC, integrated Hall sensor, prog. speed curve, open-loop control
MPQ6653-AEC1	5.5	35	2	960	75 (Standby)	1.2	PWM/DC	-	TSOT23-6, TSOT23-6-SL	Single-phase BLDC, integrated Hall sensor, prog. speed curve, open-/closed-loop control
MPQ6653A-AEC1	3.5	35	2	960	120 (Standby)	1.2	PWM/DC	-	TSOT23-6, TSOT23-6-SL, TQFN-6 (2x3)	Single-phase BLDC, integrated Hall sensor, prog. speed curve, open-/closed-loop control
MPQ6631H-AEC1	3.6	35	3	160	130 (Standby)	3	PWM/DC	✓	TQFN-26 (3x4)	3-phase BLDC, prog. speed curve, open-/closed-loop control, 1/3 Hall inputs
MPQ6634-AEC1	4.5	35	3	500	40 (Standby)	2	PWM/DC	✓	TQFN-12 (3x4)	3-phase BLDC, sensorless, prog. speed curve, open-/closed-loop control
MPQ6547-AEC1	4	30	3	110	1	1.5 (RMS)	PWM	✓	QFN-18 (3x4)	Three-phase power stage
MPQ6541-AEC1	4.75	40	3	30	1	8 (RMS)	PWM/ENBL	✓	TQFN-26 (6x6)	Three-phase power stage, PWM/ENBL inputs, int. current-sense amp
MPQ6541A-AEC1	4.5	40	3	30	1	8 (RMS)	HS/LS	✓	TQFN-26 (6x6)	Three-phase power stage, HS/LS inputs, int. current-sense amp

Stepper Motor Drivers

Part Number	Supply Voltage (Min) (V)	Supply Voltage (Max) (V)	# of Half-Bridges	$R_{DS(on)}$ (HS + LS) (mΩ)	Typ Shutdown I_o (μA)	Peak Output Current (A)	Step Mode	Input Control Interface	Wettable Flank Option	Package	Notes
MPQ6605D-AEC1	4.5	60	-	LS: 350	2	1.5	-	Parallel	-	QFN-24 (4x4)	4-channel, low-side driver
MPQ6606-AEC1	4.5	60	-	LS: 700	-	0.75	-	SPI	-	TSSOP-20EP	8-channel, low-side driver
MPQ6609-AEC1	4	36	4	580	1	1	1, 1/2, 1/4, 1/8, 1/16, 1/32	SPI	✓	QFN-18 (3x4)	Bipolar stepper, int. current sense, rotor stall detection, BEMF measurement
MPQ6600L-AEC1	4.5	35	4	365	2.5	1.5	1, 1/2, 1/4, 1/8	Indexer	✓	QFN-24 (4x4)	Bipolar, microstepping, int. current sense and latch-off

LOAD SWITCHES | AUTOMOTIVE

Load Switches

5V Load Switches

Part Number	V_{CC} (Min) (V)	V_{CC} (Max) (V)	Load Current (A)	$R_{DS(on)}$ (mΩ)	I_o (Typ) (mA)	Adj Current Limit	Power Good	Wettable Flank QFN Option	Package	Notes
MPQ5071-AEC1	3	5.5	0.5	50	0.18	✓	✓	-	QFN-12 (2x2)	-
MPQ5072-AEC1	3	5.5	1	50	0.18	✓	✓	-	QFN-12 (2x2)	-
MPQ5073-AEC1	3	5.5	2	50	0.18	✓	✓	-	QFN-12 (2x2)	-
MPQ5074-AEC1	3	5.5	3	10	0.22	✓	✓	✓	QFN-13 (2.5x3)	-
MPQ5075A-AEC1	3	5.5	5	10	0.22	✓	✓	✓	QFN-13 (2.5x3)	-
MPQ5077A-AEC1	3	5.5	7	10	0.22	✓	✓	✓	QFN-13 (2.5x3)	-

LOAD SWITCHES | AUTOMOTIVE

Load Switches POC (16V) Load Switches

	Part Number	V_{IN} (Min) (V)	V_{IN} (Abs Max) (V)	Load Current (A)	$R_{DS(ON)}$ (m Ω)	I_G (Typ) (mA)	Adj Current Limit	ASIL-B	Wettable Flank QFN Option	Package	Notes
S	MPQ5862-AEC1	5	26.5	1.5	90	0.005	✓	-	✓	QFN-17 (3x4)	2-ch, smart HSS, $\pm 3\%$ high-accuracy current-sensing, full diagnostics and protections
S	MPQ5864-AEC1	5	26.5	0.8	200	0.005	✓	✓	✓	QFN-17 (3x4)	4-ch, smart HSS, $\pm 3\%$ high-accuracy current-sensing, full diagnostics and protections
S	MPQ77220FS-AEC1	5	26.5	1.5	90	0.005	✓	-	✓	QFN-17 (3x4)	2-ch, smart HSS, $\pm 3\%$ high-accuracy current-sensing, full diagnostics and protections, ASIL-B, ISO 26262 compliant
N	MPQ77240FS-AEC1	5	26.5	0.8	200	0.005	✓	✓	✓	QFN-17 (3x4)	4-ch, smart HSS, $\pm 3\%$ high-accuracy current-sensing, full diagnostics and protections, ASIL-B, ISO 26262 compliant

Load Switches 40V Load Switches

	Part Number	V_{IN} (Min) (V)	V_{IN} (Abs Max) (V)	Load Current (A)	$R_{DS(ON)}$ (m Ω)	I_G (Typ) (mA)	Adj Current Limit	Fault Pin	Wettable Flank QFN Option	Package	Notes
	MPQ5066-AEC1	6	38	6	7	1	✓	✓	-	QFN-22 (3x5)	ISO 16750-1 compliant
	MPQ5068-AEC1	6	38	8	7	1	✓	✓	-	QFN-22 (3x5)	ISO 16750-1 compliant
	MPQ5069-AEC1	6	38	10	7	1	✓	✓	-	QFN-22 (3x5)	ISO 16750-1 compliant
P	MPQ5870-AEC1	5	42	0.5	300	0.5	✓	✓	✓	QFN-8 (2x2.5)	1-ch, smart HSS, $\pm 1\%$ high-accuracy current-sensing
	MPQ5871-AEC1	5	42	1	60	0.5	✓	✓	✓	QFN-8 (2x2.5)	1-ch, smart HSS, $\pm 4\%$ high-accuracy current-sensing
	MPQ5872-AEC1	5	42	2	60	0.5	✓	✓	✓	QFN-8 (2x2.5)	1-ch, smart HSS, $\pm 4\%$ high-accuracy current-sensing
N	MPQ5873-AEC1	5	42	3	60	0.5	✓	✓	✓	QFN-8 (2x2.5)	1-ch, smart HSS, $\pm 4\%$ high-accuracy current-sensing

Reverse-Battery Protection Controllers

	Part Number	V_{IN} (Min) (V)	V_{IN} (Abs Max) (V)	Reverse Battery (V)	Min Gate Drive Current (mA)	Forward Voltage Drop (mV)	Shutdown I_G (Typ) (μ A)	Power Good	Int Boost Converter	Package	Notes
S	MPQ5816-AEC1	3	42	-40	110/2000	200	4	✓	-	QFN-21 (3x4)	Integrated diode, low-voltage start-stop transient operation, AC rectification up to 100kHz, ISO 16750-2 compliant
S	MPQ5817-AEC1	3	42	-36	110/2000	200	4	✓	-	QFN-21 (4x5)	Integrated diode, low-voltage start-stop transient operation, AC rectification up to 100kHz, ISO 16750-2 compliant
S	MPQ5836-AEC1	3	55	-36	110/2000	200	4	✓	-	QFN-21 (3x4)	Integrated diode, low-voltage start-stop transient operation, AC rectification up to 100kHz, ISO 16750-2 compliant
	MPQ5850-AEC1	3	42	-36	170/430	20	4	✓	✓	TSOT23-8	Low-voltage start-stop transient operation, AC rectification up to 100kHz, ISO 16750-2 compliant
N	MPQ5852-AEC1	3	42	-36	170/430	20	4	✓	✓	QFN-13 (3x3)	Low-voltage start-stop transient operation, AC rectification up to 100kHz, ISO 16750-2 compliant, two voltage monitors
S	MPQ5857-AEC1	4.5	42	-42	800/1300	20	8	✓	✓	QFN-16 (3x4)	Back-to-back FET control, AC rectification up to 100kHz, OCP/OVP and monitoring, ISO 7637 and ISO 16750 compliant
P	MPQ5858-AEC1	4.5	80	-80	800/1300	20	8	✓	✓	QFN-16 (3x4)	Low-voltage start-stop transient operation, AC rectification up to 100kHz, ISO 16750-2 compliant, 2 voltage monitors

Analog Switches

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Switch Current (A)	R _{DS(ON)} (mΩ)	I _D (Typ) (mA)	t _{ON} /t _{OFF} (ns)	Bandwidth (MHz)	Wettable Flank QFN Option	Package	Notes
MPQ2735-AEC1	1.65	5.5	0.1	0.25	1	29/23	50	-	QFN-10 (2x2)	Low-voltage, 0.45Ω dual SPDT analog switches, separate control inputs

CLASS-D AUDIO AMPLIFIERS | AUTOMOTIVE

Class-D Audio Amplifiers

Part Number	V _{IN} (Min) (V)	V _{IN} (Abs Max) (V)	P _{OUT} (W)	R _{DS(ON)} (mΩ)	Idle Current (Typ) (mA)	f _{SW} (kHz)	Efficiency (%)	THD+N at 1kHz Input (%)	PSRR (dB)	SNR (dB)	Output Noise (μV)	Type	Load Diagnostic	Selectable Gain	Power Limiter	Digital Interface	Wettable Flank QFN Option	Package	Notes
MPQ7795-AEC1	3.9	42	24.5 @ 14.4V, 4Ω Load	150	6.5	330kHz to 2.2MHz	92 @ 470kHz, 90 @ 2MHz	0.09 @ 1W, 470kHz	71 @ 100Hz	102	115	Mono, BTL	✓	✓	✓	I ² C	✓	QFN-24 (4x4)	Low EMI, mono BTL with diagnostics
MPQ7790-AEC1	5.5	18	9 @ 12V, 8Ω Load	300	5	300kHz	90	0.15 @ 5W (8Ω), 300kHz	50	102	115	Mono, BTL	-	✓	✓	-	-	TSSOP-20EP	Low EMI, analog input, for mono speaker in bridge-tied load configuration

POSITION & CURRENT SENSORS | AUTOMOTIVE

Integrated Current Sensors

Part Number	Current Range (A)	V _{CC} (V)	Over-Temperature Accuracy	Temp Range (°C)	Isolation Voltage (V _{RMS})	Working Voltage (V _{DC})	Reinforced Isolation (V _{RMS})	Bandwidth (kHz)	Over-Current Detection	Voltage Reference	Primary Conductor Resistance (mΩ)	UL Certification	Package	Notes
N MCQ1805	±5, ±10, ±20, ±30, ±40, ±50	3.3, 5	2.5%	-40 to +125	3000	500	-	100	✓	-	0.9	✓ + TUV	SOIC-8	AEC-Q100, coreless, ratiometric analog output, immune to external magnetic field gradients
N MCQ1806	±5, ±10, ±20, ±30, ±40, ±50	3.3, 5	2.5%	-40 to +125	3000	500	-	100	-	-	0.9	✓	SOIC-8	AEC-Q100, coreless, ratiometric analog output
S MCQ1810	±5, ±10, ±20, ±30, ±40, ±50, ±65, ±80, ±100	3.3, 5	2%	-40 to +150	5000	1100	560	350	✓	✓	0.3	Planned	SOIC-10W	AEC-Q100, coreless, 0.3mΩ low primary conductor resistance, bi- or unidirectional sensing, ratiometric or absolute analog output, OCD with 1μs response time
S MCQ1812	±5, ±10, ±20, ±30, ±40, ±50, ±65, ±80	3.3, 5	2%	-40 to +150	5000	1100	560	350	✓	✓	1.0	Planned	SOIC-16W	AEC-Q100, coreless, bi- or unidirectional sensing, ratiometric or absolute analog output, prog. OCD with 1μs response time
S MCQ1814	±5, ±10, ±20, ±30, ±40, ±50, ±65, ±80	3.3, 5	2%	-40 to +150	5000	1100	560	350	✓	✓	1.0	Planned	SOIC-16W	AEC-Q100, coreless, bi- or unidirectional sensing, ratiometric or absolute analog output, prog. OCD with 1μs response time
N MCQ1823	±5, ±10, ±20, ±30, ±40, ±50	3.3, 5	2.5%	-40 to +125	100	N/A	-	120	✓	-	0.6	✓	QFN-12 (3x3)	AEC-Q100, coreless, bi- or unidirectional sensing, ratiometric or absolute analog output, immune to external magnetic field gradients
S MCQ2803	±50, ±100, ±150, ±200, ±250, ±300, ±400	3.3, 5	3.5%	-40 to +150	5000	1000	475	250	-	-	0.1	Planned	5-Pin THM, 5-Pin SMT	AEC-Q100, bi- or unidirectional sensing, ratiometric or absolute analog output

POSITION & CURRENT SENSORS | AUTOMOTIVE

Integrated Current Sensors

Part Number	Current Range (A)	V _{CC} (V)	Over-Temperature Accuracy	Temp Range (°C)	Isolation Voltage (V _{RMS})	Working Voltage (V _{DC})	Reinforced Isolation (V _{RMS})	Bandwidth (kHz)	Over-Current Detection (V _{RMS})	Voltage Reference	Primary Conductor Detection (OCD)	UL Certification	Package	Notes
S MCQ2804	±50, ±100, ±150, ±200	3.3, 5	3.5%	-40 to +150	5000	1000	475	100	✓	-	0.1	Planned	6-Pin THM, 6-Pin SMT	AEC-Q100, bi- or unidirectional sensing, ratiometric or absolute analog output, OCD with 1µs response time
S MCQ2805	±50, ±100, ±150, ±200, ±250, ±300, ±400	3.3, 5	3.5%	-40 to +150	5000	1000	475	250	✓	-	0.1	Planned	6-Pin THM, 6-Pin SMT	AEC-Q100, bi- or unidirectional sensing, ratiometric or absolute analog output, OCD with 1µs response time

MagAlpha™ Magnetic Position Sensors

Part Number	±30 Resolution	Interface	Supply Voltage (V)	Supply Current (mA)	Sensing Range (mT)	Cutoff Frequency (Hz)	Latency at Constant Speed (µs)	Magnetic Field Detection	Temperature Range (°C)	Package	Wettable Flanks	Notes
MAQ430	12-Bit	SPI, UVW, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	390	8	-	-40 to +150	QFN-16 (3x3)	✓	AEC-Q100
MAQ470	12-Bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	390	8	✓	-40 to +150	QFN-16 (3x3)	✓	AEC-Q100
MAQ473	10-Bit to 14-Bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	23 to 6k	8	✓	-40 to +150	QFN-16 (3x3)	✓	AEC-Q100, prog. filter
N MAQ600	12-Bit to 15-Bit	SPI, ABZ, PWM, UVW, SSI	3 to 3.6	7	20+ (No Upper Limit)	75 to 17k	0	✓	-40 to +125	QFN-16 (3x3)	✓	AEC-Q100, TMR front-end, high accuracy & BW, 0.6° INL (<0.1° INL through user calibration with 32-word lookup table), no speed error
N MAQ800	8-Bit	SPI, SSI	3 to 3.6	11.7	30+ (No Upper Limit)	90	4000	✓	-40 to +125	QFN-16 (3x3)	✓	Optimized for automotive HMI applications, SSI output
N MAQ820	8-Bit	SPI, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	90	4000	✓	-40 to +125	QFN-16 (3x3)	✓	Optimized for automotive HMI applications, SSI output
N MAQ850	8-Bit	SPI, PWM	3 to 3.6	11.7	30+ (No Upper Limit)	90	4000	✓	-40 to +125	QFN-16 (3x3)	✓	Optimized for automotive HMI applications, SSI output

MagDiff™ Magnetic Position Sensors with Stray Field Immunity

Part Number	±30 Resolution	Interface	Supply Voltage (V)	Supply Current (mA)	Sensing Range (mT)	Cutoff Frequency (Hz)	Latency at Constant Speed (µs)	Magnetic Field Detection	Temperature Range (°C)	Package	Wettable Flanks	Notes
S MAQ79010	10-Bit to 14.5-Bit	SPI, SSI, I ² C, UVW, SENT, ABZ	3.3V, 5V	12	8+ (No Upper Limit)	12 to 100k	0	✓	-40 to +150	QFN-16 (3x3)	✓	AEC-Q100, ASIL-B compliant, robust against parasitic stray fields >4kA/m DC, or 5mT
P MAQ79016	10-Bit to 14.5-Bit	SPI, SSI, I ² C, UVW, SENT, ABZ	Up to 26V	12	8+ (No Upper Limit)	12 to 100k	0	✓	-40 to +150	QFN-16 (3x3)	✓	AEC-Q100, ASIL-B compliant, 26V with reverse polarity protection, robust against parasitic stray fields >4kA/m DC, or 5mT
S MAQ900	10-Bit to 14.5-Bit	SPI, SSI, I ² C, UVW, SENT, ABZ	3.3V, 5V	12	8+ (No Upper Limit)	12 to 100k	0	✓	-40 to +150	QFN-16 (3x3)	✓	AEC-Q100, robust against parasitic stray fields >4kA/m DC, or 5mT

MagVector™ 3D Magnetic Position Sensors

Part Number	Data Length	Interface	Supply Voltage (V)	Supply Current (mA)	Sensing Range (mT)	Conversion Time (µs)	Temperature Range (°C)	Package	Notes
P MPQ310	12-Bit	I ² C, SPI	3.3	25nA to 2.5	±125 or ±250	40	-40 to +150	TSOT23-6	AEC-Q100, digital component output, selectable operating power modes and sensing axis

ELECTRIFICATION | AUTOMOTIVE

Isolated Gate Drivers

Part Number	Isolation Rating (kV _{RMS})	Configuration Type	# of Channels	CMTI (Min) (kV/µs)	Power Switch Type	Peak Source Current (A)	Peak Sink Current (A)	UVLO (V)	Input VDD1 (V)	Driver Output (Max) (V)	Package	Notes
N MPQ18831-AEC1	2.5/3/5	Dual-Input Half-Bridge	2	100	SiC FET, IGBT, MOSFET, GaN FET	4	8	5/8/10/12	2.8 to 5.5	30	SOIC-16 NB, SOIC-16 WB, LGA-13	AEC-Q100, UL1577 certified, VDE-0884/CQC in progress
N MPQ18851-AEC1	2.5/3/5	Dual Input, Independent Dual-Channel	2	100	SiC FET, IGBT, MOSFET, GaN FET	4	8	5/8/10/12	2.8 to 5.5	30	SOIC-16 NB, LGA-13, SOIC-16 WB	AEC-Q100, UL1577 certified, VDE-0884/CQC in progress
N MPQ18871-AEC1	2.5/3/5	PWM Input Half-Bridge	2	100	SiC FET, IGBT, MOSFET, GaN FET	4	8	5/8/10/12	2.8 to 5.5	30	SOIC-16 NB, LGA-13, SOIC-16 WB	AEC-Q100, UL1577 certified, VDE-0884/CQC in progress
N MPQ18811-AEC1	3/5	Single-Channel Gate Driver	1	100	SiC FET, IGBT, MOSFET, GaN FET	6	10	5/8/10/12/15	2.8 to 5.5	30	SOIC-8 NB, SOIC-8 WB, SOIC-14 NB	AEC-Q100, UL1577 certified, VDE-0884/CQC in progress, fault reporting
P MPQ18815-AEC1	5	Single-Channel Gate Driver	1	100	SiCFET, IGBT, MOSFET	4	4	12/15/17	2.8 to 5.5	30	SOIC-16 WB	Desat. detection, active Miller clamp, soft turn-off, external buffer, AEC-Q100, UL1577 and VDE-0884 certified

Isolated Power Supplies

Part Number	Topology	Device Type	Output Power (W)	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Typ) (V)	Integrated Transformer	Package Type	Isolation Voltage (kV _{RMS})	# of Outputs	Package Size: WxL (mm)	Notes
P MPQ6007-AEC1	Flyback	Converter	10	4.5	42	12 to 24	-	QFN-11	5+ (Dependent on Transformer Design)	1, More Possible	3x3	Automotive active clamp primary-side regulated flyback, ultra-low EMI
P MPDQ11510GRDE-171P2-AEC1	Flyback	Converter	15 to 50	20	1200	12 to 24	-	QFN-22	5+ (Dependent on Transformer Design)	1, More Possible	10x10	Automotive flyback converter with integrated 1700V SiC FET, 5mm creepage
P MPDQ11510GY-171P2-AEC1	Flyback	Converter	15 to 50	20	1200	12 to 24	-	SOIC-28 WB	5+ (Dependent on Transformer Design)	1, More Possible	7.85x7.5	Automotive flyback converter with integrated 1700V SiC FET, 7.5mm creepage
N MPQ18913-AEC1	LLC Resonant	Converter	6	5	35	20	-	QFN-10	5+ (Dependent on Transformer Design)	1, More Possible	2x2.5	5MHz high-frequency SiC/IGBT bias supply, automatic resonant frequency detection
N MID1W2424AGYE-AEC1	LLC Resonant	Isolated Module	1.5	5	35	24	✓	SOIC-16 WB	5	1	10.3x10.3 x2.5	24V _{IN} , 1.5W, automotive isolated power module for SiC bias supplies
N MIE1W0505BGY-AEC1	LLC Resonant	Isolated Module	1	2.6	5.5	5/3.3	✓	SOIC-16 WB	3	1	10.3x10.3 x2.5	5V _{IN} , 1W, automotive isolated power module

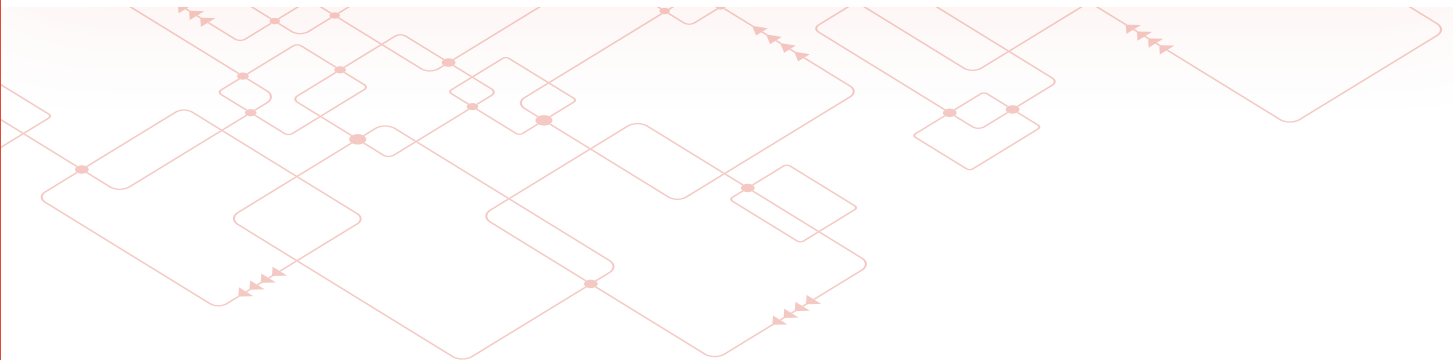
ELECTRIFICATION | AUTOMOTIVE

Digital Isolators

	Part Number	Total Channel Count	# of Channels (Forward/Reverse)	Isolation Rating (kV _{RMS})	Data Rate	Propagation Delay (Typ) (ns)	Min CMTI (kV/μs)	Surge Voltage Level (V _{PK})	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Package	Notes
N	MPQ27911-AEC1	2	1/1	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-8 WB, SOIC-8 NB	AEC-Q100
N	MPQ27920-AEC1	2	2/0	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-8 WB, SOIC-8 NB	AEC-Q100
N	MPQ27922-AEC1	4	2/2	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	AEC-Q100
N	MPQ27931-AEC1	4	3/1	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	AEC-Q100
N	MPQ27940-AEC1	4	4/0	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	AEC-Q100
N	MPQ27933-AEC1	6	3/3	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	AEC-Q100
N	MPQ27942-AEC1	6	4/2	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	AEC-Q100
N	MPQ27951-AEC1	6	5/1	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	AEC-Q100
N	MPQ27960-AEC1	6	6/0	3.75/5	150	13	100	5300/8000	2.5	5.5	SOIC-16 WB, SOIC-16 NB	AEC-Q100

Non-Isolated Gate Drivers (Half-Bridge)

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{SW} (Max) (V)	HS Gate Drive (Max) (V)	# of Channels	Peak Pull-Up Current (A)	Peak Pull-Down Current (A)	Rise Time (μs)	Fall Time (μs)	Turn-Off/On Delay (μs)	Wettable Flank Option	Package	Notes
N	MPQ1907-AEC1	4.5	20	105	18	1	2.5	3.5	0.012	0.009	0.018	-	QFN-10 (3x3)	100V H-bridge
	MPQ1918-AEC1	3.6	5.5	100	8	1	1.6	5	0.005	0.003	0.020	✓	FCQFN-14 (3x3)	100V half-bridge GaN/MOSFET driver
P	MPQ1919-AEC1	3.7	5.5	100	8	2	5	0.005	0.005	0.020	✓	FCQFN-15 (3x3)	Smart HB GaN driver with desat.	
	MPQ1922-AEC1	4	15	100	15	1	3	4	Adj	Adj	0.3	✓	SOIC-8E, QFN-10 (4x4)	Int. current-sense amp, 9ns to 15ns rise/fall (2.2nF load)
	MPQ1923-AEC1	5	17	100	17	1	7	8	0.0072	0.0055	0.02	✓	QFN-10 (4x4), QFN-8 (4x4), SOIC-8	High-frequency
N	MPQ18024-AEC1	9	16	110	18	1	4.7	6	0.015	0.009	0.02	-	SOIC-8	-



EASYPower™ | AC/DC POWER CONVERSION

AC Buck Converters

Part Number	Typ Max Power (W)	V _{IN} (Min) (V _{AC})	V _{IN} (Max) (V _{AC})	Control Method	R _{DS(ON)} (Ω)	Breakdown Voltage (V)	No-Load Power (mW)	Package	Notes
MP100L	0.5	85	305	Smart LDO	9.5	700	100	SOIC-8E	Inductorless regulator for low-power applications
MP103	1	85	305	Smart LDO	-	700	100	SOIC-8E	Inductorless controller for low-power applications
MP150	2	20	265	Non-Isolated	30	500	150	TSOT23-5, SOIC-8	Offline regulator, up to 200mA output current
MP155	3	20	265	Non-Isolated	20	500	100	TSOT23-5, SOIC-8	Offline regulator, up to 220mA output current
MP157	6	20	265	Non-Isolated	10	500	100	TSOT23-5, SOIC-8	Offline regulator, up to 360mA output current
MP158	3	20	265	Non-Isolated	20	500	100	TSOT23-5, SOIC-8	Offline regulator, up to 70mA output current
MP171A	2	20	305	Non-Isolated	20	700	30	TSOT23-5, SOIC-8	Improved EMI performance from the MP171 (up to 60mA output current)
MP172A	3	20	305	Non-Isolated	16	700	30	TSOT23-5, SOIC-8	Improved EMI performance from the MP172 (up to 120mA output current)
MP173A	4	20	305	Non-Isolated	14	700	30	TSOT23-5, SOIC-8	Improved EMI performance from the MP173 (up to 280mA output current)
MP174A	5	20	305	Non-Isolated	13.5	700	30	TSOT23-5, SOIC-8	Improved EMI performance from the MP174 (up to 400mA output current)
MP175	10	30	265	Non-Isolated	4.5	700	30	SOIC-8	Offline regulator, up to 600mA output current
MP175L	7.5	30	265	Non-Isolated	4.5	700	30	SOIC-8	Offline regulator, up to 600mA output current, for lower output applications than the MP175
MP163A	2	20	265	Non-Isolated	16	700	30	SOIC-8-7B, SOIC-16	Offline regulator with integrated LDO, 210mA current-limited switching regulator
MP163B	3	20	265	Non-Isolated	14	700	30	SOIC-8-7B, SOIC-16	Offline regulator with integrated LDO, 420mA current-limited switching regulator
MP163C	4	20	265	Non-Isolated	13.5	700	30	SOIC-8-7B, SOIC-16	Offline regulator with integrated LDO, 660mA current-limited switching regulator
MP161A	2	30	265	Non-Isolated	17	700	10	SOIC-16	Integrated 240mA current-limited switching regulator, linear regulator, and relay driver
MP161B	3	30	265	Non-Isolated	14	700	10	SOIC-16	Integrated 420mA current-limited switching regulator, linear regulator, and relay driver
N MP180	2.5	30	265	Non-Isolated	17.5	700	3	TSOT23-5	Zero-standby buck regulator, up to 180mA output current
N MP183	3.5	30	265	Non-Isolated	17.5	700	3	TSOT23-5, SOIC-8	Zero-standby buck regulator, up to 250mA output current

FLYBACK | AC/DC POWER CONVERSION

Secondary-Side Regulation

Part Number	Typ Max Power (W)	V _{IN} (Min) (V _{AC})	V _{IN} (Max) (V _{AC})	Type	f _{SW} (Max) (kHz)	Control Scheme	Breakdown Voltage (V)	R _{DS(ON)} (Ω)	Package	Notes
HFC0100	Ext FET	85	305	Controller	-	Quasi-Resonant	700	-	SOIC-8	-
HFC0300	Ext FET	85	305	Controller	-	Variable Frequency	700	-	SOIC-7	Variable off-time
HFC0310	Ext FET	85	305	Controller	600	Fixed Frequency	-	-	SOIC-8	Programmable fixed-frequency
S HFC0310A	Ext FET	85	305	Controller	600	Fixed Frequency	-	-	SOIC-8	Metal-spin from HFC0310 to help driver SiC FET

FLYBACK | AC/DC POWER CONVERSION

Secondary-Side Regulation

	Part Number	Typ Max Power (W)	V_{in} (Min) (V _{AC})	V_{in} (Max) (V _{AC})	Type	f_{sw} (Max) (kHz)	Control Scheme	Breakdown Voltage (V)	$R_{DS(on)}$ (mΩ)	Package	Notes
	HFC0500	Ext FET	85	305	Controller	65	Fixed Frequency	700	-	SOIC8-7A	HV start-up, X-capacitor discharge, brown-in/brownout
N	HFC0502	Ext FET	85	305	Controller	65	Fixed Frequency	700	-	SOIC8-7A	Supports DC input, HV start-up, X-capacitor discharge, brown-in/brownout
	HFC0511	Ext FET	85	305	Controller	130	Fixed Frequency	700	-	SOIC8-7A	Ultra-low no-load power consumption
S	HFC0580	Ext FET	85	305	Controller	130	Fixed Frequency	700	-	SOIC-14	Interleaved flyback controller, valley-locked QR function
N	HFC0650	Ext FET	85	305	Controller	300	Variable Frequency	700	-	SOIC8-7A	High f_{sw} QR flyback controller for high-efficiency, high-density adapters, GaN driver
N	HFC0651	Ext FET	85	305	Controller	300	Variable Frequency	700	-	SOIC8-7A	QR flyback controller for high-efficiency, high-density adapters, Si driver
P	HFC0652	Ext FET	85	305	Controller	500	Variable Frequency	700	-	SSOP10	High f_{sw} QRZVS flyback controller for high-efficiency, high-density adapters, GaN driver
N	HF300	Ext FET	85	305	Controller	200	Variable Frequency	200	-	SOT23-6	Ideal clamper controller for high-frequency flybacks
S	HFP300-100	100	85	305	Regulator	200	Variable Frequency	700	-	SOIC-8	Flyback ideal clamp
	HF900	10	85	440	Regulator	300	Peak Current	900	13	PDIP8-7 EP, SOIC14-11	Integrated 900V MOSFET
	HF920	10	85	440	Regulator	150	Peak Current	900	15	SOIC14-11, SOIC8-7A	Integrated 900V MOSFET
	HF920A	10	85	440	Regulator	150	Peak Current	900	15	SOIC14-11, SOIC8-7A	HF920 with AC UV protection
	HF920B	10	85	440	Regulator	150	Peak Current	900	15	SOIC14-11, SOIC8-7A	Improved EMI performance from the HF920
P	HF930A	7 to 8	85	440	Regulator	150	Variable Frequency	900	11	SOIC8-7, SOIC14-9	Primary-side regulator with low standby
P	HF930B	12	85	440	Regulator	150	Variable Frequency	900	6	SOIC14-9	Primary-side regulator with low standby
P	HF931A	7 to 8	85	440	Regulator	150	Variable Frequency	900	11	SOIC8-7, SOIC14-9	Secondary-side regulator with ultra-low standby
P	HF931B	12	85	440	Regulator	150	Variable Frequency	900	6	SOIC14-9	Secondary-side regulator with ultra-low standby
	HF500-7	7	85	305	Regulator	65	Fixed Frequency	700	12	SOIC8-7B	Integrated 700V MOSFET
	HF500-15	15	85	305	Regulator	65	Fixed Frequency	700	4.5	SOIC8-7B	Integrated 700V MOSFET
	HF500-30	30	85	305	Regulator	65	Fixed Frequency	700	1.4	PDIP8-7B	Integrated 700V MOSFET
N	HF500A-20	20	85	305	Regulator	65	Fixed Frequency	700	3	PDIP8-7B	Integrated 700V MOSFET, covers 12W to 20W home appliance applications
	HF500A-30	30	85	305	Regulator	65	Fixed Frequency	700	1.4	PDIP8-7B	Improved EMI performance from the HF500-30
	HF500-40-C05T	40	85	305	Regulator	65	Fixed Frequency	700	0.9	PDIP8-7B	Integrated 700V MOSFET
P	HF600-40	40	85	305	Regulator	65	Variable Frequency	700	0.9	PDIP8-7B	Integrated 700V MOSFET, flyback regulator with CCM/QR mode
N	HFG610-35	35	85	305	Regulator	300	Variable Frequency	700	0.36	QFN-21 (5x6)	Integrated 700V GaN HEMT
N	HFG610-45	45	85	305	Regulator	300	Variable Frequency	700	0.27	QFN-21 (5x6), QFN-25 (7x7)	Integrated 700V GaN HEMT
N	HFG610-65	65	85	305	Regulator	300	Variable Frequency	700	0.16	QFN-25 (7x7)	Integrated 700V GaN HEMT
N	HFG610A-35	35	85	305	Regulator	300	Variable Frequency	700	0.36	QFN (5x6)	Integrated 700V GaN HEMT, line compensation and external OTP
N	HFG610A-45	45	85	305	Regulator	300	Variable Frequency	700	0.27	QFN (7x7)	Integrated 700V GaN HEMT, line compensation and external OTP
N	HFG610A-65	65	85	305	Regulator	300	Variable Frequency	700	0.16	QFN (7x7)	Integrated 700V GaN HEMT, line compensation and external OTP

Primary-Side Regulation

Part Number	Typ Max Power (W)	V _{IN} (Min) (V _{dc})	V _{IN} (Max) (V _{dc})	Type	f _{SW} (Max) (kHz)	Control Scheme	Breakdown Voltage (V)	R _{DS(on)} (Ω)	Package	Notes
MP020A-5	7	85	305	Regulator	75	Variable Frequency	700	10	SOIC8-7A	CV/CC control
MP023	Ext FET	85	305	Controller	100	Variable Frequency	700	-	SOIC8-7A	CV/CC control
MP024-10	10	85	305	Regulator	100	Variable Frequency	700	4.5	SOIC8-7B	CV/CC control

All-In-One Flyback with Primary-Side & Secondary-Side Controllers

Part Number	Typ Max Power (W)	V _{IN} (Min) (V _{dc})	V _{IN} (Max) (V _{dc})	Type	f _{SW} (Max) (kHz)	Control Scheme	Breakdown Voltage (V)	R _{DS(on)} (Ω)	Package	Notes
MPX2001	Ext FET	85	305	Controller	85	Variable/CCM	650	-	SOICW-20	200V integrated SR controller with capacitive isolation
MPX2002	Ext FET	85	305	Controller	85	CCM/QR	650	-	SOICW-16	150V integrated SR controller with capacitive isolation
N MPX2003	Ext FET	85	305	Controller	140	CCM/QR	650	-	SOICW-16	Higher-frequency version of the MPX2002
S MPX2005	Ext FET	9V _{DC}	600V _{DC}	Controller	250	CCM/QR	650	-	SOICW-16	All-in-one solution, supports low DC input applications
P MPX2100	Ext FET	85	305	Controller	300	CCM/ZVS/QR	650	-	TSOICW-16	All-in-one SRZVS flyback controller with capacitive isolation
S MPXP0900	40	85	305	Regulator	65	CCM/QR	650	0.9	SOIC20-13 WB	Integrated 700V MOSFET based on the MPX2002 for up to 45W applications
P MPXP0600	50	85	305	Regulator	65	CCM/QR	650	0.6	SOIC20-13 WB	Integrated 700V MOSFET based on the MPX2002 for up to 50W applications
P MPXP0200	65	65	305	Regulator	65	CCM/QR	650	0.35	SOIC20-13 WB	Integrated 700V MOSFET based on the MPX2002 for up to 65W applications

LLC 600V HALF-BRIDGE DRIVERS | AC/DC POWER CONVERSION

Part Number	V _{IN} (Min) (V _{dc})	V _{IN} (Max) (V _{dc})	Control Scheme	Power (W)	Topology	Capacitive Mode Protection	Adaptive Dead Time Control	Package	Notes
HR1000A	85	305	Voltage Mode	Ext FET	LLC Resonant	-	-	SOIC-16	Variable frequency, high-power applications
HR1001A	85	305	Voltage Mode	Ext FET	LLC Resonant	✓	✓	SOIC-16	Two-level OCP via frequency shift and auto-restart, other features same as the HR1001B
HR1001B	85	305	Voltage Mode	Ext FET	LLC Resonant	✓	✓	SOIC-16	Variable frequency, two-level OCP (1st level auto-restart, 2nd level latch)
HR1001C	85	305	Voltage Mode	Ext FET	LLC Resonant	✓	✓	SOIC-16	Improved surge performance compared to the HR1001B
HR1001L	85	305	Voltage Mode	Ext FET	LLC Resonant	✓	✓	SOIC-16	Two-level OCP via frequency shift and latch, other features same as the HR1001B
HR1002	85	305	Voltage Mode	Ext FET	LLC Resonant	✓	✓	SOIC-16	Higher switching frequency applications than the HR1001C (up to 400kHz to 500kHz)
HR1002A	85	305	Voltage Mode	Ext FET	LLC Resonant	✓	✓	SOIC16-15	Alternate package option of the HR1002 without the N/C pin
P HR1008	85	528	Current Mode	Ext FET	LLC Resonant	✓	✓	SOIC-16	High-voltage start-up current source and X-capacitor discharge

PFC + LLC COMBO CONTROLLERS | AC/DC POWER CONVERSION

Part Number	LLC Control Scheme	PFC Control Scheme	No-Load Power Consumption (mW)	Programming Ability	Topology	High-Voltage Start-Up	Package	Notes
HR1203	Voltage Mode	Digital CCM/DCM Multi-Mode	<150	I ² C/GUI	PFC + LLC	✓	TSSOP-28, SOIC-28	Digital PFC + analog LLC with GUI, replaces the HR1200
HR1204	Voltage Mode	Digital CCM/DCM Multi-Mode	<150	I ² C/GUI	PFC + LLC	-	TSSOP-28, SOIC-28	Digital PFC + analog LLC with GUI, replaces the HR1201
HR1210	Digital Current Mode	Digital CCM/DCM Multi-Mode	<100	UART/GUI	PFC + LLC	✓	TSSOP-20, SOIC-20	High performance, fully digital
HR1211	Digital Current Mode	Digital CCM/DCM Multi-Mode	<100	UART/GUI	PFC + LLC	✓	TSSOP-20, SOIC-20	High performance, fully digital
HR1213	Digital Current Mode	Digital CCM/DCM Multi-Mode	<100	UART/GUI	PFC + LLC	✓	TSSOP-20, SOIC-20	AC and DC input, with or without aux, selectable via the GUI
HR1215	Digital Current Mode	Digital CCM/DCM Multi-Mode	<100	UART/GUI	PFC + LLC	✓	TSSOP-20, SOIC-20	Keeps the output regulated when AC turns off
P HR1230	Digital Current Mode	Digital CCM/CRM/DCM Multi-Mode	<70	UART/GUI	PFC + LLC	✓	SOIC-16	Excellent peak power performance, light-load efficiency
N HR1275	Digital Current Mode	Digital CrM/DCM Multi-Mode	<85	UART/GUI	PFC + LLC	✓	TSSOP-20, SOIC-20, SOIC-16	Digital combo controller with CrM/DCM PFC
N HR1275L	Digital Current Mode LLC	Digital CrM/DCM Multi-Mode	<85	UART/GUI	PFC + LLC	✓	TSSOP-20, SOIC-20, SOIC-16	Digital combo controller with CrM/DCM PFC, improved THD for LED lighting applications
N HR1280	Digital Current Mode	Digital CCM/DCM Multi-Mode	<85	UART/GUI	PFC + LLC	✓	TSSOP-20, SOIC-20	Full digital PFC + LLC controller with digital PG indicator
S HR1120	Digital Current Mode AHB Flyback	Digital CCM/DCM Multi-Mode	<75	UART/GUI	PFC + AHB Flyback	✓	TSSOP-20	Digital combo controller for wide V _{OUT} range applications

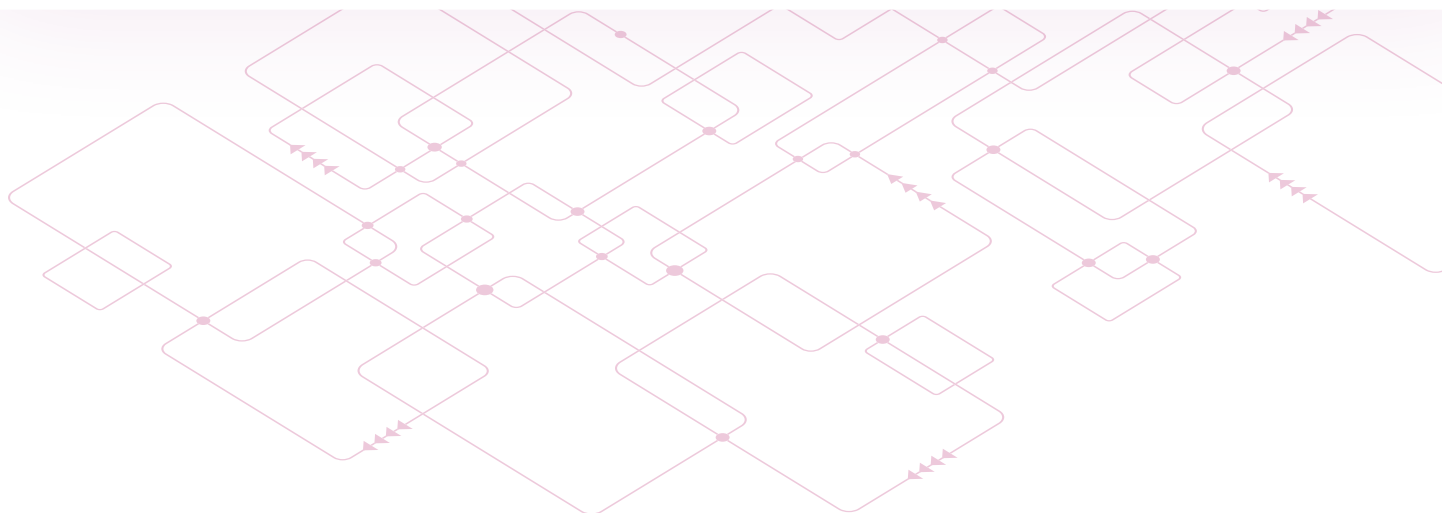
PFC | AC/DC POWER CONVERSION

Part Number	V _{IN} (Min) (V _{AC})	V _{IN} (Max) (V _{AC})	I _{O,MAX} / I _{CC,MAX} (mA)	I _{GATE_SRC} / I _{GATE_SINK} (mA)	Control Scheme	Topology	Package	Notes
MP44010	85	305	0.65/2.5	-350/+600	Boundary Mode	Boost/Buck-Boost	SOIC-8	Boundary mode, general purpose
MP44011	85	305	0.65/2.5	-350/+600	Boundary Mode	Boost/Buck-Boost	SOIC-8	Boundary mode, reduced capacitance and inductor size compared to the MP44010
MP44014	85	305	3.2/4.5	-750/+800	Boundary Mode	Boost/Buck-Boost	SOIC-8	Boundary mode
MP44014A	85	305	3.2/4.5	-750/+800	Boundary Mode	Boost/Buck-Boost	SOIC-8	Boundary mode, adjacent open-loop protection
N MP44017	85	305	0.2/1.5	-600/+1000	CrM/DCM Multi-Mode	Boost	SOIC-8	Based on the MP44018, optimized burst thresholds for lighting applications with deep dimming requirements
MP44018A	85	305	0.2/1.5	-600/+1000	CrM/DCM Multi-Mode	Boost	SOIC-8	Enhanced light-load efficiency
MP44019	85	305	0.2/1.5	-600/+1000	CrM/DCM Multi-Mode	Boost	SOIC-8	Based on the MP44018, implements second OVP function for TV applications
N MP44020	85	305	0.18/2.1	-600/+1000	CrM/DCM Multi-Mode	Boost	SOIC-8	Enhanced PF and THD
N MP44060	85	305	0.25/5	-600/+1000	CrM/DCM Multi-Mode	Boost	SOIC-8	High frequency, based on the MP44018-A
S MP45000	85	305	0.9/10	-770/+910	CrM/DCM Multi-Mode	Totem-Pole Boost	TSSOP-28	Best efficiency, fully integrated
MP4078	85	305	0.4/5	35V/0.27Ω Source-Driven	DCM	Flyback/Buck-Boost/Buck	SOIC-8	Primary-side control for constant voltage power

SYNCHRONOUS RECTIFIERS | AC/DC POWER CONVERSION

Flyback Topology (Fast Turn-Off, Intelligent)

Part Number	Type	V _{in} (Min) (V)	V _{in} (Max) (V)	f _{sw} (Max) (kHz)	Drain Rating (V)	Regulation Voltage (mV)	Typical R _{DS(on)} (mΩ)	Package	Notes
MP6902	Controller	8	24	400	180	70	Ext FET	SOIC-8	Light-load management
MP6906	Controller	4.2	35	400	180	30	Ext FET	SOIC-8, TSOT23-6	V _{cc} down to 4.5V, light-load management, turn-off blanking and SYNC feature
MP6907	Controller	4.2	35	400	180	70	Ext FET	SOIC-8, TSOT23-6	V _{cc} down to 4.5V, light-load management, turn-off blanking and SYNC feature, better efficiency than the MP6902
MP6908	Controller	4	13	400	180	40	Ext FET	TSOT23-6	Fast turn-off intelligent rectifier, slew rate detection, self-biased (no need for auxiliary winding)
MP6908A	Controller	4	13	600	180	40	Ext FET	TSOT23-6	High-frequency, fast turn-off intelligent rectifier, slew rate detection, self-biased (no need for auxiliary winding)
MP6908L	Controller	4.5	13	150	180	40	Ext FET	TSOT23-6	Optimized for 65kHz
N MP6908S	Controller	4.5	13	400	180	40	Ext FET	TSOT23-6	Zero MOT
MP6909	Controller	4	13	400	180	40	Ext FET	TSOT23-6	Fast turn-off intelligent rectifier, slew rate detection
MP6951	Controller	4	13	1000	180	40	Ext FET	TSOT23-6	Fast turn-off, intelligent VDS ringing detection
N MP6951A	Controller	4	13	1000	180	30	Ext FET	TSOT23-6	Fast turn-off, intelligent VDS ringing detection
MP6960	Controller	8	24	400	180	70	Ext FET	SOIC-8	Integrated CC/CV controller
N MP6980	Controller	4	13	150	180	40	Ext FET	TSOT23-6	Thermally improved version based on the MP6908A
N MP6982	Controller	4.5	13	600	180	40	Ext FET	TSOT23-6	SR driver voltage optimized for GaN FET, based on the MP6908A
MP6910A	Ideal diode	8	24	250	100	70	15	SOIC-8	MP6902-based ideal diode
MP6910B	Ideal diode	8	24	250	100	70	13	SOIC-8	MP6902-based ideal diode
MP6919	Ideal diode	4.5	13	150	100	40	13	SOIC-8	MP6908-based ideal diode
MP9989	Ideal diode	4.5	13	150	100	40	10	SOIC-8, QFN-8 (4x5)	MP6908-based ideal diode
N MP9989A	Ideal diode	4	13	300	100	40	10	SOIC-8, QFN-8 (4x5)	High-frequency, 20V, 3.5A to 4A, MP6908A-based ideal diode
MP6953	Ideal diode	8	24	250	100	70	17	SOIC-8	12V, 2.5A, ideal diode
MP6954	Ideal diode	8	24	250	100	70	14	SOIC-8	12V, 3A, ideal diode
N MP6971	Ideal diode	4.5	13	150	100	40	20	SOIC-8	12V, 2A, MP6908-based ideal diode
MP6972	Ideal diode	4.5	13	150	100	40	17	SOIC-8	12V, 2.5A, MP6908-based ideal diode
MP6973	Ideal diode	4.5	13	150	100	40	14	SOIC-8	12V, 3A, MP6908-based ideal diode
N MP6975	Ideal diode	4.5	13	150	100	40	12	SOIC-8	12V, 3.5A, MP6908-based ideal diode
MP6976	Ideal diode	4.5	13	150	100	40	10.5	SOIC-8	20V, 3.5A, MP6908-based ideal diode
S MP9986	Ideal diode	4.5	13	150	100	40	8	QFN-8 (4x5)	20V, 4.5A, MP6908-based ideal diode



SYNCHRONOUS RECTIFIERS | AC/DC POWER CONVERSION

LLC Topology (Fast Turn-Off, Intelligent)

Part Number	Type	f_{sw} (Max) (kHz)	Drain Rating (V)	Regulation Voltage (mV)	Typical $R_{DS(on)}$ (m Ω)	Single/Dual	Package	Notes
MP6903	Controller	300	180	70	Ext FET	Single	SOIC-8E	High noise immunity, light-load management
MP6922	Controller	300	180	70	Ext FET	Dual	SOIC-8E, SOIC-14	V_{FWD} 70mV for LLC
MP6922A	Controller	300	180	30	Ext FET	Dual	SOIC-8E, SOIC-14	High-efficiency, V_{FWD} 30mV for LLC, light-load management
MP6922L	Controller	300	180	70	Ext FET	Dual	SOIC-8	V_{FWD} 70mV for LLC, shorten LL mode entry t_{ON} threshold, disable light-load entry when no gate pulse compared to the MP6922
MP6923	Controller	300	180	15	Ext FET	Dual	SOIC-14	High-power optimized
MP6925	Controller	500	180	45	Ext FET	Dual	SOIC-8	Enhanced light-load performance, compatible with the MP6924A
MP6925A	Controller	500	180	45	Ext FET	Dual	SOIC-8	Enhanced light-load performance, compatible with the MP6924
N MP6926	Controller	600	180	29	Ext FET	Dual	SOIC-8	High-frequency LLC SR based on the MP6925
P MP6929	Controller	750	140	15/30	Ext FET	Dual	SOIC-8	High-frequency enhanced driver ability and efficiency for high-frequency LLC SR controllers
S MP6933	Ideal diode	500	40	45	3.5	Dual	SOIC-16E	Dual-channel
P MP6941	Ideal diode	500	60	45	9	Single	QFN-12 (5x6)	Single-channel
N MP6943	Ideal diode	500	60	45	5.5	Single	QFN-12 (5x6)	Single-channel
P MP6947	Ideal diode	500	60	45	7.5	Single	QFN-12 (5x6)	Single-channel

700V HALF-BRIDGE GATE DRIVERS | AC/DC POWER CONVERSION

LLC Topology (Fast Turn-Off, Intelligent)

Part Number	Type	$V_{DD} I_{D_MAX} / I_{CS_MAX}$ (mA)	V_{DD_MAX} (V)	$I_{GATE_SRC} / I_{GATE_SINK}$ (mA)	Package	Notes
S MP18721	Half-Bridge Driver	0.9/2.5	20	-500/-4000/+500/+4000	SOIC-8	CMTI >100kV/ μ s
P MPG137xx	Half-Bridge Module	0.9/2.5	-	-	QFN (8x9)	CMTI >100V/ns

AC/DC ISOLATED | LED LIGHTING

Controllers

Part Number	V_{in} (Min) (V _{AC})	V_{in} (Max) (V _{AC})	Power (W)	Topology	Package	Notes
MP4026	85	305	Ext FET	Flyback	SOT23-6	Primary-side control, active PFC
MP4027	85	305	Ext FET	Flyback	SOT23-8	Primary-side control, PFC, NTC, and PWM dimming
MP4031	85	305	Ext FET	Flyback	SOIC-8	TRIAC and analog dimming, deep dimming, primary-side control, active PFC
MP4033	85	305	Ext FET	Flyback	SOIC-8, MSOP-10, SOIC-14	Enhanced TRIAC dimming, primary-side control, active PFC
MP4057A	85	305	Ext FET	Buck-Boost	MSOP-10, SOIC-14	Single-chip/single-stage solution for smart LED/wireless modules
MP4059	85	305	Ext FET	Buck-Boost	SOIC-8	3% analog dimming
MP4060	85	305	Ext FET	Buck-Boost	SOIC-8, MSOP-10, SOIC-14	Improved trailing-edge dimmer performance at high line over the MP4056
MP4078	85	305	Ext FET	Flyback/Buck-Boost/ Buck	SOIC-8	Primary-side control and PFC controller for constant voltage power
HR1001A	85	305	Ext FET	LLC Resonant	SOIC-16	Resonant half-bridge, variable frequency, high-power application, auto-restart at over-current for street lighting applications
HR1001B	85	305	Ext FET	LLC Resonant	SOIC-16	Resonant half-bridge, variable frequency, high-power application, two-level OCP
HR1001C	85	305	Ext FET	LLC Resonant	SOIC-16	Enhanced LLC controller with adaptive dead-time control, OCP, auto-restart, latch, enhanced surge
HR1001L	85	305	Ext FET	LLC Resonant	SOIC-16	Enhanced LLC controller with adaptive dead-time control, OCP, latch-off
MP44010	85	305	Ext FET	PFC Boost/Buck-Boost	SOIC-8, DIP-8	Offline PFC, boundary conduction, ultra-low start-up current (15 μ A)
MP44011	85	305	Ext FET	PFC Boost/Buck-Boost	SOIC-8	Offline PFC, boundary conduction, harmonic injection function (reduced capacitance and inductor size compared to the MP44010)
MP44014	85	305	Ext FET	PFC Boost/Buck-Boost	SOIC-8	Offline PFC, boundary conduction
MP44014A	85	305	Ext FET	PFC Boost/Buck-Boost	SOIC-8	Boundary-mode PFC controller with adjusted open-loop protection
MP44018A	85	305	Ext FET	PFC Boost/Buck-Boost	SOIC-8	CrM/DCM multi-mode boost PFC controller with enhanced light-load efficiency

Regulators

Part Number	V_{in} (Min) (V _{AC})	V_{in} (Max) (V _{AC})	Power (W)	Topology	Package	Notes
MP4032-1	85	132	7	Flyback	SOIC8-7A	Integrated 500V FET, TRIAC dimming, deep dimming, primary-side control, active PFC
MP4034	85	305	7	Flyback	SOIC-8, MSOP-10, SOIC-14	Integrated 700V FET, primary-side control, no dimming or PFC

AC/DC NON-ISOLATED | LED LIGHTING

Controllers

Part Number	V_{IN} (Min) (V _{AC})	V_{IN} (Max) (V _{AC})	Power (W)	Configuration	Package	Notes
MP4001	85	305	Ext FET	Low-Side Buck	SOIC-8	Offline LED controller, integrated high-voltage LDO, analog and PWM dimming
MP4054	85	305	Ext FET	Buck-Boost	SOT23-8	Offline LED controller, active PFC
MP4054A	85	305	Ext FET	Buck-Boost	SOT23-8	Offline LED controller, active PFC, NTC, PWM dimming
MP4056	85	305	Ext FET	Buck-Boost	SOIC-8, MSOP-10, SOIC-14	TRIAC dimming, offline LED controller, active PFC

Regulators

Part Number	V_{IN} (Min) (V _{AC})	V_{IN} (Max) (V _{AC})	Power (W)	Configuration	Package	Notes
MP4050A	85	265	8	Buck	SOIC-8, SOT23-5	Integrated 500V FET, offline driver, enhanced thermal, no PFC or dimming
MP4068	85	305 (Recommend Low-Line Only)	10	Buck/ Buck-Boost	SOIC8-7A, SOIC-8EP	Integrated 500V FET, PFC driver with TRIAC dimming
MP4088	85 (Recommend High-Line Only)	305	8.5	Buck/ Buck-Boost	SOIC8-7A, SOIC-8EP, TSOT23-5	Integrated 500V FET, PFC driver with TRIAC dimming

DC/DC LIGHTING | LED LIGHTING

Regulators

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Configuration	I_{OUT} (A)	Max Efficiency (%)	Typ Frequency	Package	Notes
MP3412	0.8	4.4	Boost	1.1	96	1MHz	TSOT23-6	Synchronous boost, no dimming
MP2480	5	36	Buck	3	95	2MHz	SOIC-8E	Hysteresis control, PWM dimming
MP2481	4.5	36	Buck/ Buck-Boost	1.2	95	1.4MHz	MSOP-8E	Analog and PWM dimming
MP24892	6	45	Low-Side Buck	1	95	600kHz	TSOT23-5	Hysteresis control, analog and PWM dimming, lower-cost version of the MP2489
MP2483	4.5	55	Buck/ Buck-Boost	2.5	95	1.35MHz	QFN-10 (3x3), SOIC-14	Analog and PWM dimming, consumer-grade
MP2488	4.5	55	Buck	2	97.5	200kHz	QFN-10 (3x3), SOIC-8E	PWM dimming
MP2487	4.5	55	Buck	1	97.5	200kHz	SOIC-8E	PWM dimming
MP24833A	4.5	55	Buck/Boost/ Buck-Boost	3	90	210kHz	SOIC-8E	Analog and PWM dimming
S MP24880	7	55	Buck	2	97.5	1MHz	TSSOP-28EP	PWM dimming
N MP24881	5.2	60	Buck	2	95	2MHz	SOIC-8EP	Analog and PWM dimming
MP24895	6	36	Low-Side Buck	1	95	600kHz	QFN-6 (3x3), TSOT23-5	Hysteresis control, analog and PWM dimming
MP24895A	6	36	Low-Side Buck	-	-	-	MSOP-8EP	The MP24895 in an MSOP-8EP package, analog and PWM dimming
MP4688	4.5	80	Buck	1	95	2MHz	SOIC-8, SOIC-8E	Hysteresis control, PWM dimming
MP4689A	4.5	100	Buck	1	95	1MHz	SOIC-8EP	Hysteresis current-mode control, dedicated PWM dimming control input

Regulators

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Configuration	I_{OUT} (A)	Max Efficiency (%)	Typ Frequency	Package	Notes
MP2410	4.2	24	Buck	2	97	1MHz	TSOT23-6, TSOT23-8	Synchronous buck, analog dimming only
MP2410A	4.2	24	Buck	2	97	1MHz	TSOT23-6, TSOT23-8	Synchronous buck, analog and PWM dimming
MP2489	6	60	Low-Side Buck	1	95	600kHz	QFN-6 (3x3), TSOT23-5, SOIC-8E	Hysteresis control

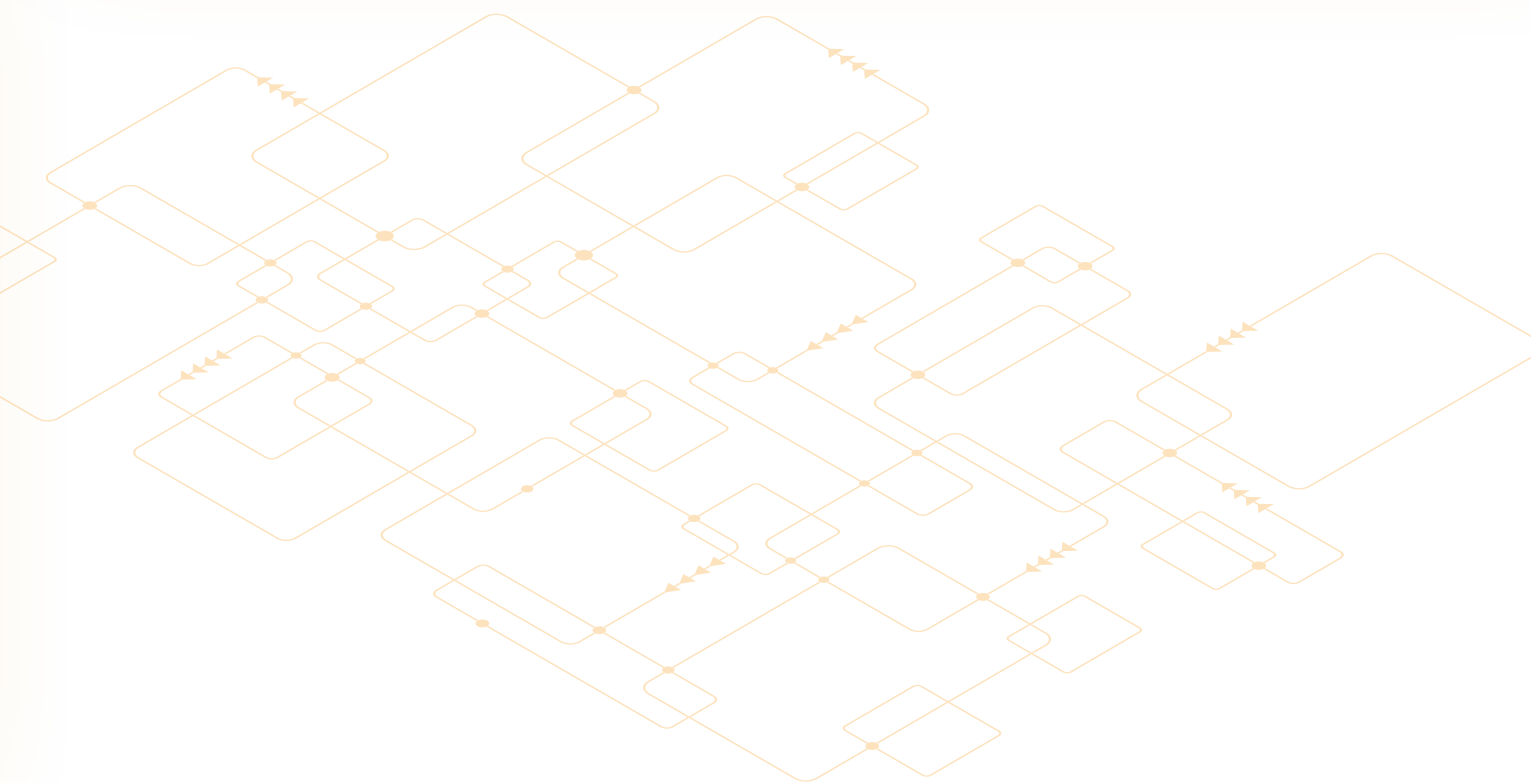
Controllers

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Power (W)	Configuration	Max Efficiency (%)	Package	Notes
MP24894	6	60	Ext FET	Low-Side Buck	95	TSOT-6	Buck controller, hysteresis control

PROTECTION | LED LIGHTING

Regulators

Part Number	Control Method	Package	Notes
MP4690	Shunt	SOD-123	Smart bypass for LED protection, 6V voltage threshold protects 1 LED



SINGLE-CELL SWITCHING CHARGERS | BATTERY MANAGEMENT

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (Max) (A)	Battery Charge Voltage (V)	OTG Current (Max) (A)	f_{SW} (kHz)	Control Interface	NVDC Power Path	Battery Type	Package	Notes
MP2610	5	24	26	2	4.2/8.4	-	1100	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (4x4)	NTC battery temp monitor
MP2611	4	6	8	2	4	-	1500	Standalone	-	Li-Ion, Li-Polymer	QFN-14 (3x4)	Dual-input, NTC battery temp monitor
MP2615	4	18	23	2	4.1/8.4	-	600	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (3x3)	NTC battery temp monitor
MP2615A	4	18	23	2	4.2/8.7	-	600	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (3x3)	NTC battery temp monitor
MP2615B	4	18	23	2	3.99/4.03	-	760	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (3x3)	NTC battery temp monitor
MP2615C	4	18	23	2	4.1 to 8.4	-	760	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (3x3)	NTC battery temp monitor, 25m Ω R_{SNS}
N MP2615D	4	18	23	2	4.05/4.13	-	1000	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (3x3)	Batt. NTC monitor, 47m Ω R_{SNS}
MP2625B	4	10	20	2	4	-	1600	Standalone	✓	Li-Ion, Li-Polymer	QFN-20 (3x4)	NTC battery temp monitor
MP26101	5	24	26	2	4.1/8.2	-	1100	Standalone	-	Li-Ion, Li-Polymer	QFN-16 (4x4)	NTC battery temp monitor
MP2623	4	24	26	2	3.6/7.2	-	1100	Standalone	-	LiFePO4	QFN-16 (4x4)	NTC battery temp monitor
MP2626	4	7	20	2	4.2/4.35	1	1200/600	Standalone	-	Li-Ion, Li-Polymer	QFN-24 (4x4)	NTC battery temp monitor
MP2617A	4	10	20	3	4	-	1600	Standalone	✓	Li-Ion, Li-Polymer	QFN-20 (3x4)	NTC battery temp monitor
MP2617B	4	10	20	3	4	-	1600	Standalone	✓	Li-Ion, Li-Polymer	QFN-20 (3x4)	NTC battery temp monitor
MP2617H	4	14	20	3	4	-	1600	Standalone	✓	Li-Ion, Li-Polymer	QFN-20 (3x4)	NTC battery temp monitor
MP2635A	4	7	20	2	4.2/3.6	2	1200/600	Standalone	-	Li-Ion, Li-Polymer, LiFePO4	QFN-24 (4x4)	Power-path management, NTC batt. temp monitor, adj. boost V_{OUT}
MP2633A	4	7	20	2	4.2/3.6	1	1200/600	Standalone	-	Li-Ion, Li-Polymer, LiFePO4	QFN-24 (4x4)	Power-path management, NTC batt. temp monitor, adj. boost V_{OUT}
MP2690	4	6	14	3	4.2/4.35 /4.45	2	600	Standalone	-	Li-Ion, Li-Polymer	QFN-26 (4x4)	Power-path management, BC1.2 detection, LED fuel gauge, NTC battery temp monitor, all-in-one autonomous mode
MP2635B	4	7	20	2	4.2/4.35	2	1200/600	Standalone	-	Li-Ion, Li-Polymer	QFN-24 (4x4)	Power-path management, NTC batt. temp monitor, adj. boost V_{OUT}
MP2637	5	6	20	3	4.2/4.35	2	600	Standalone	-	Li-Ion, Li-Polymer	QFN-24 (4x4)	Power-path management, NTC batt. temp monitor, adj. boost V_{OUT}
MP2637A	5	6	20	3	4.055/4.2	2	620	Standalone	-	Li-Ion, Li-Polymer	QFN-24 (4x4)	Power-path management, NTC batt. temp monitor, adj. boost V_{OUT}
MP2632B	4	6	20	3	4.2/4.35 /4.45	3	600	Standalone	-	Li-Ion, Li-Polymer	QFN-26 (4x4)	Power-path management, BC1.2 detection, LED fuel gauge, NTC batt. temp monitor, all-in-one autonomous mode
MP2636	5	7	16	3	4.2/4.3 /4.35	3	600	Standalone	-	Li-Ion, Li-Polymer	QFN-30 (4x4)	Power-path management, NTC battery temp monitor, adj. boost V_{OUT} , batt. current monitor

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (Max) (A)	Battery Charge Voltage (V)	OTG Current (Max) (A)	f_{SW} (kHz)	Control Interface	NVDC Power Path	Battery Type	Package	Notes
MP2696A	4	11	16	4	3.6 to 4.45	4	700/1200	I ² C	-	Li-Ion, Li-Polymer	QFN-21 (3x3)	JEITA batt. NTC monitor, power-path management, OTP prog. charging parameters, batt. current monitor, prog. boost V_{OUT}
MP2696B	4	11	16	4	3.6 to 4.45	4	700/1200	I ² C	-	Li-Ion, Li-Polymer	QFN-21 (3x3)	3.5A max input current, JEITA batt. NTC monitor, power-path management, OTP prog. charging parameters, batt. current monitor, prog. boost V_{OUT}
MP2695	4	11	16	4	3.6 to 4.45	-	600	I ² C	-	Li-Ion, Li-Polymer	QFN-21 (3x3)	JEITA batt. NTC monitor, OTP prog. charging parameters, batt. current monitor
MP2624	4	7	20	5	3.48 to 4.425	1	1700	I ² C	✓	Li-Ion, Li-Polymer	QFN-22 (3x4)	JEITA batt. NTC monitor, BC1.2 detection, shipping mode, OTG, OCP hiccup function
MP2624A	4	7	20	5	3.48 to 4.425	1	1700	I ² C	✓	Li-Ion, Li-Polymer	QFN-22 (3x4)	JEITA batt. NTC monitor, BC1.2 detection, shipping mode, OTG, OCP latch-off function
MP2639B	4	16	20	5	4	3	1300	Standalone	-	Li-Ion, Li-Polymer	QFN-26 (4x4)	JEITA batt. NTC monitor, LED fuel gauge, batt. current monitor
MP2731	4	16	22	5	3.4 to 4.67	3	1000/1350	I ² C/ Standalone	✓	Li-Ion, Li-Polymer, LiFePO4	QFN-26 (3.5x3.5)	Input current reg., V_{IN} reg., integrated ADC, JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG
MP2723	4	6	22	3	3.4 to 4.67	2	1000/1350	I ² C/ Standalone	✓	Li-Ion, Li-Polymer, LiFePO4	QFN-26 (3.5x3.5)	Input current reg., V_{IN} reg., integrated ADC, JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG
MP2733	4	16	22	5	3.4 to 4.67	3	1000/1350	I ² C/ Standalone	✓	Li-Ion, Li-Polymer, LiFePO4	QFN-26 (3.5x3.5)	Input current reg., V_{IN} reg., integrated ADC (always available), JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG
MP2723A	4	6	22	3	3.4 to 4.67	2	1000/1350	I ² C/ Standalone	✓	Li-Ion, Li-Polymer, LiFePO4	QFN-26 (3.5x3.5)	Input current reg., V_{IN} reg., integrated ADC (always available), JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG
N MP2733A	4	16	22	5	3.4 to 4.67	3	1000/1350	I ² C/ Standalone	✓	Li-Ion, Li-Polymer, LiFePO4	QFN-26 (3.5x3.5)	Input current reg., V_{IN} reg., integrated ADC (always available), JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG, RBFET controllable in OTG mode
MP2759	4	36	45	3	3.6 to 26.4	-	450/700	Standalone	-	Li-Ion, Li-Polymer, LiFePO4	QFN-19 (3x3)	JEITA batt. NTC monitor, input bypass power path, V_{IN} reg., input current reg., OTP memory, input status/charging indication
MP2759A	4	36	45	3	3.6 to 26.4	-	450/700	Standalone	-	Li-Ion, Li-Polymer, LiFePO4	QFN-19 (3x3)	Batt. NTC monitor, input bypass power path, V_{IN} reg., input current regulation, OTP memory, input status/charging indication
MP2720	4	6	26	3	3.6 to 4.6	3	750 to 1500	I ² C	✓	Li-Ion, Li-Polymer, LiFePO4	QFN-22 (2.5x3.5)	Input current reg., V_{IN} reg., JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG

SINGLE-CELL SWITCHING CHARGERS | BATTERY MANAGEMENT

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (Max) (A)	Battery Charge Voltage (V)	OTG Current (Max) (A)	f_{SW} (kHz)	Control Interface	NVDC Power Path	Battery Type	Package	Notes
MP2720A	4	6	26	2	3.6 to 4.6	3	750 to 1500	I ² C	✓	Li-Ion, Li-Polymer	QFN-22 (2.5x3.5)	Input current reg., V_{IN} reg., JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG
MP2721	4	16	26	5	3.6 to 4.6	3	750 to 1500	I ² C	✓	Li-Ion, Li-Polymer, LiFePO4	QFN-22 (2.5x3.5)	Input current reg., V_{IN} reg., JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG
MP2722	4	16	26	5	3.6 to 4.6	3	750 to 1500	I ² C	✓	Li-Ion, Li-Polymer, LiFePO4	QFN-22 (2.5x3.5)	Input current reg., V_{IN} reg., JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG, integrated USB Type-C DRP CC controller
N MP2724	4	6	26	2	3.6 to 4.6	3	750 to 1500	I ² C	✓	Li-Ion, Li-Polymer, LiFePO4	QFN-22 (2.5x3.5)	Input current reg., V_{IN} reg., JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG, integrated USB Type-C sink mode
MP2770	4	16	20	6	3.6 to 4.45	4	500 to 1000	I ² C	✓	Li-Ion, Li-Polymer	QFN-18 (3x4)	JEITA batt. NTC monitor, power-path management, integrated ADC, OTP prog. charging parameters, prog. boost V_{OUT} and I_{OUT}
N MP2772	4	13.5 / 6.5	26	2	3.6 to 4.6	1.5	1500/2000	I ² C	✓	Li-Ion, Li-Polymer	WLCSP-30 (2.5x2.85)	Input current reg., V_{IN} reg., JEITA batt. NTC monitor, NVDC power path, OTP memory, shipping mode, thermal reg., USB BC1.2 input det., USB OTG with dual outputs
S MP2718	4	16	22	3	5	2	1200 to 2500	I ² C	✓	Li-Ion, Li-Polymer	QFN-20 (3mm x3mm)	Input current reg., V_{IN} reg., JEITA batt. NTC monitor, NVDC power path, external N-MOSFET driver for PMID power path, OTP memory, shipping mode, thermal reg., USB OTG

LINEAR CHARGERS | BATTERY MANAGEMENT

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (mA)	Battery Charge Voltage (V)	Power Path	Control Interface	Battery Type	Package	Notes
MPQ5480	4	6	7	7.8 to 127	4	✓	Standalone	Li-Ion, Li-Polymer	WLCSP-16 (1.7x1.7)	Integrated buck regulator and load switch, USB compatible
MP2603	3	5	25	50 to 150	4	-	Standalone	Li-Ion, Li-Polymer	TSOT23-5	Charging indication
MP2660	4	6	13	8 to 500	3.6 to 4.5	✓	I ² C	Li-Ion, Li-Polymer, LiFePO4	WCSP-9 (1.55x1.55)	Batt. OCP/UVP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible
MP2661	4	6	13	8 to 500	3.6 to 4.565	✓	I ² C	Li-Ion, Li-Polymer, LiFePO4	WCSP-9 (1.55x1.55)	Batt. OCP/UVP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (mA)	Battery Charge Voltage (V)	Power Path	Control Interface	Battery Type	Package	Notes
MP2662	4	6	21	8 to 456	3.6 to 4.5	✓	I ² C	Li-Ion, Li-Polymer, LiFePO4	WCSP-9 (1.75x1.75)	Batt. OCP/UVP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible
MP2663	4	6	13	8 to 500	3.6 to 4.5	✓	I ² C	Li-Ion, Li-Polymer, LiFePO4	WCSP-9 (1.55x1.55)	Batt. OCP/UVP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible
MP2664	4	6	13	8 to 500	3.6 to 4.5	✓	I ² C	Li-Ion, Li-Polymer, LiFePO4	QFN-10 (2x2)	Batt. OCP/UVP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible
MP2602	3	6	28	85 to 1000	4	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	NTC batt. temp monitor, adapter present, charging indication, prog. termination current
MP26028	3	7	20	85 to 1000	4	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, prog. termination current
MP26029	4	6	13	30 to 1000	3.6 to 4.4	-	Standalone	Li-Ion, Li-Polymer	SOT563, SOIC-8E, QFN-10 (3x3)	Batt. NTC monitor, OTP memory, thermal reg., USB compatible
MP2604	3	7	28	85 to 1000	4	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, prog. termination current, NTC batt. temp monitor
MP2605	3	7	28	200 to 1000	4	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, NTC batt. temp monitor
MP26053	3	7	28	200 to 1000	4	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, NTC batt. temp monitor
MP26056	3	7	28	200 to 1000	4	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Dual-mode USB/AC adapter current limits, adapter present, charging indication, prog. termination current
MP26057	4	7	28	200 to 1000	4	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, prog. termination current, NTC batt. temp monitor
MP26058	3	7	28	200 to 1000	4	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, prog. termination current, NTC batt. temp monitor
MP2606	3	7	28	85 to 1000	4	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, prog. termination current
MP26060	3	7	24	85 to 1000	4	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, prog. termination current
MP2607	5	6	13	300 to 1500	4	✓	Standalone	Li-Ion, Li-Polymer	QFN-14 (3x4)	Power-path management, dual-mode USB/AC adapter current limits, low $R_{DS(ON)}$, adapter present, charging indication, NTC batt. temp monitor
MP2608	4	6	28	100 to 1000	4	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Dual-input, fault and charging indication, prog. termination current
MP26121	3	7	28	200 to 1000	4	-	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Adapter present, charging indication, NTC batt. temp monitor
MP2631	3	7	28	200 to 1000	4	✓	Standalone	Li-Ion, Li-Polymer	QFN-10 (3x3)	Integrated 10mA LDO, adapter present, charging indication
MP2667	4	6	13	16 to 1000	3.6 to 4.5	✓	I ² C	Li-Ion, Li-Polymer, LiFePO4	QFN-10 (2x2)	Batt. OCP/UVP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible
MP2665A	4	6	21	16 to 896	3.6 to 4.545	✓	I ² C	Li-Ion, Li-Polymer, LiFePO4	QFN-12 (2.5x3)	Batt. OCP/UVP, batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible
MP2700	4	14	26	20 to 1000	2.4V to 4.5V	-	Standalone	NiMH, Li-Ion, Li-Polymer, LiFePO4	WLCSP-8 (1.05x1.6)	Adapter present, charging indication, charge OCP, JEITA batt. NTC monitor, V_{IN} reg., input current reg., OTP memory, thermal reg.



LINEAR CHARGERS | BATTERY MANAGEMENT

	Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (mA)	Battery Charge Voltage (V)	Power Path	Control Interface	Battery Type	Package	Notes
N	MP2702	4	14	26	20 to 1000	2.4 to 4.5	-	Standalone	NiMH, Li-Ion, Li-Polymer, LiFePO4	QFN-10 (2x2.5)	Adapter present, charging indication, charge OCP, JEITA batt. NTC monitor, V_{IN} reg., input current reg., OTP memory, thermal reg., EN control
N	MP2703	4	14	26	20 to 1000	2.4 to 4.5	-	Standalone	NiMH, Li-Ion, Li-Polymer, LiFePO4	QFN-10 (2x2.5)	Adapter present, charging indication, charge OCP, JEITA batt. NTC monitor, V_{IN} reg., input current reg., OTP memory, thermal reg., battery diagnostics
N	MP2710	3	6	21	8 to 456	3.6 to 4.545	✓	I ² C	Li-Ion, Li-Polymer	WLCSP-9 (1.85x1.85)	Batt. OCP/UVLO, JEITA batt. NTC monitor, V_{IN} reg., NVDC power path, OTP memory, shipping mode, thermal reg., USB compatible

MULTI-CELL SWITCHING CHARGERS | BATTERY MANAGEMENT

	Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (Max) (A)	Battery Charge Voltage (V)	f_{SW} (kHz)	Topology	# of Series Cells	Control Interface	Battery Type	Package	Notes
	MP2610	5	24	26	2	4.2/8.4	1100	Non-Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (4x4)	Batt. NTC monitor
	MP26101	5	24	26	2	4.1/8.2	1100	Non-Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (4x4)	Batt. NTC monitor
	MP26123	9	24	26	2	8.4/12.6	600	Non-Sync Buck	2, 3	Standalone	Li-Ion, Li-Polymer	QFN-16 (4x4)	Batt. NTC monitor
	MP26124	18	24	28	2	17	600	Non-Sync Buck	4	Standalone	Li-Ion, Li-Polymer	QFN-16 (4x4)	Batt. NTC monitor
	MP2615	4	18	23	2	4.1/8.4	600	Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (3x3)	Batt. NTC monitor, input status/charging indication
	MP2615A	4	18	23	2	4.2/8.7	600	Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (3x3)	Batt. NTC monitor, input status/charging indication
	MP2619	3	24	26	2	8.4/12.6	600	Non-Sync Buck	2, 3	Standalone	Li-Ion, Li-Polymer	QFN-28 (4x5)	Power-path management, batt. NTC monitor
	MP2623	4	24	26	2	3.6/7.2	1100	Non-Sync Buck	1, 2	Standalone	LiFePO4	QFN-16 (4x4)	Batt. NTC monitor
	MP2672	4	6	14	2	8.3 to 9	600/1200	Sync Boost	2	I ² C/ Standalone	Li-Ion, Li-Polymer	QFN-18 (2x3)	NVDC power-path management, JEITA batt. NTC monitor, OTP prog. charging parameters, integrated cell balancing
	MP2639A	4	6	20	3	8	1300	Sync Boost	2	Standalone	Li-Ion, Li-Polymer	QFN-26 (4x4)	JEITA batt. NTC monitor, LED fuel gauge, batt. current monitor, integrated cell balancing, USB OTG
	MP2639C	4	6	20	3	8	1300	Sync Boost	2	Standalone	Li-Ion, Li-Polymer	QFN-26 (4x4)	USB OTG, integrated cell balancing, USB compatible, JEITA batt. NTC monitor, thermal reg., V_{IN} reg., LED fuel gauge
	MP2659	4	36	45	3	10.8 to 26.4	700/350	Sync Buck	3, 4, 5, 6	Standalone	Li-Ion, Li-Polymer	QFN-19 (3x3)	Batt. NTC monitor, V_{IN} reg., input current reg. OTP prog. charging parameters, integrated power FETs, input status/charging indication
	MP2615C	4	18	23	2	4.1 to 8.4	760	Sync Buck	1, 2	Standalone	Li-Ion, Li-Polymer	QFN-16 (3x3)	Batt. NTC monitor, 25m Ω R _{SNS}
	MP2672A	4	6	14	2	8.2 to 8.9	600/1200	Sync Boost	2	I ² C/ Standalone	Li-Ion, Li-Polymer	QFN-18 (2x3)	JEITA batt. NTC monitor, NVDC power path, thermal reg., V_{IN} reg., integrated cell balancing, OTP memory

Part Number	Operating V_{in} (Min) (V)	Operating V_{in} (Max) (V)	Absolute V_{in} (Max) (V)	Charge Current (Max) (A)	Battery Charge Voltage (V)	f_{sw} (kHz)	Topology	# of Series Cells	Control Interface	Battery Type	Package	Notes
MP2762A	4	21	28	6	7.425 to 9	600/800/1000	Buck or Boost	2	I ² C	Li-Ion, Li-Polymer	QFN-30 (4x5)	JEITA batt. NTC monitor, NVDC power path, V_{in} reg., input current reg., OTP memory, dual-phase operation, batt. current monitor, integrated ADC
MP2759	4	36	45	3	3.6 to 26.4	450/700	Sync Buck	1, 2, 3, 4, 5, 6	Standalone	Li-Ion, Li-Polymer, LiFePO ₄	QFN-19 (3x3)	JEITA batt. NTC monitor, input bypass power path, V_{in} reg., input current reg., OTP memory, input status/charging indication
MP2759A	4	36	45	3	3.6 to 26.4	450/700	Sync Buck	1, 2, 3, 4, 5, 6	Standalone	Li-Ion, Li-Polymer, LiFePO ₄	QFN-19 (3x3)	Batt. NTC monitor, input bypass power path, V_{in} reg., input current reg., OTP memory, input status/charging indication
MP2650	4	21	28	5	7.425 to 18	600/800/1000	Buck or Boost	2, 3, 4	I ² C	Li-Ion, Li-Polymer	QFN-30 (4x5)	JEITA batt. NTC monitor, NVDC power path, V_{in} reg., input current reg., OTP memory, batt. current monitor, integrated ADC
MP2651	4	22	28	6	3.4 to 18.68	500 to 1200	Buck-Boost	1, 2, 3, 4	I ² C/ Standalone	Li-Ion, Li-FePO ₄ , Li-Polymer	TQFN-30 (4x5)	Batt. current monitoring, batt. UVP, input current reg., V_{in} reg., integrated ADC, JEITA batt. NTC monitor, OTP memory, thermal reg., USB compatible, USB OTG
N MP2652	4	22	26	6	7.2 to 22	375 to 770	Buck-Boost	2, 3, 4, 5	I ² C/ Standalone	Li-Ion, Li-FePO ₄ , Li-Polymer	TQFN-30 (4x5)	Batt. current monitoring, input current reg., V_{in} reg., integrated ADC, integrated LDO, JEITA batt. NTC monitor, NVDC power path, OTP memory, thermal reg., USB compatible, USB OTG, USM control
N MP2658	5	36	45	3	2 to 31	350/680	Buck	1, 2, 3, 4, 5, 6, 7	Standalone	Li-Ion, Li-FePO ₄ , Li-Polymer, Lead Acid, Super Cap, NiMH, NiCd	QFN-19 (3x3)	NTC monitor, OTP memory, batt. OVP, prog. V_{BATT_REG} , input current reg., V_{in} reg., safety timer, termination current enable/disable
MP2760	4	22	28	6	3.4 to 18.72	500 to 1200	Buck-Boost	1, 2, 3, 4	I ² C/ Standalone	Li-Ion, Li-FePO ₄ , Li-Polymer	TQFN-30 (4x5)	VBATT_REG, batt. current monitor, batt. UVP, input current reg., V_{in} reg., integrated ADC, JEITA batt. NTC monitor, NVDC power path, OTP memory, thermal reg., USB compatible, USB source mode, USM control
N MP2761	4	22	28	6	7.2 to 18.68	375 to 770	Buck-Boost	2, 3, 4	I ² C/ Standalone	Li-Ion, Li-FePO ₄ , Li-Polymer	TQFN-30 (4x5)	VBATT_REG, batt. current monitor, batt. UVP, input current reg., V_{in} reg., integrated ADC, JEITA batt. NTC monitor, NVDC power path, OTP memory, thermal reg., USB compatible, USB source mode, USM control
S MP2764	4	22	28	8	22	500 to 1000	Buck-Boost	2, 3, 4, 5	I ² C/SMBus	Li-Ion, Li-Polymer	QFN-32 (4x5)	All FETs integrated with driver for ext. BAFET, NVDC power path, USB PD source mode, system power (PSYS) monitor, input current (IAM) and battery current (IBM), processor hot indication (/PROCHOT), VBATT_REG, batt. UVP, batt. current monitoring, V_{in} reg., input current reg., integrated ADC, USB PD source mode, OTP memory, thermal reg.
S MP2769	5	60	65	25	7.2 to 48	150 to 700	Buck-Boost	2 to 13	I ² C	Li-Ion, LiFePO ₄	QFN-32 (5x6)	VBATT_REG, batt. current monitoring, input current reg., V_{in} reg., NTC hot monitor, OTP memory, batt. OVP, prog. safety timer, termination current enable/disable, USB PD source mode

CC & CV CONTROLLERS | BATTERY MANAGEMENT

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Charge Current (Max) (A)	Charge Status	Charge Type	Battery Charge Voltage (V)	Package	Notes
MP26075	3	6	28	1	✓	CV/CC Linear	4.05 to 4.2	QFN-10 (3x3)	Pre-charge function, thermal foldback, voltage control function for flyback controller
MP26085	7	20	22	-	-	CV/CC Controller	Prog	SOT23-8	1.223V voltage reference
MP2681	5	30	36	4	✓	CV/CC Controller	12.45 to 20.75 (3S to 5S)	SOIC-16	Full protection and indication, one-chip solution for power tool applications
MP2681B	5	30	36	5	✓	CV/CC Controller	12.44 to 20.74 (3S to 5S)	SOIC-16	Full protection and indication, one-chip solution for power tool applications

SWITCHED CAPACITOR CONVERTERS | BATTERY MANAGEMENT

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Max Discharge Current (A)	Max Reverse Charge Current (A)	Peak Efficiency (%)	f_{SW} (Min) (kHz)	f_{SW} (Max) (kHz)	Control Interface	# of Series Cells	Package	Notes
N MP2752	11	16	10	5	0.993	250	800	I ² C	1, 2	WLCSP-42 (2.9x2.55)	Shipping mode, freq. dithering, direct charge, dead battery wakeup, audio mode
N MP2753	11	16	10	-	0.993	250	800	I ² C/ Standalone	2	WLCSP-42 (2.9x2.55)	Audio mode, shipping mode, freq. dithering
S MP2755	11	16	10	5	0.993	250	800	I ² C/ Standalone	1, 2	WLCSP-42 (2.9x2.55)	Audio mode, shipping mode, reset mode, dead battery activation, power path

INPUT PROTECTION | BATTERY MANAGEMENT

Part Number	Operating V_{IN} (Min) (V)	Operating V_{IN} (Max) (V)	Absolute V_{IN} (Max) (V)	Current (Max) (A)	Charge Type	Package	Notes
MP2670	3	5.55	30	1.5	Battery Protection	QFN-10 (3x3)	Input OVP/OCV, batt. OVP, OTP, fault indication
MP2671	2.7	5.65	30	1.5	Battery Protection	QFN-12 (3x4)	Input OVP/OCV, batt. OVP, OTP, prog. current limit
MP2676	2.8	5.8	30	1.6	Battery Protection	QFN-8 (2x2)	Input OVP/OCV, batt. OVP, OTP, integrated charging FET
MP2678	2.8	9.9	30	1.7	Battery Protection	QFN-8 (2x2)	Input OVP/OCV, batt. OVP, OTP, 5V LDO mode

FUEL GAUGES | BATTERY MANAGEMENT

	Part Number	# of Series Cells	Chemistry	Communication Interface	External SOC Indication	Pack SOC Accuracy ¹	Cell Impedance Monitoring	Thermal Model ²	Battery Monitor I/If	Features	Package
	MPF42790	2 to 16	Li-Ion, Li-Polymer	I ² C	LED	±3%	-	-	Via MCU	Pack and cell SOC and SOH, max available power, charge and runtime, lifetime logging	TQFN-32 (4x4)
	MPF42791	2 to 16	Li-Ion, Li-Polymer	I ² C	LED	±2.5%	✓	✓	Via MCU	Pack and cell SOC and SOH, max available power, charge and runtime, lifetime logging	TQFN-32 (4x4)
	MPF42792	2 to 16	Li-Ion, Li-Polymer	I ² C	-	±3%	-	-	Via MCU	Pack and cell SOC and SOH, max available power, charge and runtime, lifetime logging	TQFN-32 (4x4)
	MPF42795	2 to 10	Li-Ion, Li-Polymer	I ² C	LED	±3%	-	-	Via MCU	Pack and cell SOC and SOH, max available power, charge and runtime, lifetime logging	TQFN-32 (4x4)
	MPF42797	2 to 10	Li-Ion, Li-Polymer	I ² C	-	±3%	-	-	Via MCU	Pack and cell SOC and SOH, max available power, charge and runtime, lifetime logging	TQFN-32 (4x4)
N	MPF42793	2 to 16	LiFePO ₄	I ² C	LED	±5%	✓	✓	Via MCU	Pack and cell SOC and SOH, max available power, charge and runtime, lifetime logging	TQFN-32 (4x4)
S	MPF42780	2 to 10	Li-Ion, Li-Polymer, LiFePO ₄	I ² C	LED	±3%	✓	✓	Direct	Pack and cell SOC and SOH, max available power, charge and runtime, lifetime logging	TQFN-32 (4x4)
S	MPF42781	2 to 16	Li-Ion, Li-Polymer, LiFePO ₄	I ² C	LED	±3%	✓	✓	Direct	Pack and cell SOC and SOH, max available power, charge and runtime, lifetime logging	TQFN-32 (4x4)
S	MPF42786	2 to 112	Li-Ion, Li-Polymer, LiFePO ₄	I ² C	LED	±3%	✓	✓	Via MCU	Pack and cell SOC and SOH, max available power, charge and runtime, lifetime logging	TQFN-32 (4x4)

1) Pack SOC over-temperature, when paired with an MP279x battery monitor.

2) The thermal model increases SOC accuracy by dynamically compensating for cell self-heating.

BATTERY MANAGEMENT SYSTEMS: MONITORING & PROTECTION | BATTERY MANAGEMENT

	Part Number	# of Series Cells	Battery Pack Voltage (V)	CHG/DSG FET Driver	Separate Port Control	Cell Balancing	Coulomb Counting	Discharge Soft-Start	Load/Charger Detection	Cell Voltage Synchronized w/ Current Measurement	0T Cell Voltage Accuracy (-20°C to +60°C)	Communication Interface	Interrupt Alert	Diagnostic Features	Package	Notes
	MP2787	7 to 16	18 to 86	-	✓	✓	-	-	✓	±7.5mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, general-purpose I/O pins, 1 high-voltage GPIO	
	MP2790	4 to 10	10 to 75	High-Side	✓	✓	✓	✓	✓	±7.5mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins, 1 high-voltage GPIO	
	MP2791	7 to 14	18 to 75	High-Side	-	✓	✓	✓	✓	±7.5mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins, 1 high-voltage GPIO	
N	MP2793	4 to 16	10 to 86	High-Side	✓	✓	✓	✓	✓	±7.5mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Independent control of CHG/DSG FETs, prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins, 1 high-voltage GPIO	
N	MP2795	7 to 16	18 to 86	High-Side	-	✓	✓	✓	✓	±10mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins	

BATTERY MANAGEMENT SYSTEMS: MONITORING & PROTECTION

| BATTERY MANAGEMENT

Part Number	# of Series Cells	Battery Pack Voltage (V)	CHG/DSG FET Driver	Separate Port Control	Cell Balancing	Coulomb Counting	Discharge Soft Start	Load/Charger Detection	Cell Voltage Synchronized w/ Current Measurement	OT Cell Voltage Accuracy (-20°C to +60°C)	Communication Interface	Interrupt Alert	Diagnostic Features	Package	Notes
MP2796	7 to 16	18 to 86	High-Side	-	✓	-	✓	-	-	±12.5mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins
MP2797	7 to 16	18 to 86	High-Side	-	✓	✓	✓	✓	✓	±7.5mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins, 1 high-voltage GPIO
S MP2797A	7 to 16	18 to 86	High-Side	-	✓	✓	✓	✓	✓	±4.5mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins, 1 high-voltage GPIO
S MP2798	3 to 18	7.5 to 86	-	-	✓	✓	-	-	✓	±4.5mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins, 1 high-voltage GPIO
S MP3716	3 to 18	7.5 to 86	High-Side	✓	✓	✓	✓	✓	✓	±12.5mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins, 1 high-voltage GPIO
S MP3716A	3 to 18	7.5 to 86	High-Side	✓	✓	✓	✓	✓	✓	±4.5mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins, 1 high-voltage GPIO
S MP3713	3 to 10	7.5 to 50	High-Side	✓	✓	✓	✓	✓	✓	±7.5mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins, 1 high-voltage GPIO
S MP3712	3 to 7	7.5 to 50	High-Side	✓	✓	✓	✓	✓	✓	±12.5mV	I ² C/SPI + CRC	✓	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins, 1 high-voltage GPIO
S MP3710	3 to 18	7.5 to 86	High-Side	-	✓	-	✓	-	-	±12.5mV	I ² C + CRC	-	Open-Wire Detection and Watchdog	TQFP-48 (7x7)	Standalone operation, prog. thresholds for OC, short-circuit, UV, OV, and high/low temp, persistent dead cell flag, general-purpose I/O pins, 1 high-voltage GPIO

ACTIVE BALANCERS | BATTERY MANAGEMENT

Part Number	Topology	Cell Chemistry	# of Series Cells	Maximum Net Balance Current (A)	Minimum V _{IN} (V)	Maximum V _{IN} (V)	CU Quiescent Current (µA)	CL Quiescent Current (µA)	Efficiency V _{CELL} = 3V	OVP/UVP	OC/POCP	Control Interface	Special Features	Package
N MP2640	Bidirectional, Buck-Boost	Li-ion, Li-Po, LiFePO4	2	2.5	3.8	16	30	4	89.0%	✓	✓	2-Pin	Integrated FETs, temp reg. and monitoring, 5V for local isolator power and logic pull-up	QFN-26 (4x4)
N MP2641	Bidirectional, Buck-Boost	Li-ion, Li-Po, LiFePO4	2	2	3.8	16	25	4	92.8%	✓	✓	2-Pin	Integrated FETs, temp reg. and monitoring, 5V for local isolator power and logic pull-up	QFN-26 (4x4)
N MP2642	Bidirectional, Buck-Boost	Li-ion, Li-Po, LiFePO4	2	1	3.8	16	12	0.1	92.8%	✓	✓	2-Pin	Integrated FETs, temp reg. and monitoring, simple digital logic or battery monitor control	QFN-26 (4x4)
N MP2643	Bidirectional, Buck-Boost	Li-ion, Li-Po, LiFePO4	2	2	3.8	16	12	0.1	92.8%	✓	✓	2-Pin	Integrated FETs, temp reg. and monitoring, simple digital logic or battery monitor control	QFN-26 (4x4)

WHITE LED DRIVERS | DISPLAY POWER AND CONTROL

Part Number	V _{IN} (Min) (V)		V _{IN} (Max) (V)		V _{OUT} (Max) (V)		# of Channels	Current Limit (Typ) (A)		V _{FB} (V)	f _{sw} (kHz)	Open LED Protection		Package	Notes
								✓	Type						
MP9361	2.8	5	5	1	-	-	1350	✓	Reg Charge Pump	TSOT23-6	Internal soft start				
MPQ9361	2.8	5	5	1	-	-	1350	✓	Reg Charge Pump	TSOT23-6	Internal soft start, industrial grade				
MP3412	0.8	4.4	5	1	1.1	0.2	1000	✓	Boost	TSOT23-6	High efficiency				
MP3204	2.5	6	21	1	0.35	0.104	1300	✓	Boost	TSOT23-6	UVLO, low EMI, thermal shutdown				
MP3205	2.5	6	21	1	0.35	0.104	1300	-	Boost	TSOT23-5	MP3204 without the OV pin				
MP3304B	3	6	24	1	1.33	0.2	2200	✓	Boost	QFN-8 (2x3)	High efficiency, true PWM dimming				
MP1518	2.5	6	25	1	0.35	0.104	1300	-	Boost	QFN-8 (2x2), TSOT23-6	External current-sense resistor				
MP1488	2.5	6	25	1	0.8	0.104	1300	-	Boost	TSOT23-6	Fixed frequency				
MP3202	2.5	6	25	1	1.33	0.104	1300	✓	Boost	QFN-8 (2x2), TSOT23-5	UVLO, low EMI, thermal shutdown, 25V max output				
MP3306	3	12	30	1	1.8	0.2	700	✓	Boost	QFN-12 (2x2)	Synchronous boost, integrated disconnect FET				
MP3301	2.5	6	36	1	1	0.2	1300	✓	Boost	TSOT23-5	Up to 10 series LED				
MP3302	2.5	6	36	1	1.33	0.2	1300	✓	Boost	QFN-8 (2x3), TSOT23-5	UVLO, low EMI, thermal shutdown				
MP3305	3	6	36	1	1.33	0.2	2200	✓	Boost	QFN-8 (2x3)	High efficiency, true PWM dimming, adjustable OVP threshold				
MP3308	3	6	36	1	1.33	0.2	2200	✓	Boost	QFN-14 (3x4)	Supports CABG dimming				
MP1517	2.6	25	25	1	4	0.7	1100	✓	Boost	QFN-16 (4x4)	UVLO, external compensation				
MP1528	2.7	36	36	1	0.95	0.4	Variable	✓	Boost	MSOP-8, QFN-6 (3x3), QFN-8 (2x3)	Drives up to nine series white LED drivers				
MP3309L	2.7	5.5	24	1	1.6	0.2	300 to 2200 Prog	✓	Boost	QFN-10 (1.4x1.8)	Synchronous boost				
MP3309	2.7	5.5	35	1	1.5	0.2	300 to 2200 Prog	✓	Boost	QFN-10 (1.4x1.8)	Synchronous boost				
MP3309A	2.7	5.5	35	1	1.5	0.2	300 to 2200 Prog	✓	Boost	QFN-10 (3x3)	Synchronous boost				
MP3309C	2.7	5.5	35	1	1.5	0.2	300 to 2200 Prog	✓	Boost	QFN-10 (1.4x1.8)	Synchronous boost, I ² C interface				
MP3307	2.7	5.5	35	1	1.6 (Min)	0.2	300 to 2200 Prog	✓	Boost	TSOT23-8	For automotive infotainment LCDs				
MP3362	3	36	36	1	4	0.2	200 to 2200 Prog	✓	Boost	TSOT23-8	Low R _{DS(ON)} , soft start				
MP3363	1.8	36	36	1	1	0.2	200 to 2200 Prog	✓	Boost	TSOT23-8	Low R _{DS(ON)} , soft start				
MP3310	4.5	25	50	1	1.3	0.5	1200 Prog	✓	Boost	QFN-10 (3x3)	Wide input range, true PWM dimming				
MP3370	3.5	36	38	1	3	-	400	✓	Boost	SOIC-8E	Internal current source				
MP4013B	8	26	Ext FET	1	Ext FET	0.6	100 to 600	✓	Boost	SOIC-16	More features and better protection, replaces the MP4012 and MP4013 in new designs				
MP23701	4.2	24	-	1	5	0.1	1500	✓	Buck	UTQFN-8 (1.5x2.5)	2A, synchronous, step-down LED driver				
MP4700	Offline	Offline	Ext FET	1	Ext FET	0.3	Up to 160	✓	Buck	SOIC-8E	BCM zero-current and valley voltage switching >97% efficiency, low BOM cost, low-power stress				
MP24830-C470	4.5	90	Ext FET	1	Ext FET	0.201	50 to 365	✓	Buck-Boost	SOIC-14, QFN-14 (3x4)	Power leverage in 2.5 power stages, low BOM cost, high efficiency				
MP3312	2.7	5.5	36	2	1.8	0.24	1200	✓	Boost	WLCS-9 (1.3x1.3)	30mA/string, balanced LED current				

WHITE LED DRIVERS | DISPLAY POWER AND CONTROL

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	# of Channels	Current Limit (Typ) (A)	V _{FB} (V)	f _{sw} (kHz)	Open LED Protection	Type	Package	Notes
MP3313	2.7	5.5	38	3	1.5	-	250/500/1000	✓	Boost	WLCSP-12	Linear/exponential analog dimming, 100mA LED current in flash mode, I ² C
MP3318	2.7	5.5	38	3	1.5	-	250/500/1000	✓	Boost	WLCSP-12	Linear/exponential analog dimming, 100mA LED current in flash mode, I ² C
MP1519	2.5	5.5	10	4	-	-	1300	-	Charge Pump	QFN-16 (3x3)	Common cathode
MP3384L	3	25	50	4	1.2	0.6	625 or 1250	✓	Boost	QFN-16 (3x3)	-
N MP3359	3.5	40	45	4	7	-	200 to 2200	✓	Boost/SEPIC	QFN-20 (3x4)	150mA/ch, separated PWM and analog dimming pin
MP3364	3.5	36	45	4	5.5	-	200 to 2200	✓	Boost/SEPIC	QFN-24 (4x4)	150mA/ch, PWM/analog/mixed dimming, I ² C interface (3 x IC addresses)
S MP3365	3.5	36	45	4	7	-	200 to 2200	✓	Boost/SEPIC	QFN-24 (4x4)	150mA/ch, PWM/analog/mixed dimming, I ² C (3 x IC addresses) interface for dimming, NTC
MP3394S	5	28	Ext FET	4	Ext FET	0.3	150 to 500	✓	Boost	TSSOP-16EP, SOIC-16	Max 55V V _{LEDX_PIN} , max 200mA/string
MP3398A	5	28	Ext FET	4	Ext FET	0.6	100 to 500	✓	Boost	TSSOP-16EP, SOIC-16, SOIC-20	Max 55V V _{LEDX_PIN} , max 350mA/string, inductor short protection, separate ADIM pin
MP3398D	5	28	Ext FET	4	Ext FET	-	100 to 500	✓	Boost	SOIC-16, SOIC-20	Max 55V V _{LEDX_PIN} , max 350mA/string, PWM and analog dimming
MP3398L	4.5	28	Ext FET	4	Ext FET	0.6	100 to 500	✓	Boost	SOIC-16	Lower V _{IN} (min) than the MP3398A
MP3398E	4.5	33	Ext FET	4	Ext FET	-	100 to 500	✓	Boost	SOIC-16, TSSOP-16EP, PDIP-16	Max 80V V _{LEDX_PIN} , max 400mA/string, PWM and analog dimming
MP3398H	4.5	33	Ext FET	4	Ext FET	-	100 to 900	✓	Boost	SOIC-16	Max 80V V _{LEDX_PIN} , max 400mA/string, PWM and analog dimming
MP3383	4.5	33	Ext FET	4	Ext FET	-	100 to 900	✓	Boost	SOIC-16, TSSOP-16EP	Max 80V V _{LEDX_PIN} , max 400mA/string, 12V VGATE, PWM and analog dimming
MP3385A	4.5	33	Ext FET	4	Ext FET	-	100 to 900	✓	Boost	QFN-20 (4x4)	I ² C, max 80V V _{LEDX_PIN} , max 300mA/ch, replaces the MP3385
MP3385B	4.5	33	Ext FET	4	Ext FET	-	100 to 900	✓	Boost	QFN-20 (4x4)	I ² C, max 80V V _{LEDX_PIN} , max 300mA/ch, ILED ≤ 3mA during analog dimming
MP3378	5	24	Ext FET	4	-	-	300 to 500	✓	Boost + Buck	SOIC-28, TSSOP-28EP	Max 55V V _{LEDX_PIN} , integrated boost controller and DC/DC buck converter, AAM power-save mode
MP3378E	5	24	Ext FET	4	-	-	300 to 500	✓	Boost + Buck	TSSOP-28EP	Max 55V V _{LEDX_PIN} , integrated boost controller and DC/DC buck converter, separate EN pin
MP4653	Offline	Offline	Ext FET	4	Ext FET	0.2	20 to 250	✓	LLC	SOIC-20	LIPS CC/CV mode, low BOM cost, high efficiency
MP4655	Offline	Offline	Ext FET	2	Ext FET	0.2	40 to 130	✓	LLC	SOIC-28	Single-stage LED driver and system voltage regulator
MP4658	6	36	80	4	-	1.2	20 to 350	✓	Pre-Flyback	SOIC-16	Max 80V V _{LEDX_PIN} , analog and PWM dimming with AC/DC feedback
MP4657A	4	16	Ext FET	4	Ext FET	1.2	20 to 350	✓	Pre-Flyback	SOIC-16	Pure single-stage, flyback LED driver and system voltage controller
MP4657B	4	16	Ext FET	4	Ext FET	1.2	20 to 350	✓	Pre-Flyback	SOIC-16	Improves audible noise reduction performance

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	# of Channels	Current Limit (Typ) (A)	V _{FB} (V)	f _{SW} (kHz)	Open LED Protection	Type	Package	Notes
MP3366	3	25	50	6	2.5	0.5	600	✓	Boost	WLCSP-18 (1.3x2.5)	Smart dimming, tablet PCs
MP3314	2.7	30	43	6	Configurable	-	312/625/1250	✓	Boost	CSP-20 (2.4x1.74), QFN-24 (4x4)	60mA, 50V, boost WLED driver with I ² C interface
S MP3314A	2.7	30	43	6	Configurable	-	312/625/1250	✓	Boost	CSP-20 (2.4x1.74)	80mA, 50V, boost WLED driver with 2 x PWM dimming for VR applications
MP3387A	3	26	50	6	2.5	-	500 to 1250	✓	Boost	TQFN-24 (4x4)	Max 80mA/string, combined analog and PWM dimming
MP3387L	3	26	50	6	2.5	0.6	500 to 1250	✓	Boost	TQFN-24 (4x4)	Smart dimming
MP3367	3.5	36	45	6	3	0.4	200 to 2200	✓	Boost/SEPIC	QFN-24 (4x4), TSSOP-28EP	150mA/ch, PWM/analog/mixed dimming, I ² C interface
MP3388S	4.5	25	50	8	2	0.6	625 or 1250	✓	Boost	QFN-24 (4x4)	PWM/DC input PWM dimming
MP3376	3	30	36	8	2.5	-	350 to 2400	✓	Sync Boost	QFN-24 (4x4)	Sync boost, max 50mA/string, I ² C interface
MP3376A	3	30	37.5	8	2.5	-	350 to 2400	✓	Sync Boost	QFN-24 (4x4)	Sync boost, max 50mA/string, I ² C interface
MP3371	2.7	30	45	8	1.8/2.5	-	350/500/650/800/950/1200	✓	Sync Boost	QFN-24 (4x4)	Sync boost, I ² C, linear smooth dimming, multi-dimming mode
MP3372	2.7	30	45	8	1.8/2.5	-	350/500/650/800/950/1200	✓	Sync Boost	QFN-24 (4x4)	Sync boost, I ² C, linear smooth dimming, multi-dimming mode, phase-shift function during PWM dimming
MP3391	9	35	Ext FET	8	Ext FET	0.45	150 to 500	✓	Boost	TSSOP-28EP, SOIC-28	Max 55V V _{LEDX_PIN} , 80mA/ch, ideal for 18" to 24" LCD panels/TVs
MP3373	9	40	Ext FET	8	Ext FET	0.2	100 to 1000	✓	Boost	SOIC-28, TSSOP-28	Phase shift, inductor short protection, cost effective, replaces the MP3393 in new designs
MP3389	5	28	Ext FET	12	Ext FET	0.6	100 to 500	✓	Boost	TSSOP-28EP, SOIC-28	Max 50V V _{LEDX_PIN} , 120mA/ch, PWM or DC input burst, PWM dimming
MPQ3362-AEC1	3	36	36	1	4	0.2	200 to 2200 Prog	✓	Boost	TSOT23-8	Low R _{DS(ON)} , soft start, AEC-Q100 qualified
N MPQ3359-AEC1	3.5	40	45	4	7	-	200 to 2200	✓	Boost/SEPIC	QFN-20 (3x4)	150mA/ch, separated PWM and analog dimming pin
N MPQ3359A-AEC1	3.5	40	45	1/2/3/4	7	-	200 to 2200	✓	Boost/SEPIC	QFN-20 (3x4)	150mA/ch, separated PWM and analog dimming pin
MPQ3364-AEC1	3.5	36	45	4	5.5	-	200 to 2200	✓	Boost/SEPIC	QFN-24 (4x4)	150mA/ch, PWM/analog/mixed dimming, I ² C (3 x IC addresses)
S MPQ3365-AEC1	3.5	36	45	4	7	-	200 to 2200	✓	Boost/SEPIC	QFN-24 (4x4)	150mA/ch, PWM/analog/mixed dimming, I ² C (3 x IC addresses) for dimming, NTC
S MPQ3365A-AEC1	3.5	36	45	5	7	-	200 to 2200	✓	Boost/SEPIC	QFN-24 (4x4)	150mA/ch, PWM/analog/mixed dimming, I ² C (3 x IC addresses) for dimming, NTC
MPQ3369-AEC1	3.5	36	45	6	3	-	200 to 2200	✓	Boost/SEPIC	QFN-24 (4x4), TSSOP28-EP	100mA/ch, PWM/analog/mixed dimming, I ² C interface
MPQ3367-AEC1	3.5	36	45	6	3	-	200 to 2200	✓	Boost/SEPIC	QFN-24 (4x4), TSSOP28-EP	150mA/ch, PWM/analog/mixed dimming, I ² C interface
MPQ3367A-AEC1	3.5	36	45	6	3	-	200 to 2200	✓	Boost/SEPIC	QFN-24 (4x4)	150mA/ch, PWM/analog/mixed dimming, I ² C (3 x IC addresses)
S MPQ3359C-AEC1	3.5	40	45	1/2/3/4	Ext FET	-	200 to 2200	✓	Boost/SEPIC	QFN-20 (3x4)	160mA/ch, separated PWM and analog dimming pin

WHITE LED DRIVERS | DISPLAY POWER AND CONTROL

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	# of Channels	Current Limit (Typ) (A)	V _{FB} (V)	f _{SW} (kHz)	Open LED Protection	Type	Package	Notes
S	MPQ3366C-AEC1	3.8	36	Ext FET	6	Ext FET	-	200 to 2200	✓	Boost/SEPIC	QFN-24 (4x4)	Max 50V V _{LED, PIN} , 200mA/ch, PWM/analog/mixed dimming, I ² C (4 x IC addresses) for dimming, NTC
S	MPQ3368-AEC1	3.8	36	Ext FET	8	Ext FET	-	200 to 2200	✓	Boost/SEPIC	QFN-24 (4x4)	Max 50V V _{LED, PIN} , 200mA/ch, PWM/analog/mixed dimming, I ² C (4 x IC addresses) for dimming, NTC

RGB LED DRIVERS | DISPLAY POWER AND CONTROL

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	LEDx Abs Voltage (V)	# of Channels	I _{CHANNEL} (Max) (mA)	Dimming Control	Interface	Type	Package	Notes
	MP3320N	1.8	5.5	5.5	3	100	P-Dim	-	Charge Pump	QFN-14 (2x2)	-
	MP3320A	1.8	5.5	5.5	4	51	P-Dim, A-Dim	I ² C (16 Config Addresses)	Charge Pump	QFN-14 (2x2)	Configurable phase shift
	MP3320B	2	5.5	5.4	4	102	P-Dim, A-Dim	I ² C (16 Config Addresses)	Sync Boost	QFN-14 (2x2)	Configurable phase shift
	MP3324	4	16	18	8	100	P-Dim, A-Dim	I ² C (10 Config Addresses)	Current Source	QFN-24 (4x4)	LED current slew rate, phase shift
	MP3326	4	16	18	16	50	P-Dim, A-Dim	I ² C (10 Config Addresses)	Current Source	QFN-24 (4x4)	LED current slew rate, phase shift
	MP3326A	4.5	16	22	16	80	P-Dim, A-Dim	I ² C (10 Config Addresses)	Current Source	QFN-24 (4x4)	LED current slew rate, phase shift
S	MP3328A	6	16	55	32	100	P-Dim, A-Dim	SPI (Daisy Chain)	Current Source	QFN-48 (7x7)	Fine-tuned feedback to regulate front-stage LED supply voltage
S	MP3321	3	20	24	48	80	P-Dim, A-Dim	SPI (Daisy Chain)	Current Source	QFN-68 (8x8)	LED current slew rate, phase shift, adaptive voltage feedback
	MPQ3323B-AEC1	4.5	16	22	4	320	P-Dim, A-Dim	I ² C (10 Config Addresses)	Current Source	QFN-24 (4x4)	LED current slew rate, phase shift
	MPQ3324-AEC1	4	16	18	8	100	P-Dim, A-Dim	I ² C (10 Config Addresses)	Current Source	QFN-24 (4x4)	LED current slew rate, phase shift
	MPQ3326-AEC1	4	16	18	16	50	P-Dim, A-Dim	I ² C (10 Config Addresses)	Current Source	QFN-24 (4x4)	I ² C input logic voltage: (V _{IL, MAX} : 0.4V, V _{IH, MIN} : 1.3V)
	MPQ3326-AEC1-C03Q	4	16	18	16	50	P-Dim, A-Dim	I ² C (10 Config Addresses)	Current Source	QFN-24 (4x4)	I ² C input logic voltage: (V _{IL, MAX} : 0.8V, V _{IH, MIN} : 1.5V)
	MPQ3326A-AEC1	4.5	16	22	16	80	P-Dim, A-Dim	I ² C (10 Config Addresses)	Current Source	QFN-24 (4x4)	I ² C input logic voltage: (V _{IL, MAX} : 0.4V, V _{IH, MIN} : 1.3V)
	MPQ3326B-AEC1	4.5	16	22	16	80	P-Dim, A-Dim	I ² C (10 Config Addresses)	Current Source	QFN-24 (4x4)	I ² C input logic voltage: (V _{IL, MAX} : 0.8V, V _{IH, MIN} : 1.5V)
S	MPQ3322-AEC1	3.5	22	24	24	100	P-Dim, A-Dim	CAN (16 Config IC Addresses)	Current Source	QFN-40 (6x6)	LED current slew rate, phase shift, adaptive voltage feedback, failsafe mode
S	MPQ3621-AEC1	3	11	24	48	50	P-Dim, A-Dim	SPI (Daisy Chain)	Current Source	QFN-68 (8x8)	LED current slew rate, phase shift, adaptive voltage feedback
S	MPQ3321-AEC1	3	22	24	48	80	P-Dim, A-Dim	SPI (Daisy Chain)	Current Source	QFN-68 (8x8)	LED current slew rate, phase shift, adaptive voltage feedback
S	MPQ3327-AEC1	3.5	20	-	4	-	-	SPI (Daisy Chain), GPIO	Scan Switch	QFN-14 (3x3)	8A, 4 switching line scan driver for local dimming, combined with the MPQ3321 for scanning scheme

LCD & OLED DISPLAY POWER AND DRIVERS | DISPLAY POWER AND CONTROL

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Regulator Blocks	Output Voltage (V)	Current Limit (Typ) (A)	Interface	Package	Notes
MP5610	2.7	5.5	1x Boost for V _{OP} ; 1x Neg Charge Pump for V _{ON}	V _{OP} Up to 5.8V	V _{OP} : 0.3A	-	QFN-10 (1.4x1.8)	LCD bias power supply
MP5611	2.9	5.2	1x 0.5A Boost for E _{LVDD} ; 1x 0.5A Buck-Boost for E _{LVSS} ; 1x 0.1A Boost for A _{VDD}	Config 4.6V to 5.2V V _{ELVDD} (Default 4.6V); Config -1.4V to -6.4V V _{ELVSS} (Default -4V); Config 5V to 7.7V V _{AVDD} (Default 5.8V)	ELVDD: 1.5A; ELVSS: 3A; AVDD: 0.5A	One Wire	TQFN-16 (3x3)	AMOLED display power supply
S MP5613	2.7	12	1x Boost for V _{DDP} ; 1x Buck-Boost for V _{DDN} ; 1x 0.05A Positive Charge Pump for V _{GH} ; 1x 0.05A Negative Charge Pump for V _{GL} ; 1x 0.025A V _{COM} Buffer	V _{DDP} : 2.7V to 21.9V Configurable; V _{DDN} : -16.6V to -0.7V Configurable; V _{GH} : 5V to 43.2V Configurable; V _{GL} : -15.9V to 0V Configurable; V _{COM} : -13.21V to +19.8V Configurable	V _{DDP} : 2.5A V _{DDN} : 2.5A	I ² C (1x OTP)	QFN-28 (4x5)	LCD bias power supply
S MPQ5613A -AEC1	2.7	12	1x Boost for V _{DDP} ; 1x 0.05A Pos Charge Pump for V _{GH} ; 1x 0.05A Neg Charge Pump for V _{GL} ; 1x 0.025A V _{COM} Buffer	V _{DDP} : 2.7V to 21.9V Configurable; V _{GH} : 5V to 43.2V Configurable; V _{GL} : -15.9V to 0V Configurable; V _{COM} : 0V to 19.8V Configurable	V _{DDP} : 2.5A	I ² C (1x OTP)	QFN-28 (4x5)	LCD bias power supply
S MPQ5613B -AEC1	2.7	5.7	1x Boost for V _{DDP} ; 1x Buck-Boost for V _{DDN} ; 1x 0.05A Pos Charge Pump for V _{GH} ; 1x 0.05A Neg Charge Pump for V _{GL} ; 1x 0.025A V _{COM} Buffer;	V _{DDP} : 2.7V to 9V Configurable; V _{DDN} : -10.3V to -0.7V Configurable; V _{GH} : 5V to 32V Configurable; V _{GL} : -15.9V to 0V Configurable; V _{COM} : -5V to +9.67V Configurable	V _{DDP} : 1.8A V _{DDN} : 1.8A	I ² C (1x OTP)	QFN-28 (4x5)	LCD bias power supply
S MPQ5613 -AEC1	2.7	12	1x Boost for V _{DDP} ; 1x Buck-Boost for V _{DDN} ; 1x 0.05A Pos Charge Pump for V _{GH} ; 1x 0.05A Neg Charge Pump for V _{GL} ; 1x 0.025A V _{COM} Buffer;	V _{DDP} : 2.7V to 21.9V Configurable; V _{DDN} : -16.6V to -0.7V Configurable; V _{GH} : 5V to 43.2V Configurable; V _{GL} : -15.9V to 0V Configurable; V _{COM} : -13.21V to +19.8V Configurable	V _{DDP} : 2.5A V _{DDN} : 2.5A	I ² C (1x OTP)	QFN-28 (4x5)	LCD bias power supply

LED PHOTO FLASH DRIVERS | DISPLAY POWER AND CONTROL

Photo Flash

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (Max) (V)	# of Channels	I _{OUT} (Max) (A)	f _{SW} (kHz)	Type	Package	Notes
MP3214	2.7	5.5	-	1	0.5	1.35	Charge Pump	QFN-16 (3x3)	Charge pump
MP3331-C09W	2.7	5.2	-	1	2	1/2/3/4	Boost	WLCSP-9 (1.7x1.7)	2A boost, I ² C, synchronous rectification, output disconnect
MP3331-C09T	2.7	5.5	-	1	2	1/2/3/4	Boost	WLCSP-9 (1.7x1.7)	2A boost, I ² C, synchronous rectification, output disconnect
MP3336	2.7	5.5	5.5	2	4	1/2/3/4	Boost	WLCSP-20 (1.6x2)	Flash LED driver with 2A/ch, I ² C interface
MP3336A	2.7	5.5	5.5	2	4	1/2/3/4	Boost	WLCSP-20 (1.6x2)	Flash LED driver with 2A/ch, I ² C interface, NFC application

DIGITAL CONTROLLERS & PROCESSORS | CLASS-D AUDIO

	Part Number	Number of Channels	Input Format	Max Sample Rate (kHz)	Number of Bits	Number of PWM Outputs	Control Interface	Package
N	AX5688	2	I ² S, TDM	768	32	4	I ² C, SPI	QFN-64 (9x9)
N	AX5689	4	I ² S, TDM	768	32	8	I ² C, SPI	QFN-64 (9x9)

ANALOG INPUT | CLASS-D AUDIO

Mono

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	P _{OUT} (W)	Efficiency (%)	THD+N (%)	PSRR (dB)	Package	Notes
	MP1720	2.5	5.5	2.7	90	0.11 @ 1W	60	QFN-10 (3x3), MSOP-10E	BTL, low EMI, high efficiency, flexible switching frequency setting
	MP7731	9.5	18	30	90	0.1 @ 1W	60	TSSOP-20F	Exposed pad
	MPQ7731	9.5	18	30	90	0.1 @ 1W	60	TSSOP-20F	Exposed pad, industrial grade
	MP7741	9.5	36	10	94	0.02 @ 1W	58	QFN-10 (3x3)	Single-ended, fully integrated audio amplifier
	MP7740	9.5	36	15	90	0.018 @ 1W	60	SOIC-8	Single-ended amplifier
	MP7747	9.5	36	20	91	0.02 @ 1W	59	QFN-10 (3x3)	Single-ended, fully integrated audio amplifier

Stereo

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	P _{OUT} (W)	Efficiency (%)	THD+N (%)	PSRR (dB)	Package	Notes
	MP7705	9.5	12	2.5 (2x), 5 (2x)	95	0.06 @ 1W	60	TSSOP-20F	Single-ended audio amplifier, exposed pad
	MP7720	9.5	24	20	93	0.04 @ 1W	60	SOIC-8, PDIP-8	20W amplifier
	MP7722	9.5	24	20 (2x)	93	0.06 @ 1W	60	TSSOP-20F	Single-ended audio amplifier, exposed pad
	MP7748S	9.5	36	30 (2x)	94	0.02 @ 1W	59	TSSOP-28EP	2x 30W single-ended or 1x 60W BTL amplifier
	MP7751	5	26	20 (2x)	92	0.06 @ 1W	60	TSSOP-28EP	BTL amplifier
	MP7752	5	18	15 (2x)	90	0.06 @ 1W	60	TSSOP-28EP	Filterless BTL amplifier
	MP7758	5	18	15 (2x)	90	0.06 @ 1W	60	TSSOP-28EP	Idle channel I _q <10mA analog input options
	MP7770	9.5	36	45 (2x)	95	0.03 @ 1W	60	TSSOP-28F	2x 45W single-ended or 1x 90W BTL amplifier, 8.5A peak, exposed pad

PWM INPUT | CLASS-D AUDIO

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Half-Bridges	I _{OUT} (Max) (A)	Control Interface	Package	Notes
	MP8040	7.5	24	1	9	PWM	SOIC-8EP	Half-bridge driver
	MP8046	7.5	28	2	5	PWM	TSSOP-20F	Full-bridge driver
	MP8049S	5	26	4	5.5	PWM	QFN-40 (5x5)	Dual full-bridge driver
	MPQ8039-AEC1	7.5	24	1	9	PWM	SOIC-8EP	Half-bridge driver, AEC-Q100 qualified

BRUSHED DC MOTORS/SOLENOID DRIVERS | MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Half-Bridges	I _{OUT} (Max) (A)	R _{DS(on)} (HS + LS) (mΩ)	Control Interface	Package	Notes
MP6610	4	55	1	3	100 + 120	EN/IN	TSOT23-8, SOIC-8	Half-bridge
MP8040	7.5	24	1	9	100	PWM	SOIC-8EP	H-bridge driver
N MP1930	9	18	1	10	11	HS/LS	QFN-26 (7x7)	Half-bridge, 18V to 75V V _{IN} for MOSFETs
MP6513L	2.5	5.5	2	0.6	500 + 500	IN1/IN2	TSOT23-6	Low-power H-bridge
MP6513	2.5	21	2	0.8	500 + 500	IN1/IN2	TSOT23-6	Simple H-bridge
MP6550	1.8	22	2	2	120 + 120	IN1/IN2	QFN-12 (2x2)	H-bridge, input logic voltage: (V _{IL_MAX} : 0.4V, V _{IH_MIN} : 1.6V)
S MP6550A	1.8	22	2	2	120 + 120	IN1/IN2	QFN-12 (2x2)	H-bridge, input logic voltage: (V _{IL_MAX} : 0.8V, V _{IH_MIN} : 1.29V)
MP6614	5	35	2	2	280 + 220	IN1/IN2	SOIC-8EP	H-bridge
MP6515	5.4	35	2	2.8	250 + 250	PHASE/EN	QFN-20 (3x4), TSSOP-16EP	H-bridge motor driver
MP6516	5.4	35	2	2.8	250 + 250	EN/IN	TSSOP-16EP	Dual half-bridge driver
MP6522	5.4	35	2	3.2	250 + 250	IN1/IN2	QFN-24 (5x5)	Simple H-bridge motor driver
MP8046	7.5	28	2	5	165	PWM	TSSOP-20F	Full-bridge driver
MP6519	2.5	28	2	5	65 + 65	PWM	QFN-19 (3x3)	H-bridge current regulator, 64kHz internal clock frequency
N MP6519A	2.5	28	2	5	65 + 65	PWM	QFN-19 (3x3)	H-bridge current regulator, 32kHz internal clock frequency
MP6551	2.5	14	2	5	15 + 12	EN/IN	QFN-14 (2.5x3)	Dual half-bridge driver
MP6619	5.4	28	2	5	65 + 65	IN1/IN2	QFN-19 (3x3)	H-bridge
MP6619L	2.5	28	2	5	65 + 65	IN1/IN2	QFN-19 (3x3)	H-bridge with external VCC and OCP_SET pin
MP6613	4.5	45	2	5	75 + 75	Prog	QFN-28 (4x5), TSSOP-28EP	Simple H-bridge with three prog. control modes
MP6612	4	40	2	5	70 + 45	IN1/IN2	TSSOP-20EP	H-bridge with current sense
MP6612D	4	40	2	5	70 + 45	ENBL/DIR	TSSOP-20EP	H-bridge with current sense
S MP6611	2.7	32	2	8	20 + 20	SPI	QFN-20 (4x4)	H-bridge with prog. SR
S MP6611H	2.7	32	2	8	20 + 20	Prog	QFN-20 (4x4)	H-bridge with 3 configurable input logics and prog. SR
MP6615	4.75	40	2	8	11 + 11	Prog	TQFN-26 (6x6)	H-bridge with 3 configurable input logics
MP6523	7	28	3	0.9	1100	SPI	QFN-24 (4x4)	Motor driver with serial input control
MP6507	2.7	15	4	0.7	500 + 500	IN1/IN2	TSSOP-16EP, QFN-16 (3x3), QFN-16 (4x4)	Dual H-bridges
MP6508	2.7	18	4	1.2	250 + 250	IN1/IN2	TSSOP-16EP, QFN-16 (4x4)	Dual H-bridges
MP6508A	2.7	18	4	1.2	250 + 250	IN1/IN2	QFN-16 (3x3)	Dual H-bridges
MP6604A	4.5	45	4	2.5	150 + 150	EN/IN	QFN-28 (4x5), TSSOP-28EP	Simple dual H-bridge driver
MP6604B	4.5	45	4	2.5	150 + 150	PHASE/EN	QFN-28 (4x5), TSSOP-28EP	Simple dual H-bridge driver
MP6604C	4.5	45	4	2.5	150 + 150	HS/LS	QFN-28 (4x5), TSSOP-28EP	Simple dual H-bridge driver

BRUSHED DC MOTORS/SOLENOID DRIVERS | MOTOR DRIVERS

	Part Number	V _M (Min) (V)	V _M (Max) (V)	# of Half-Bridges	I _{OUT} (Max) (A)	R _{DS(on)} (HS + LS) (mΩ)	Control Interface	Package	Notes
	MP8049S	5	26	4	5.5	140	PWM	QFN-40 (5x5)	Dual full-bridge driver
S	MP6603	8	55	4	5	65 + 50	PWM	QFN-25 (4x5)	Dual full-bridge driver, selectable input interface
	MP6526	7	28	6	0.9	1100	SPI	SOIC-28, QFN-24 (4x4), QFN-24 (5x5)	Serial input control
	MP6527	5.5	40	10	0.8	1300	SPI	TSSOP-28EP	Serial input control
	MPQ6610-AEC1	4	55	1	3	100 + 120	EN/IN	TSOT23-8, SOIC-8	Half-bridge, AEC-Q100 qualified
	MPQ6614-AEC1	5	35	2	1.5	280 + 220	IN1/IN2	QFN-8 (2x3)	H-bridge DC motor driver, AEC-Q100 qualified
	MPQ6519-AEC1	3	28	2	5	65 + 65	PWM	QFN-19 (4x4)	H-bridge current regulator, AEC-Q100 qualified
N	MPQ6619-AEC1	2.7	28	2	5	65 + 65	IN1/IN2	QFN-19 (4x4)	H-bridge, AEC-Q100 qualified
N	MPQ6612A-AEC1	4	40	2	5	63 + 40	IN1/IN2	QFN-18 (3x4)	H-bridge with current sense, AEC-Q100 qualified
N	MPQ6612A-D-AEC1	4	40	2	5	63 + 40	ENBL/DIR	QFN-18 (3x4)	H-bridge with current sense, AEC-Q100 qualified
S	MPQ6611-AEC1	2.7	32	2	8	20 + 20	SPI	QFN-20 (4x4)	H-bridge with prog. slew rate, AEC-Q100 qualified
S	MPQ6611H-AEC1	2.7	32	2	8	20 + 20	Prog	QFN-20 (4x4)	H-bridge with 3 configurable input logics and prog. slew rate, AEC-Q100 qualified
	MPQ6615-AEC1	4.75	40	2	8	11 + 11	Prog	TQFN-26 (6x6)	H-bridge with 3 configurable input logics, AEC-Q100 qualified
	MPQ6523-AEC1	7	28	3	0.9	1100	SPI	QFN-24 (4x4)	Serial input control, AEC-Q100 qualified
	MPQ6524-AEC1	7	28	4	0.9	1100	SPI	QFN-24 (4x4)	Serial input control, AEC-Q100 qualified
	MPQ6526-AEC1	7	28	6	0.9	1100	SPI	QFN-24 (4x4), QFN-24 (5x5)	Serial input control, AEC-Q100 qualified
	MPQ6626-AEC1	5.5	40	6	0.8	1300	SPI	TSSOP-28EP	Serial input control, AEC-Q100 qualified
	MPQ6628-AEC1	5.5	40	8	0.8	1300	SPI	TSSOP-28EP	Serial input control, AEC-Q100 qualified
	MPQ6527-AEC1	5.5	40	10	0.8	1300	SPI	TSSOP-28EP	Serial input control, AEC-Q100 qualified

PRE-DRIVERS | MOTOR DRIVERS

	Part Number	Supply Voltage (Min) (V)	Supply Voltage (Max) (V)	V _{SW} (Max) (V)	# of Half-Bridges	I _{SWK} / I _{SOURCE} (A)	Control Interface	Package	Notes
S	MP6590A	7.5	80	80	-	1	ENBL/ON	QFN-11 (3x4)	High-side MOSFET driver
	MP1921A	9	18	100	1	2.5/1.5	INH/INL	SOIC-8EP, QFN-8 (3x3), QFN-9 (3x3), QFN-10 (4x4)	Half-bridge gate driver
	MP1921B	9	18	100	1	2.5/1.5	INH/INL	QFN-10 (3x3)	Half-bridge gate driver
	MP1924A	8	15	100	1	4.5/3	INH/INL	QFN-10 (4x4), SOIC-8, SOIC-8E	Half-bridge gate driver
	MP1925	8	15	100	1	4.5/3	INH/INL	QFN-8 (4x4)	Half-bridge gate driver
	MP1922	5	15	100	1	4/3	INH/INL	QFN-22 (4x5)	Half-bridge pre-driver, current-sense amplifier, slew rate control
	MP1923	5	17	100	1	8/7	INH/INL	QFN-8 (4x4), QFN-10 (4x4), SOIC-8	High-frequency half-bridge gate driver
	MP6528	5	60	60	2	1/0.8	EN/PWM	QFN-28 (4x4)	H-bridge pre-driver
	MP6530	5	60	60	3	1/0.8	EN/PWM	QFN-28 (4x4), TSSOP-28EP	3-phase pre-driver

Part Number	Supply Voltage (Min) (V)	Supply Voltage (Max) (V)	V _{SW} (Max) (V)	# of Half-Bridges	I _{SHM} / I _{SENSANCE} (A)	Control Interface	Package	Notes
MP6531A	5	60	60	3	1/0.8	HS/LS	QFN-28 (4x4), TSSOP-28EP	3-phase pre-driver
MP6532	5	60	60	3	1/0.8	PWM/DIR, 3 Hall Inputs	QFN-28 (4x4), TSSOP-28EP	3-phase pre-driver with commutation logic
MP6534	5	55	55	3	1/0.8	EN/PWM	QFN-40 (5x5)	3-phase pre-driver with buck regulator
MP6535	5	55	55	3	1/0.8	PWM/DIR, 3 Hall Inputs	QFN-40 (5x5)	3-phase pre-driver with commutation logic and buck regulator
S MP6633A	5	50	-	3	1.1/0.7	HS/LS	QFN-34 (4x5)	3-phase pre-driver with voltage regulator and single-channel sense amplifier
S MP6633B	5	50	-	3	1.1/0.7	HS/LS	QFN-48 (6x6)	3-phase pre-driver with voltage regulator and 3-channel sense amplifier
MP6537	8	100	100	3	1/0.8	EN/PWM	QFN-28 (4x5)	3-phase pre-driver
MP6538	8	100	100	3	1/0.8	PWM/DIR, 3 Hall Inputs	QFN-28 (4x5)	3-phase pre-driver with Hall commutation logic
MP6539	8	100	100	3	1/0.8	HS/LS	QFN-28 (4x5), TSSOP-28EP	3-phase pre-driver with internal LDO, prog. OCP
MP6539B	8.5	14	100	3	1/0.8	HS/LS	QFN-28 (4x5), TSSOP-28EP	3-phase pre-driver
N MP6539C	8.5	14	80	3	1/0.8	HS/LS	QFN-28 (4x5)	3-phase pre-driver
S MPQ6590A-AEC1	7.5	80	80	-	1	ENBL/ON	QFN-11 (3x4)	High-side MOSFET driver
MPQ1922-AEC1	5	15	100	1	4/3	INH/INL	QFN-22 (4x5)	Half-bridge pre-driver, current-sense amplifier, slew rate control
MPQ1923-AEC1	5	17	100	1	8/7	INH/INL	QFN-8 (4x4), QFN-10 (4x4)	High-frequency half-bridge gate driver
MPQ6528-AEC1	5	60	60	2	1/0.8	EN/PWM	QFN-28 (4x5)	H-bridge pre-driver with PWM/EN inputs, AEC-Q100 qualified
N MPQ6641-AEC1	6	40	-	2	1/0.8	EN/IN, SPI	QFN-32 (5x5)	H-bridge pre-driver with SPI and internal current-sense amp, AEC-Q100 qualified
N MPQ6530-AEC1	5	60	60	3	1/0.8	EN/PWM	QFN-28 (4x5)	3-phase pre-driver, AEC-Q100 qualified
MPQ6531-AEC1	5	60	60	3	1/0.8	HS/LS	QFN-28 (4x5)	3-phase pre-driver, AEC-Q100 qualified
MPQ6532-AEC1	5	60	60	3	1/0.8	PWM/DIR, 3 Hall Inputs	QFN-28 (4x5)	3-phase pre-driver with commutation logic, AEC-Q100 qualified
MPQ6533-AEC1	6	40	-	3	1/0.8	EN/IN, SPI	QFN-32 (5x5)	3-channel pre-driver with SPI interface and internal current-sense amp, AEC-Q100 qualified
S MPQ6633A-AEC1	5	50	-	3	1.1/0.7	HS/LS	QFN-34 (4x5)	3-phase pre-driver with voltage regulator and single-channel sense amplifier
S MPQ6633B-AEC1	5	50	-	3	1.1/0.7	HS/LS	QFN-48 (6x6)	3-phase pre-driver with voltage regulator and 3-channel sense amplifier
N MPQ6539-AEC1	8	80	80	3	1/0.8	HS/LS	QFN-28 (4x5)	3-phase pre-driver with internal LDO, prog. OCP, AEC-Q100 qualified

STEPPER MOTOR DRIVERS | MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	R _{DS(on)} (HS + LS) (mΩ)	Step Mode	Control Interface	Package	Notes
MP6506	2.7	15	0.5	500 + 500	1, ½	Parallel	QFN-16 (3x3)	Bipolar stepper
MP6507	2.7	15	0.7	500 + 500	1, ½	Parallel	TSSOP-16EP, QFN-16 (3x3), QFN-16 (4x4), TSSOP-16	Bipolar stepper
MP6508	2.7	18	1.2	250 + 250	1, ½	Parallel	TSSOP-16EP, QFN-16 (4x4)	Bipolar stepper

STEPPER MOTOR DRIVERS | MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	I _{OUT} (Max) (A)	R _{DS(on)} (HS + LS) (mΩ)	Step Mode	Control Interface	Package	Notes
MP6508A	2.7	18	1.2	250 + 250	1, 1/2	Parallel	QFN-16 (3x3)	Bipolar stepper
MP6509	2.7	18	1.2	250 + 250	1, 1/2	Parallel	TSSOP-20EP	Bipolar stepper, current attenuation
MP6518	8	35	1.5	300 + 300	1, 1/2, 1/4, 1/8	Indexer	TSSOP-28EP	Bipolar stepper, microstepping
MP6520	8	32	1.5	300 + 300	1, 1/2, 1/4, 1/8	Indexer	QFN-28 (4x5)	Stepper, integrated MOSFETs
MP6600	4.5	35	1.5	195 + 170	1, 1/2, 1/4, 1/8	Indexer	QFN-24 (4x4)	Bipolar stepper, microstepping, internal current sense
MP6600L	4.5	35	1.5	195 + 170	1, 1/2, 1/4, 1/8	Indexer	QFN-24 (4x4)	Bipolar stepper, microstepping, internal current sense, latch-off function
MP6504	8	32	2	220 + 220	1, 1/2, 1/4, 1/8	Indexer	QFN-28 (4x5)	Bipolar stepper, microstepping
MP6501A	8	35	2.5	220 + 220	1, 1/2, 1/4, 1/8	Indexer	TSSOP-28EP	Bipolar stepper, microstepping
MP6601	4.5	35	2.5	170 + 150	1, 1/2, 1/4	Parallel	QFN-24 (5x5), TSSOP-28EP	Stepper, internal current sense
MP6500	4.5	35	2.5	195 + 170	1, 1/2, 1/4, 1/8	Indexer	QFN-24 (5x5), TSSOP-28	Bipolar stepper, microstepping, internal current sense
MP6500A	4.5	35	2.5	195 + 170	1, 1/2, 1/4, 1/8	Indexer	TSSOP-28EP, QFN-24 (5x5)	Bipolar stepper, microstepping, internal current sense, programmable voltage
MP6500L	4.5	35	2.5	195 + 170	1, 1/2, 1/4, 1/8	Indexer	QFN-24 (5x5)	Bipolar stepper, microstepping, internal current sense, latch-off function
MP6602	4.5	35	4	60 + 30	1, 1/2, 1/4, 1/8, 1/16, 1/32	SPI, Indexer	QFN-25 (4x5)	Stepper, stall detection
N MP6603	8	55	5	65 + 50	1, 1/2, 1/4, 1/8	Parallel, Indexer	QFN-25 (4x5)	Dual full-bridge driver, selectable input interface
MP6604A	4.5	45	2.5	150 + 150	-	IN/EN	QFN-28 (4x5), TSSOP-28EP	Simple dual H-bridge driver
MP6604B	4.5	45	2.5	150 + 150	-	PHASE/EN	QFN-28 (4x5), TSSOP-28EP	Simple dual H-bridge driver
MP6604C	4.5	45	2.5	150 + 150	-	HS/LS	QFN-28 (4x5), TSSOP-28EP	Simple dual H-bridge driver
MP6605C	4.5	60	1.5	LS: 350	-	I ² C	QFN-24 (4x4)	4-channel low-side driver
MP6605D	4.5	60	1.5	LS: 350	-	Parallel	QFN-24 (4x4)	4-channel low-side driver
MP6605E	4.5	60	1.5	LS: 350	-	SPI	QFN-24 (4x4)	4-channel low-side driver
MP6606	4.5	60	0.75	LS: 700	-	SPI	TSSOP-20EP	8-channel low-side driver
S MPQ6605D-AEC1	4.5	60	1.5	LS: 350	-	Parallel	QFN-24 (4x4)	4-channel low-side driver, AEC-Q100 qualified
S MPQ6606-AEC1	4.5	60	0.75	LS: 700	-	SPI	TSSOP-20EP	8-channel low-side driver, AEC-Q100 qualified
S MPQ6609-AEC1	4	36	1	340 + 240	1, 1/2, 1/4, 1/8, 1/16, 1/32	SPI	QFN-18 (3x4)	Bipolar stepper, internal current sense, rotor stall detection, BEMF measurement, AEC-Q100 qualified
N MPQ6600L-AEC1	4.5	35	1.5	195 + 170	1, 1/2, 1/4, 1/8	Indexer	QFN-24 (4x4)	Bipolar stepper, microstepping, internal current sense, latch-off function, AEC-Q100 qualified

INTEGRATED BLDC MOTOR DRIVERS | MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Half-Bridges	I _{OUT} (Max) (A)	R _{DS(on)} (HS + LS) (mΩ)	Control Interface	Package	Notes
MP6543C	3	22	3	1.2	110 + 110	ENBL/PWM	QFN-24 (3x4)	3-phase power stage with 3 current-sense amplifiers
MP6543	3	12	3	2	110 + 110	ENBL/PWM	QFN-24 (3x4)	3-phase power stage with 3 current-sense amplifiers

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Half-Bridges	I _{OUT} (Max) (A)	R _{DS(on)} (HS + LS) (mΩ)	Control Interface	Package	Notes
MP6543A	3	12	3	2	110 + 110	HS/LS	QFN-24 (3x4)	3-phase power stage with 3 current-sense amplifiers
MP6543B	3	12	3	2	110 + 110	PWM/DIR, 3 Hall Inputs	QFN-24 (3x4)	3-phase power stage with 3 current-sense amplifiers
MP6543H	3	22	3	2	110 + 110	ENBL/PWM	QFN-24 (3x4)	3-phase power stage with 3 current-sense amplifiers
MP6543H-A	3	22	3	2	110 + 110	HS/LS	QFN-24 (3x4)	3-phase power stage with 3 current-sense amplifiers
MP6543H-B	3	22	3	2	110 + 110	PWM/DIR, 3 Hall Inputs	QFN-24 (3x4)	3-phase power stage with 3 current-sense amplifiers
MP6545	4.5	45	3	2.5	150 + 150	HS/LS	QFN-28 (4x5), TSSOP-28EP	3-channel power stage
MP6545A	4.5	45	3	2.5	150 + 150	HS/LS	QFN-28 (4x5), TSSOP-28EP	3-channel power stage, separate GND for A/B/C phases
MP6546	3.5	22	3	3	150 + 150	I ² C Hall, Angle Sensor Inputs	QFN-20 (3x4)	3-phase power stage, 1MHz I ² C Interface
MP6536	5	26	3	5.5	140 + 140	ENBL/PWM	QFN-40 (5x5)	3-channel half-bridge driver
MP6540	5.5	35	3	3	50 + 50	ENBL/PWM	QFN-26 (5x5)	3-phase power stage with 3 current-sense amplifiers
MP6540A	5.5	35	3	3	50 + 50	HS/LS	QFN-26 (5x5)	3-phase power stage with 3 current-sense amplifiers
MP6540H	5.5	50	3	5	45 + 45	ENBL/PWM	QFN-26 (5x5)	3-phase power stage with 3 current-sense amplifiers
MP6540HA	5.5	50	3	5	45 + 45	HS/LS	QFN-26 (5x5)	3-phase power stage with 3 current-sense amplifiers
MP6541	4.75	40	3	8	15 + 15	ENBL/PWM	TQFN-26 (6x6)	3-phase power stage with 3 current-sense amplifiers
MP6541A	4.75	40	3	8	15 + 15	HS/LS	TQFN-26 (6x6)	3-phase power stage with 3 current-sense amplifiers
S MP6549	3	22	3	10	10 + 7	ENBL/PWM, HS/LS	QFN-26 (4x4)	3-phase power stage, parallel mode for high-current single half-bridge
S MPQ6547-AEC1	4	30	3	1.5	60 + 50	PWM	QFN-18 (3x4)	3-phase power stage
MPQ6541-AEC1	4.75	40	3	8	15 + 15	ENBL/PWM	TQFN-26 (6x6)	3-phase power stage with 3 current-sense amplifiers, AEC-Q100 qualified
MPQ6541A-AEC1	4.75	40	3	8	15 + 15	HS/LS	TQFN-26 (6x6)	3-phase power stage with 3 current-sense amplifiers, AEC-Q100 qualified

FAN DRIVERS | MOTOR DRIVERS

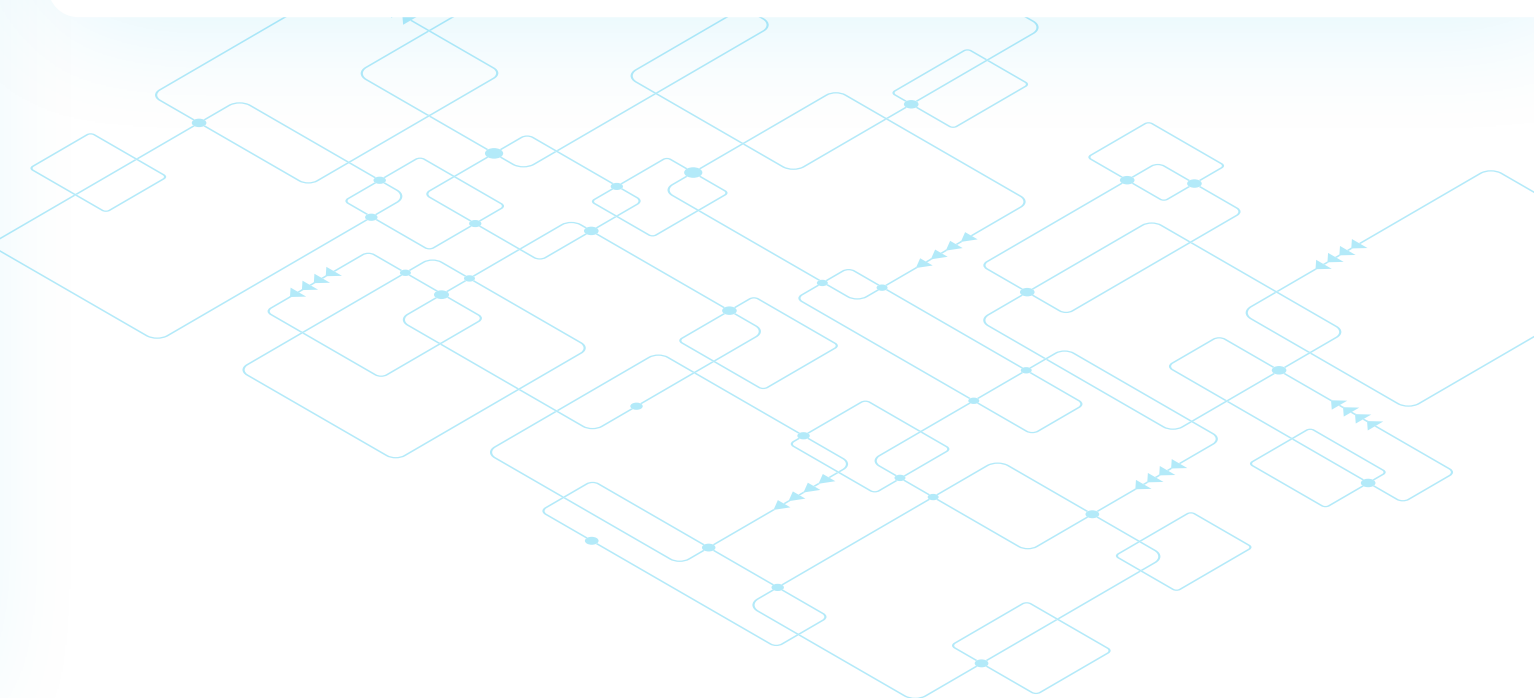
Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Half-Bridges	I _{OUT} (Max) (A)	R _{DS(on)} (HS + LS) (mΩ)	Hall Sensor	Package	Notes
MP6505	4.5	16	2	0.4	600	External	TSSOP-16EP	Single-phase BLDC
MP6510	4.5	16	2	1.2	600	External	TSSOP-16EP	Single-phase BLDC
MP6517A	3.3	16	2	2	850	Integrated	TSOT23-6, TSOT23-6-SL	Single-phase BLDC, prog. speed curve, open-loop control
MP6517B	3.3	16	2	2	850	Integrated	TSOT23-6-L, TSOT23-6-R, TSOT23-6-SL, TSOT23-6-RSL	Single-phase BLDC, prog. speed curve, open-loop control
MP6650	3.3	18	2	2	850	Integrated	TSOT23-6-L, TSOT23-6-R, TSOT23-6-SL, TSOT23-6-RSL	Single-phase BLDC, open-loop speed control
MP9517	3.3	18	2	2	850	Integrated	TSOT23-6-L, TSOT23-6-SL	Single-phase BLDC, open-loop speed control
MP9518	3.3	18	2	1.2	850	Integrated	TSOT23-6, TSOT23-6-SL	Single-phase BLDC, open-loop speed control

FAN DRIVERS | MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	# of Half-Bridges	I _{OUT} (Max) (A)	R _{DS(on)} (HS + LS) (mΩ)	Hall Sensor	Package	Notes
MP6652	3	18	2	1.3	850	Integrated	TSOT23-6-L, TSOT23-6-SL	Single-phase BLDC, prog. speed curve, open-loop control
MP6652A	3	18	2	1	850	Integrated	TSOT23-6-L, TSOT23-6-SL	ESD enhanced
S MP6655	3.5	18	2	2.5	250	Integrated	TSOT23-6-L, TSOT23-6-SL	Single-phase BLDC, prog. speed curve, open-/closed-loop control
N MP6653	5.5	32	2	1.2	960	Integrated	TSOT23-6-L, TSOT23-6-SL	Single-phase BLDC, prog. speed curve, open-/closed-loop control
N MP6653A	3.5	35	2	1.2	960	Integrated	TSOT23-6-L, TSOT23-6-SL, TQFN-6 (2x3)	Single-phase BLDC, prog. speed curve, open-/closed-loop control
N MP6616B	3.3	18	2	4	100	Integrated	QFN-10 (2x3)	ESD enhanced
S MP6617	3.3	18	2	6	64	Integrated	QFN-10 (2.5x3)	Single-phase BLDC, prog. speed curve, open-/closed-loop control
S MP6618	4.5	32	2	3	150	Integrated, External	QFN-12 (3x3)	Single-phase BLDC, prog. speed curve, open-/closed-loop control
MP6630	2	5.5	3	1.4	800	Integrated	UTQFN-8 (2x3)	3-phase BLDC, prog. speed curve, open-loop control
MP6630H	2	16	3	1.4	800	Integrated	UTQFN-8 (2x3)	3-phase BLDC, prog. speed curve, open-loop control
MP6631	3.6	24	3	3	160	External	QFN-26 (3x4)	3-phase BLDC, prog. speed curve, open-/closed-loop control
MP6631H	3.6	35	3	3	160	External	QFN-26 (3x4)	3-phase BLDC, prog. speed curve, open-/closed-loop control
MP6631A	3.6	35	3	3	160	External	QFN-26 (3x4)	FG output function at the align stage, based on the MP6631H
N MP6631B	3.6	35	3	3	160	External	QFN-26 (3x4)	Minimum soft-start time less than 0.5s, based on the MP6631H
N MP6637	2.5	5.5	3	1.3	350	Sensorless	SOT583	3-phase BLDC, open-loop speed control
N MP6637A	2.5	5.5	3	1.3	350	Sensorless	SOT583	FG/RD pin configurable based on the MP6637
S MP6638	2.5	15	3	1.7	300	Sensorless	UTQFN-8 (2x2.5)	3-phase BLDC, open-loop speed control
N MP6636	3.3	18	3	4	190	Sensorless	SOIC-8EP, TQFN-10 (4x4)	3-phase BLDC, prog. speed curve, open-/closed-loop control
N MP6634	4.5	35	3	2	500	Sensorless	TQFN-12 (3x4)	3-phase BLDC, prog. speed curve, open-/closed-loop control
N MP6632A	6	50	3	External FETs	External FETs	External	QFN-32 (4x4)	3-phase BLDC, prog. speed curve, open-/closed-loop control, trapezoid drive
N MP6632	6	50	3	External FETs	External FETs	External	QFN-32 (4x4)	3-phase BLDC, prog. speed curve, open-/closed-loop control, sine drive
S MP6635	6	35	3	External FETs	External FETs	Sensorless	QFN-28 (5x5)	3-phase BLDC, prog. speed curve, open-/closed-loop control
MPQ6517B-AEC1	3.3	16	2	2	850	Integrated	TSOT23-6, TSOT23-6-SL	Single-phase BLDC, prog. speed curve, open-loop control, AEC-Q100 qualified
N MPQ6653-AEC1	5.5	35	2	1.2	960	Integrated	TSOT23-6, TSOT23-6-SL	Single-phase BLDC, prog. speed curve, open-/closed-loop control, AEC-Q100 qualified
N MPQ6653A-AEC1	3.5	35	2	1.2	960	Integrated	TSOT23-6, TSOT23-6-SL, TQFN-6 (2x3)	Single-phase BLDC, prog. speed curve, open-/closed-loop control, AEC-Q100 qualified
N MPQ6631H-AEC1	3.6	35	3	3	160	External	TQFN-26 (3x4)	3-phase BLDC, prog. speed curve, open-/closed-loop control, 1/3 Hall inputs, AEC-Q100 qualified
N MPQ6634-AEC1	4.5	35	3	2	500	Sensorless	TQFN-12 (3x4)	3-phase BLDC, prog. speed curve, open-/closed-loop control, AEC-Q100 qualified
S MPQ6632-AEC1	6	50	3	External FETs	External FETs	External	QFN-32 (4x4)	3-phase BLDC, prog. speed curve, open-/closed-loop control, AEC-Q100 qualified
S MPQ6635-AEC1	6	35	3	External FETs	External FETs	Sensorless	QFN-28 (5x5)	3-phase BLDC, prog. speed curve, open-/closed-loop control, AEC-Q100 qualified

MOTOR CONTROLLERS & SMART DRIVERS | MOTOR DRIVERS

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Core	RAM (KB)	Flash (KB)	Interface	Special Features	Grade	Package	Notes
MP6570	3	3.6	-	-	-	SPI, I ² C, RS-485	Up to 14-Bit AnguSensor; Up to 80kHz fSW; 10-Bit ADC with Prog Gain; Position/Speed/Torque Operation Modes; Up to 32 Prog Slave Addresses	Catalog	QFN-32 (4x4)	3-phase BLDC controller with high-accuracy angular sensor
S MPF66200	2.5	5.5	Cortex-M0, 90MHz PLL	8	64	2x UART 1x I ² C 2x SPI 1x CAN	1x 16-Bit System Watchdog Timer; 3x 32-Bit Enhanced Timer; 4x 32-Bit Basic Timer; 1x 16-Bit Quadrature Decoder Interface; 1x 16-Bit Memory Protection Unit; 4-Ch Motor Control PWM Timer; 1x 32-Bit Hardware Divider; 1x Coordinate Rotation Digital Computer; 1x 10-Bit, 1MSPS ADC; 4x Operational Amplifier; 4x Analog Comparator	Catalog	TQFN-24 (5x5), TQFN-40 (6x6)	Smart drive controller
S MPF66280	5	60	Cortex-M0, 90MHz PLL	8	64	1x UART 1x I ² C 1x CAN	Motor and System Parameter ID and Loop Parameter Auto-Tuning; Accu-Filter for Low Noise and Vibration; Advanced Motion Controller; Hardware DIV and CORDIC	Catalog	QFN-48 (6x9)	3-phase BLDC motor smart driver



MAGALPHA™ MAGNETIC POSITION SENSORS | POSITION SENSORS

Part Number	±30 Resolution	Interface	Supply Voltage (V)	Supply Current (mA)	Sensing Range (mT)	Cutoff Frequency (Hz)	Latency at Constant Speed (µs)	Temperature Range (°C)	Package	Notes
MA102	12-Bit	SPI, UVW	3 to 3.6	11.7	30+ (No Upper Limit)	390	8	-40 to +125	QFN-16 (3x3)	Motor commutation angle sensor, UVW multi-pole pair, differential outputs
MA302	12-Bit	SPI, UVW, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	390	8	-40 to +125	QFN-16 (3x3)	Motor commutation angle sensor, 12-bit SPI output, ABZ & UVW incremental outputs
MA310	12-Bit	SPI, UVW, ABZ	3 to 3.6	11.7	15+ (No Upper Limit)	93	8	-40 to +125	QFN-16 (3x3)	Motor commutation angle sensor, 12-bit SPI output, low magnetic field
MA330	10-Bit to 14-Bit	SPI, UVW, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	23 to 6k	8	-40 to +125	QFN-16 (3x3)	Motor commutation angle sensor, up to 14-bit SPI output, programmable filter
N MA600	12-Bit to 15-Bit	SPI, ABZ, PWM, UVW, SSI	3 to 3.6	7	20+ (No Upper Limit)	75 to 17k	0	-40 to +125	QFN-16 (3x3)	TMR front-end high accuracy & BW, 0.6° INL (<0.1° INL thru user calibration with 32-word lookup table), no speed error
MA702	12-Bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	390	8	-40 to +125	QFN-16 (3x3)	12-bit SPI output, ABZ incremental & PWM outputs
MA704	10-Bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	2970	8	-40 to +125	QFN-16 (3x3)	12-bit SPI output, high BW, ABZ incremental & PWM outputs
MA710	12-Bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	15+ (No Upper Limit)	93	8	-40 to +125	QFN-16 (3x3)	12-bit SPI output, low magnetic field, ABZ incremental & PWM outputs
MA730	14-Bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	40+ (No Upper Limit)	23	8	-40 to +125	QFN-16 (3x3)	14-bit SPI output, ABZ incremental & PWM outputs
MA732	10-Bit to 14-Bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	23 to 6k	8	-40 to +125	QFN-16 (3x3)	Prog. filter, ABZ incremental & PWM outputs
MA734	8-Bit to 12.5-Bit	SPI	3 to 3.6	11	30+ (No Upper Limit)	95, 380, 95k	3	-40 to +125	QFN-16 (3x3)	Prog. filter, low latency
MA735	9-Bit to 13-Bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	40+ (No Upper Limit)	23 to 6k	8	-40 to +125	UTQFN-14 (2x2)	Ultra-small footprint, prog. filter, ABZ incremental & PWM outputs
MA736	8-Bit to 12.5-Bit	SPI	3 to 3.6	11	30+ (No Upper Limit)	95, 380, 95k	3	-40 to +125	UTQFN-14 (2x2)	Ultra-small footprint, prog. filter, low latency
MA780	8-Bit to 12-Bit	SPI	3 to 3.6	50µA (512µs OnTime)	30+ (No Upper Limit)	5 to 160k	4 to 4000	-40 to +125	QFN-16 (3x3)	Optimized for low-power, integrated wake-up and IRQ
MA782	8-Bit to 12-Bit	SPI	3 to 3.6	50µA (512µs OnTime)	30+ (No Upper Limit)	5 to 160k	4 to 4000	-40 to +125	UTQFN-14 (2x2)	Micropower, ultra-small footprint, integrated wake-up and IRQ
MA800	8-Bit	SPI, SSI	3 to 3.6	11.7	30+ (No Upper Limit)	90	4000	-40 to +125	QFN-16 (3x3)	Optimized for HMI applications
MA820	8-Bit	SPI, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	90	4000	-40 to +125	QFN-16 (3x3)	Optimized for HMI applications
MA850	8-Bit	SPI, PWM	3 to 3.6	11.7	30+ (No Upper Limit)	90	4000	-40 to +125	QFN-16 (3x3)	Optimized for HMI applications
MAQ430	12-Bit	SPI, UVW, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	390	8	-40 to +150	QFN-16 (3x3)	AEC-Q100, wettable flanks
MAQ470	12-Bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	390	8	-40 to +150	QFN-16 (3x3)	AEC-Q100, wettable flanks
MAQ473	10-Bit to 14-Bit	SPI, SSI, PWM, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	23 to 6k	8	-40 to +150	QFN-16 (3x3)	AEC-Q100, prog. filter, wettable flanks

	Part Number	±3σ Resolution	Interface	Supply Voltage (V)	Supply Current (mA)	Sensing Range (mT)	Cutoff Frequency (Hz)	Latency at Constant Speed (µs)	Temperature Range (°C)	Package	Notes
N	MAQ600	12-Bit to 15-Bit	SPI, ABZ, PWM, UVW, SSI	3 to 3.6	7	20+ (No Upper Limit)	75 to 17k	0	-40 to +125	QFN-16 (3x3)	AEC-Q100, TMR front end, high accuracy & BW, 0.6° INL (<0.1° INL thru user calibration with 32-word lookup table), no speed error
N	MAQ800	8-Bit	SPI, SSI	3 to 3.6	11.7	30+ (No Upper Limit)	90	4000	-40 to +125	QFN-16 (3x3)	Optimized for automotive HMI applications, SSI output, wettable flanks
N	MAQ820	8-Bit	SPI, ABZ	3 to 3.6	11.7	30+ (No Upper Limit)	90	4000	-40 to +125	QFN-16 (3x3)	Optimized for automotive HMI applications, SSI output, wettable flanks
N	MAQ850	8-Bit	SPI, PWM	3 to 3.6	11.7	30+ (No Upper Limit)	90	4000	-40 to +125	QFN-16 (3x3)	Optimized for automotive HMI applications, SSI output, wettable flanks

MAGDIFF™ MAGNETIC POSITION SENSORS WITH STRAY FIELD IMMUNITY | POSITION SENSORS

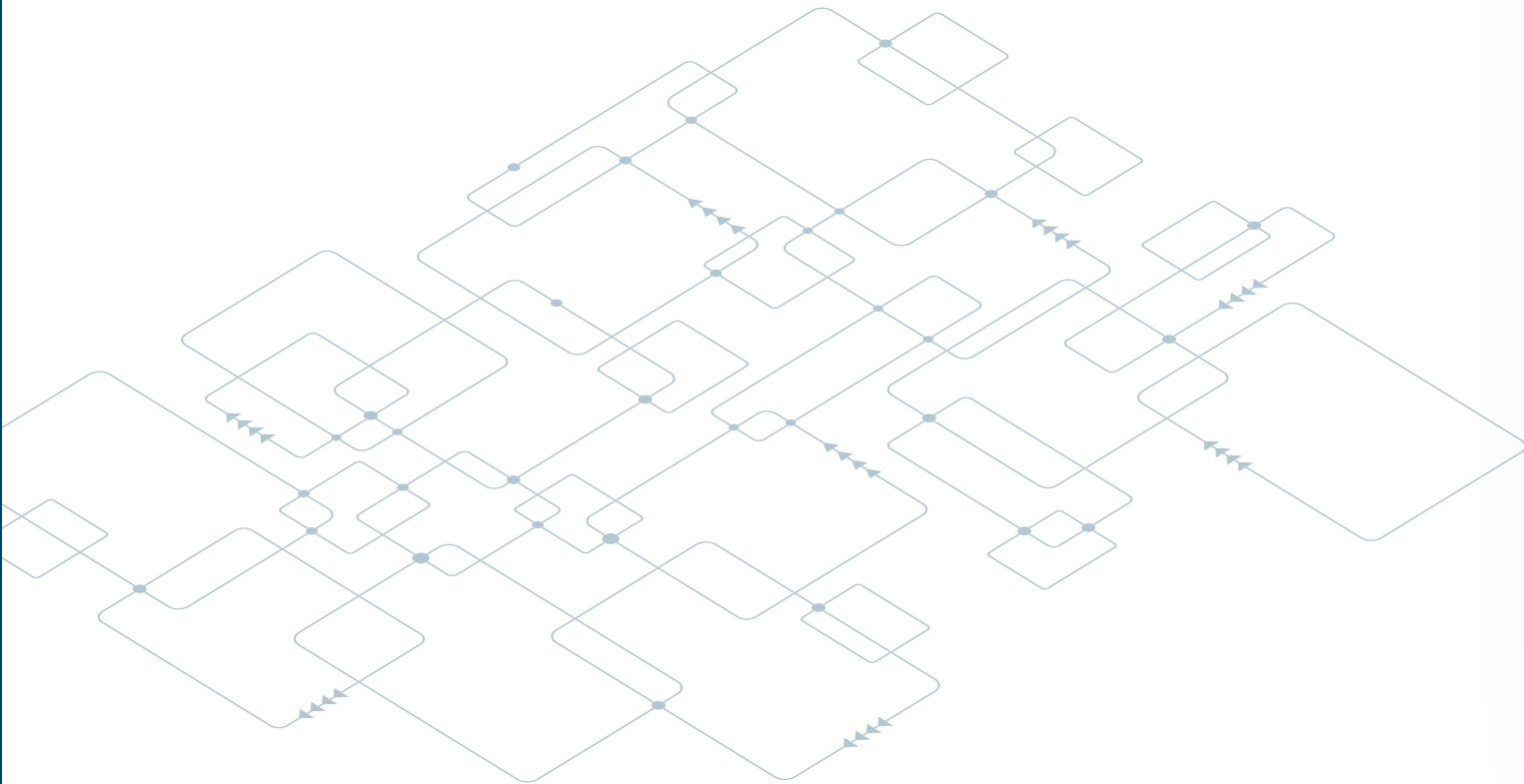
	Part Number	±3σ Resolution	Interface	Supply Voltage (V)	Supply Current (mA)	Sensing Range (mT)	Cutoff Frequency (Hz)	Latency at Constant Speed (µs)	Temperature Range (°C)	Package	Notes
S	MA900	10-Bit to 14.5-Bit	SPI, SSI, I ² C, UVW, ABZ	3.3V, 5V	12	8+ (No Upper Limit)	12 to 100k	0	-40 to +125	QFN-16 (3x3)	Robust against parasitic stray fields exceeding 4kA/m DC, or 5mT
S	MA980	9-Bit to 13-Bit	SPI	3.3V, 5V	25µA (256µs On Time)	8+ (No Upper Limit)	5 to 160k	0	-40 to +125	WLCSP (1.6x1.6)	Micropower, smallest footprint, robust against parasitic stray fields
S	MAQ79010	10-Bit to 14.5-Bit	SPI, SSI, I ² C, UVW, SENT, ABZ	3.3V, 5V	12	8+ (No Upper Limit)	12 to 100k	0	-40 to +150	QFN-16 (3x3)	AEC-Q100, ASIL-B compliant with functional safety, robust against parasitic stray fields exceeding 4kA/m DC, or 5mT, wettable flanks
P	MAQ79016	10-Bit to 14.5-Bit	SPI, SSI, I ² C, UVW, SENT, ABZ	Up to 26V	12	8+ (No Upper Limit)	12 to 100k	0	-40 to +150	QFN-16 (3x3)	AEC-Q100, ASIL-B compliant with functional safety, 26V with reverse polarity protection, robust against parasitic stray fields >4kA/m DC, or 5mT
S	MAQ900	10-Bit to 14.5-Bit	SPI, SSI, I ² C, UVW, SENT, ABZ	3.3V, 5V	12	8+ (No Upper Limit)	12 to 100k	0	-40 to +150	QFN-16 (3x3)	AEC-Q100, robust against parasitic stray fields >4kA/m DC, or 5mT
S	MAQ980	9-Bit to 13-Bit	SPI	3.3V, 5V	25µA (256µs On Time)	8+ (No Upper Limit)	5 to 160k	0	-40 to +125	UTQFN (2x2)	AEC-Q100, micropower, smallest footprint, robust against parasitic stray fields >4kA/m DC, or 5mT

MAGVECTOR™ 3D MAGNETIC POSITION SENSORS | POSITION SENSORS

	Part Number	Data Length	Interface	Supply Voltage (V)	Supply Current (mA)	Sensing Range (mT)	Conversion Time (µs)	Temperature Range (°C)	Package	Notes
N	MV300	12-Bit	I ² C, SPI	3.3	10nA to 2.5	±50 or ±180	40	-40 to +125	TSOT23-6	Digital component output, selectable operating power modes
P	MV310	12-Bit	I ² C, SPI	3.3	25nA to 2.3	±125 or ±250	40	-40 to +125	TSOT23-6	Digital component output, selectable operating power modes and sensing axis
P	MVQ310	12-Bit	I ² C, SPI	3.3	25nA to 2.3	±125 or ±250	40	-40 to +150	TSOT23-6	AEC-Q100, digital component output, selectable operating power modes and sensing axis

POSITION SENSOR MAGNETS | POSITION SENSORS

Part Number	Magnetization	Geometry	Material	OD (mm)	ID (mm)	Height (mm)	Air Gap Min (mm)	Air Gap Max (mm)	Radial Tolerance (mm)	Notes
MAG10-2C-30.25	Diametrical	Cylinder	NdFeB, Grade N35SH	3	-	2.5	0	2	0.1	-
MAG10-2C-40.25	Diametrical	Cylinder	NdFeB, Grade N35SH	4	-	2.5	0	2.6	0.2	Standard size, cost-effective
MAG10-2C-50.25	Diametrical	Cylinder	NdFeB, Grade N35SH	5	-	2.5	0	3.1	0.2	Standard size, cost-effective
MAG10-2C-60.25	Diametrical	Cylinder	NdFeB, Grade N35SH	6	-	2.5	0	3.6	0.3	-
MAG10-2C-80.25	Diametrical	Cylinder	NdFeB, Grade N35SH	8	-	2.5	0	4.5	0.4	-
MAG10-2R-50.12.25	Diametrical	Ring	NdFeB, Grade N35SH	5	1.25	2.5	1	1.4	0.4	Accurate application
MAG10-2R-60.15.25	Diametrical	Ring	NdFeB, Grade N35SH	6	1.5	2.5	1.3	1.6	0.6	Accurate application
MAG10-2R-80.20.25	Diametrical	Ring	NdFeB, Grade N35SH	8	2	2.5	2	2.5	0.8	Accurate application
MAG10-2B-40.25	Axial	Half-Cylinder	NdFeB, Grade N35SH	4	-	2.5	0	2.1	<0.1	Low field emission
MAG10-2B-50.25	Axial	Half-Cylinder	NdFeB, Grade N35SH	5	-	2.5	0	2.7	<0.1	Low field emission
MAG10-2B-60.25	Axial	Half-Cylinder	NdFeB, Grade N35SH	6	-	2.5	0	3.2	<0.1	Low field emission
MAG10-2B-80.25	Axial	Half-Cylinder	NdFeB, Grade N35SH	8	-	2.5	0	4.2	0.1	Low field emission

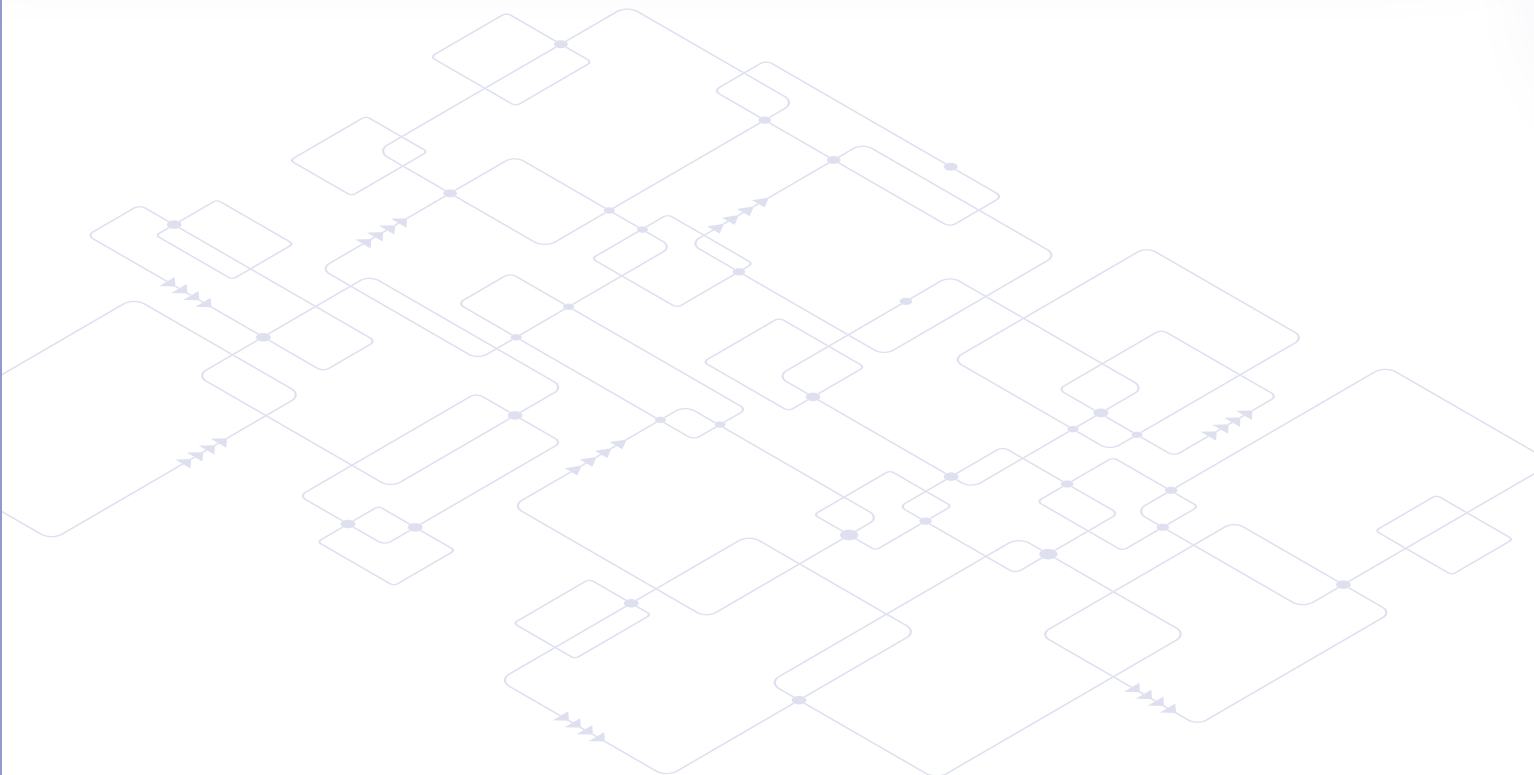


INTEGRATED CURRENT SENSORS | CURRENT SENSORS

Part Number	Current Range (A)	V _{CS} (V)	Over-Temp Accuracy	Temperature Range (°C)	Isolation Voltage (V _{RMS})	Working Voltage (V _{RMS})	Reinforced Isolation (V _{RMS})	Bandwidth (kHz)	Over-Current Detection Voltage Reference	Primary Conductor Resistance	UL Certification	Package	Notes	
MCS1800	±12.5, ±25	3.3	3%	-40 to +125	1000	200	-	100	-	1.2	-	SOIC-8	Coreless, ratiometric analog output	
MCS1801	±12.5, ±25	5	3%	-40 to +125	1000	200	-	100	-	1.2	-	SOIC-8	Coreless, ratiometric analog output	
MCS1802	±5, ±10, ±20, ±30, ±40, ±50	3.3	2.5%	-40 to +125	2200	250	-	100	-	0.9	✓	SOIC-8	Coreless, ratiometric analog output	
MCS1803	±5, ±10, ±20, ±30, ±40, ±50	5	2.5%	-40 to +125	2200	250	-	100	-	0.9	✓	SOIC-8	Coreless, ratiometric analog output	
N MCS1805	±5, ±10, ±20, ±30, ±40, ±50	3.3, 5	2.5%	-40 to +125	3000	500	-	100	✓	-	0.9	✓ + TUV	SOIC-8	Coreless, ratiometric analog output, immune to external magnetic field gradients
MCS1806	±5, ±10, ±20, ±30, ±40, ±50	3.3, 5	2.5%	-40 to +125	3000	500	-	100	-	-	0.9	✓	SOIC-8	Coreless, ratiometric analog output
S MCS1810	±5, ±10, ±20, ±30, ±40, ±50, ±65, ±80, ±100	3.3, 5	2%	-40 to +125	5000	1100	560	350	✓	✓	0.3	Planned	SOIC-10W	Coreless, low primary conductor resistance, bi- or unidirectional sensing, ratiometric or absolute analog output, prog. OCD with 1µs response time
S MCS1812	±5, ±10, ±20, ±30, ±40, ±50, ±65, ±80	3.3, 5	2%	-40 to +125	5000	1100	560	350	✓	✓	1	Planned	SOIC-16W	Coreless, bi- or unidirectional sensing, ratiometric or absolute analog output, prog. OCD with 1µs response time
S MCS1814	±5, ±10, ±20, ±30, ±40, ±50, ±65, ±80	3.3, 5	2%	-40 to +125	5000	1100	560	350	✓	✓	1	Planned	SOIC-16W	Coreless, bi- or unidirectional sensing, ratiometric or absolute analog output, prog. OCD with 1µs response time
MCS1823	±5, ±10, ±20, ±30, ±40, ±50	3.3, 5	2.5%	-40 to +125	100	N/A	-	120	✓	-	0.6	✓	QFN-12 (3x3)	Coreless, bi- or unidirectional sensing, ratiometric or absolute analog output, immune to external magnetic field gradients
N MCS1826	±15.5, ±31	3.3 to 5	3%	-40 to +125	100	N/A	-	120	✓	-	0.6	✓	QFN-12 (3x3)	Coreless, bidirectional sensing, ratiometric analog output, immune to external magnetic field gradients
S MCS2803	±50, ±100, ±150, ±200, ±250, ±300, ±400	3.3, 5	3.5%	-40 to +150	5000	1000	475	250	-	-	0.1	Planned	5-Pin THM, 5-Pin SMT	Bi- or unidirectional sensing, ratiometric or absolute analog output
S MCS2804	±50, ±100, ±150, ±200	3.3, 5	3.5%	-40 to +150	5000	1000	475	100	✓	-	0.1	Planned	6-Pin THM, 6-Pin SMT	Bi- or unidirectional sensing, ratiometric or absolute analog output, prog. OCD with 1µs response time
S MCS2805	±50, ±100, ±150, ±200, ±250, ±300, ±400	3.3, 5	3.5%	-40 to +150	5000	1000	475	250	✓	-	0.1	Planned	6-Pin THM, 6-Pin SMT	Bi- or unidirectional sensing, ratiometric or absolute analog output, prog. OCD with 1µs response time
N MCQ1805	±5, ±10, ±20, ±30, ±40, ±50	3.3, 5	2.5%	-40 to +125	3000	500	-	100	✓	-	0.9	✓ + TUV	SOIC-8	AEC-Q100, coreless, ratiometric analog output, immune to external magnetic field gradients
N MCQ1806	±5, ±10, ±20, ±30, ±40, ±50	3.3, 5	2.5%	-40 to +125	3000	500	-	100	-	-	0.9	✓	SOIC-8	AEC-Q100, coreless, ratiometric analog output

INTEGRATED CURRENT SENSORS | CURRENT SENSORS

Part Number	Current Range (A)	V _{CC} (V)	Over-Temp Accuracy	Temperature Range (°C)	Isolation Voltage (V _{RMS})	Working Voltage (V _{RMS})	Reinforced Isolation (V _{RMS})	Bandwidth (kHz)	Over-Current Detection Voltage Reference	Primary Conductor Resistance (mΩ)	UL Certification (UL)	Package	Notes	
S MCQ1810	±5, ±10, ±20, ±30, ±40, ±50, ±65, ±80, ±100	3.3, 5	2%	-40 to +150	5000	1100	560	350	✓	✓	0.3	Planned	SOIC-10W	AEC-Q100, coreless, 0.3mΩ low primary conductor resistance, bi- or unidirectional sensing, ratiometric or absolute analog output, OCD with 1μs response time
S MCQ1812	±5, ±10, ±20, ±30, ±40, ±50, ±65, ±80	3.3, 5	2%	-40 to +150	5000	1100	560	350	✓	✓	1.0	Planned	SOIC-16W	AEC-Q100, coreless, bi- or unidirectional sensing, ratiometric or absolute analog output, prog. OCD with 1μs response time
S MCQ1814	±5, ±10, ±20, ±30, ±40, ±50, ±65, ±80	3.3, 5	2%	-40 to +150	5000	1100	560	350	✓	✓	1.0	Planned	SOIC-16W	AEC-Q100, coreless, bi- or unidirectional sensing, ratiometric or absolute analog output, prog. OCD with 1μs response time
N MCQ1823	±5, ±10, ±20, ±30, ±40, ±50	3.3, 5	2.5%	-40 to +125	100	N/A	-	120	✓	-	0.6	✓	QFN-12 (3x3)	AEC-Q100, coreless, bi- or unidirectional sensing, ratiometric or absolute analog output, immune to external magnetic field gradients
S MCQ2803	±50, ±100, ±150, ±200, ±250, ±300, ±400	3.3, 5	3.5%	-40 to +150	5000	1000	475	250	-	-	0.1	Planned	5-Pin THM, 5-Pin SMT	AEC-Q100, bi- or unidirectional sensing, ratiometric or absolute analog output
S MCQ2804	±50, ±100, ±150, ±200	3.3, 5	3.5%	-40 to +150	5000	1000	475	100	✓	-	0.1	Planned	6-Pin THM, 6-Pin SMT	AEC-Q100, bi- or unidirectional sensing, ratiometric or absolute analog output, OCD with 1μs response time
S MCQ2805	±50, ±100, ±150, ±200, ±250, ±300, ±400	3.3, 5	3.5%	-40 to +150	5000	1000	475	250	✓	-	0.1	Planned	6-Pin THM, 6-Pin SMT	AEC-Q100, bi- or unidirectional sensing, ratiometric or absolute analog output, OCD with 1μs response time



ANALOG SWITCHES | PRECISION ANALOG

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	# of Channels	t_{ON} (ns)	t_{OFF} (ns)	$R_{DS(ON)}$ (Max) (Ω)	Package	Notes
MP2735	1.65	5.5	2	29	23	0.45	QFN-10 (1.4x1.8)	Low-voltage, dual SPDT
MP2736	1.65	5.5	2	29	23	0.45	QFN-10 (1.4x1.8)	Low-voltage, dual SPDT, EN function

OPERATIONAL AMPLIFIERS | PRECISION ANALOG

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	GBW (kHz)	I_Q (Typ) (μ A)	PSRR (dB)	Slew Rate (V/ μ s)	Offset Voltage (mV)	Package	Notes
MP8102	1.8	5.5	200	7.5	80	0.1	1	TSOT23-5	Ultra-low power, 600kHz
MP8130	2.7	36	100	10	80	0.1	1	TSOT23-5	Ultra-low power, 200kHz, high-voltage
MP8110	2.5	40	-	12	97	-	0.4/1	SOIC-8, MSOP-8	High-side current sense

VOLTAGE REFERENCE | PRECISION ANALOG

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	V_{OUT} (V)	Initial Accuracy (%)	Operating Current (mA)	Z_{OUT} (Ω)	Package	Notes
MP8201	1.2	12	1.2 to 10	0.5	0.06 to 20	1	SOT23	Precision adj., shunt voltage regulator, 1V shunt reference

USB/LOAD SWITCHES | USB/LOAD SWITCHES, USB PORT & USB PD CONTROLLERS, E-FUSES

USB/Load Switches

Single-Channel

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Continuous Current (Max) (A)	Short-Circuit Current (Max) (A)	Enable Logic	Fault Flags	Output Discharge	Package	Notes
MP62055	2.7	5.5	0.5	1.1	Active High	Over-Current, Active High	-	TSOT23-5	Small package, P2P with the TPS2051B
MP5075L	3	5.5	1	7	Active High	-	✓	SOT-563 (1.6x1.6)	OCP, thermal protection, small package
MP62550 MP62551	2.5	5.5	1.5	1.7	Active Low, Active High	Over-Current, Active Low	-	TQFN-6 (2x2), TSOT23-6	Precision adj. current-limited power distribution switch, 88/100mΩ at 100mA, 1.5μA max $I_{SHUTDOWN}$
MP5073	0.5	5.5	2	2	Active High	-	✓	QFN-12 (2x2)	Prog. current limit, power good, slew rate control
MP5083	0.5	5.5	2	Prog	Active High	-	✓	QFN-12 (2x2)	5% current monitoring (from 0.6A to full load), power good, slew rate control
MP5075	3	5.5	2.4	7	Active High	-	✓	SOT-563 (1.6x1.6)	OCP, thermal protection, small package
MP5077	0.5	5.5	7	13	Active High	-	✓	TQFN-12 (2x2)	Prog. current limit, slew rate control, fast-off protection
MP5087	0.5	5.5	7	7	Active High	-	✓	TQFN-12 (2x2)	5% current monitoring (from 1.5A to full load), power good, slew rate control, fast-off protection
MP5087A	0.5	5.5	7	7	Active High	-	✓	TQFN-12 (2x2)	Prog. current limit, slew rate control, fast-off protection
S MP5037A	3.15	22	7	20	Active High	-	✓	QFN-21 (3x3)	Prog. current limit and reverse-current protection

USB/Load Switches

Dual-Channel

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Continuous Current (Max) (A)	Short-Circuit Current (Max) (A)	Enable Logic	Fault Flag	Output Discharge	Package	Notes
MP5095	0.5	5.5	2.3 (x2)	5	Active High	-	✓	TSOT23-8	Dual-channel, low I_{Q} , 30mΩ low $R_{DS(ON)}$, reverse-block connection
MP5090	0.5	5.5	3/2	5	Active High	-	✓	TQFN-8 (1.5x2), CSP (1.05x1.6)	Dual-channel, low I_{Q} , 30mΩ low $R_{DS(ON)}$, reverse-block connection, small package
MP5092	0.5	5.5	7.5 (x2)	7	Active High	-	✓	TQFN-18 (2x3)	Dual-channel, prog. current limit, slew rate control, fast-off protection

USB PORT CONTROLLERS | USB/LOAD SWITCHES, USB PORT & USB PD CONTROLLERS, E-FUSES

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Continuous Current (Max) (A)	Short-Circuit Current (Max) (A)	Enable Logic	Fault Flags	Output Discharge	Package	Notes
MP5034	3.6	14	-	6	Active High	-	-	TSOT23-8	Integrates QC 3.0 protocol
MP5030C	-	14	3	6	-	-	-	QFN-10 (1.5x2)	Current-limit switch; supports CDP, DCP, and QC 3.0 modes
MP5032	3.6	14	3	6	Active High	-	-	TSOT23-8	QC 3.0 controller, integrated current-limit switch
MP5030D	-	14	3	6	Active High	-	-	QFN-10 (1.5x2)	Load detection, supports CDP and DCP modes
MP5029-C	3	24	3	3.65	Active High	✓	✓	QFN-14 (2x3)	Current-limit switch; supports CDP, DCP, and QC 3.0 modes
MPQ5029-C	3	24	3	3.65	Active High	✓	✓	QFN-14 (2x3)	Current-limit switch; supports CDP, DCP, and QC 3.0 modes; AEC-Q100

USB PD CONTROLLERS | USB/LOAD SWITCHES, USB PORT & USB PD CONTROLLERS, E-FUSES

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Continuous Current (Max) (A)	Short-Circuit Current (Max) (A)	Enable Logic	Fault Flags	Output Discharge	Package	Notes
	MP5031 MPQ5031	4.6	5.5	5	-	Active High	-	✓	QFN-20 (4x4)	Supports USB Type-C and PD3.0 PPS, USB2.0 BC1.2 CDP and DCP mode, QC2.0/3.0/4.0, BC1.2 short mode, Apple charging, and Huawei FCP
N	MP5038 MPQ5038	4.6	5.5	5	6	Active High	OVP, UVP	✓	QFN-20 (4x4)	Supports USB Type-C, PD3.0 PPS, and QC3.0; supports DCP schemes for BC1.2, BC1.2 CDP handshaking, and Huawei FCP
N	MPF52000	4.6	5.5	5	-	Active High	OVP, UVP	✓	QFN-20 (4x4)	Dual USB PD controller, source port management; supports Qualcomm Quick Charge 3/4/4+, BC1.2, Apple 3A divider mode, Huawei FCP/SCP, and USB PD3.1 with PPS
S	MPF52001	4.6	5.5	5	-	Active High	-	✓	QFN-20 (4x4)	USB PD controller, single sourcing; supports Qualcomm Quick Charge 3/4/4+, BC1.2, Apple 3A divider mode, Huawei FCP/SCP, and USB PD3.1 with PPS
N	MPF52002	4.6	5.5	5	-	Active High	OVP, UVP	✓	QFN-20 (4x4)	Single USB PD controller for DRP and sink port; supports Qualcomm Quick Charge 3/4/4+, BC1.2, Apple 3A divider mode, Huawei FCP/SCP, and USB PD3.1 with PPS
N	MPF52003	4.6	5.5	5	-	Active High	OVP, UVP	✓	QFN-40 (5x5)	Triple-port USB PD controller for sourcing ports; supports Qualcomm Quick Charge 3/4/4+, BC1.2, Apple 3A divider mode, Huawei FCP/SCP, and USB PD3.1 with PPS

USB PORT PROTECTION | USB/LOAD SWITCHES, USB PORT & USB PD CONTROLLERS, E-FUSES

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Continuous Current (Max) (A)	Short-Circuit Current (Max) (A)	Enable Logic	Fault Flags	Output Discharge	Package	Notes
S	MP4501	2.7	3.6	0.5	-	Active High	-	-	TQFN-20 (3x3)	60V, USB Type-C port with OVP and IEC ESD protection
S	MP4502	2.7	3.6	0.5	-	Active High	-	-	TQFN-20 (3x3)	28V, USB Type-C port with OVP and IEC ESD protection

E-FUSES (ELECTRONIC FUSES, INTEGRATED HOT-SWAP SWITCHES) | USB/LOAD SWITCHES, USB PORT & USB PD CONTROLLERS, E-FUSES

	Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Continuous Current (Max) (A)	Short-Circuit Current (Max) (A)	Enable Logic	Fault Flags	Output Discharge	Package	Notes
	MP5094	5/12	16/24	3/4	8	-	-	-	TSOT23-8	Dual-channel, over-voltage clamp, OCP with hiccup mode
	MP5098	4.6	13.8	4/3	8	Active Low	-	-	TQFN-10 (2x3)	Dual-channel current-limit switch with current monitoring
	MP5013A	3	18	4.2	Prog	Short-/Over-Current, Under-Voltage, Over-Voltage, Thermal Shutdown	-	-	TSOT23-8	5V, 1A to 5A, 36mΩ RDS(ON), prog. current limit and slew rate control, 5A/2.8A trip/hold current
	MP5014A	10	13.8	5	Prog	Short-/Over-Current, Under-Voltage, Over-Voltage, Thermal Shutdown	-	-	TSOT23-8	12V, 36mΩ RDS(ON), prog. current limit, over-voltage clamp, slew rate control
	MP5016	2.7	15	5	8	-	-	✓	QFN-10 (1.5x2)	Over-voltage clamp, reverse-current blocking, thermal shutdown, auto-retry
	MP5016-L	2.7	22	5	8	-	-	✓	QFN-10 (1.5x2)	Latch-off OCP, over-voltage clamp, reverse-current blocking
	MP5016H	2.7	22	5	8	-	-	✓	QFN-10 (1.5x2)	UL certified, over-voltage clamp, reverse-current blocking, thermal shutdown, auto-retry
	MP5018	4.5	5.5	5	Prog	Thermal Fault = Tri-State	-	-	QFN-12 (2x3)	Reverse-current blocking, 45mΩ R _{DS(ON)} , prog. current limit, latch-off OTP

E-FUSES (ELECTRONIC FUSES, INTEGRATED HOT-SWAP SWITCHES) | USB/LOAD SWITCHES, USB PORT & USB PD CONTROLLERS, E-FUSES

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	Continuous Current (Max) (A)	Short-Circuit Current (Max) (A)	Fault Flags	Output Discharge	Package	Notes
MP5017A	3	5.5	5	7.5	Over-Current, Over-Temperature, Output Over-Voltage	✓	QFN-12 (2x3)	Current-limit switch, over-voltage clamp, reverse-current blocking
MP5035	2.9	22	2	8	-	✓	TSOT23-6	Adjustable current limit, output discharge, OCP with hiccup mode
S MP5042	3.5	28	2	5	-	-	TSOT23-6	Adjustable current limit, OCP with hiccup mode
MP5036	2.9	14	5	8	-	✓	TSOT23-6	Fixed 15V over-voltage clamp, 0.4A to 5A prog. current limit, fast output OVP response
MP5036A	2.9	5.5	5	8	-	✓	TSOT23-6	Fixed 5.75V over-voltage clamp, 0.4A to 5A prog. current limit, fast output OVP response
MP5021B	4.8	16	10	Prog	Current Limit, Thermal Shutdown, Damaged MOSFET	✓	QFN-22 (3x5)	12V, 7m Ω $R_{DS(ON)}$ hot-swap protection device, current monitoring
MP5022A	8	16	15	Prog	Current Limit, Thermal Shutdown, Damaged MOSFET	✓	QFN-22 (3x5)	12V, 3m Ω $R_{DS(ON)}$ hot-swap protection device, current monitoring, controlled R_{ON} mode
MP5022C	4.5	16	15	36	Current Limit, Thermal Shutdown, Damaged MOSFET Detection	-	QFN-22 (3x5)	12V, 3m Ω $R_{DS(ON)}$ hot-swap protection device, current monitoring
MP5061	4.5	28	15	25	Current Limit, Thermal Shutdown, Under-Voltage, Damaged MOSFET	✓	QFN-22 (3x5)	Enable blanking time and 36V input transient set before V_{OUT} start-up, current monitoring
N MP5056	6	28	15	25	Fault Flag, Current Limit, Thermal Shutdown, Damaged MOSFET Detection	✓	QFN-22 (3x5)	Fast response (200ns) for short protection, external soft start
MP5921	4	16	50	120	GOK Fault Flag, Current Limit, Thermal Shutdown, Damaged MOSFET Detection	-	QFN-28 (4x5)	1m Ω $R_{DS(ON)}$ hot-swap protection device, current monitoring
N MP5099	10.8 / 4.5	13.2 / 5.5	4/3	8	-	-	TQFN-10 (2x3)	Dual-channel current-limit switch with current monitoring
MP5023	4	16	50	110	Current Limit, Thermal Shutdown, Damaged MOSFET Detection	✓	FCQFN-24 (4x5)	1.1m Ω hot-swap protection device, digital interface, current monitoring
MP5048	24	60	15	26	Current Limit, Thermal Shutdown, Damaged MOSFET Detection	-	QFN-30 (5x5)	7m Ω $R_{DS(ON)}$ hot-swap Intelli-Fuse solution, power-down control, current monitoring, prog. operation mode (latch-off/hiccup)
MP5991	4	16	50	100	Damaged MOSFET Detection, GOK Fault Flag, Input and Output Transient Protection, OTP, Output SCP, OVP, UVLO Protection	-	LGA-32 (5x5)	1m Ω $R_{DS(ON)}$ hot-swap Intelli-Fuse solution, current monitoring fault reporting output
MP5981	4	16	50	100	Damaged MOSFET Detection, OCP, OTP, Output SCP	-	LGA-32 (5x5)	1.1m Ω $R_{DS(ON)}$ hot-swap Intelli-Fuse solution, current monitoring, fault reporting output
MP5990	4	16	50	100	Damaged MOSFET Detection, OCP, OTP, SCP, OVP, UVP	-	LGA-45 (5x7)	1m Ω $R_{DS(ON)}$ fully integrated hot-swap protection device, digital interface, current monitoring fault reporting output
MP5048A	24	60	5	6.5	Fault Signal Output, Current Limit, Thermal Shutdown, Damaged MOSFET Detection	-	QFN-30 (5x5)	9m Ω $R_{DS(ON)}$ hot-swap Intelli-Fuse solution, current monitoring, fault signal output
N MP5026	2.7	16	20	50	FLT B Fault Flag, OCP, SCP, OVP, OTP, Damaged MOSFET Drives FLT B Low	-	LGA-26 (4x4)	16V, 20A, 2.8m Ω $R_{DS(ON)}$ hot-swap Intelli-Fuse solution

HOT-SWAP CONTROLLERS | USB/LOAD SWITCHES, USB PORT & USB PD CONTROLLERS, E-FUSES

Part Number	# of Channels	Interface	Package	Notes
MP5920	1	Digital Interface	TQFN-32 (4x4)	Parallel config., prog. via digital interface; built-in ADC for current, voltage, or temp reading, reports power and energy consumption

48V MODULES & COMPONENTS | USB/LOAD SWITCHES, USB PORT & USB PD CONTROLLERS, E-FUSES

48V Modules & Components

48V Modules

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (Max) (A)	V_{OUT} (Min) (V)	V_{OUT} (Max) (V)	Output Power (Max) (W)	Isolated/ Non-Isolated	Notes
MPC1100C-54-0002	40	60	60	4	6	300	Non-Isolated	Config. soft-start time, config. UVLO, OVP, UVP, OCP, OTP; parallel operation, protection mode
S MPC11057-54-0750-0100	40	60	139	4	6	750	Non-Isolated	Config. soft-start time, config. UVLO, OVP, UVP, OCP, OTP; parallel operation, protection mode
N MPC12106-54-0750-0220	40	60	60	10	15	800	Non-Isolated	Config. soft-start time, config. UVLO, OVP, UVP, OCP, OTP; parallel operation, protection mode

48V Modules & Components

Synchronous Rectifiers

Part Number	V_{DS} (V)	I_{DS} (A)	$R_{DS(ON)}$ (m Ω)	V_{PWM} (V)	V_{CC} (Min) (V)	V_{CC} (Max) (V)	Package	Notes
N MP8500	18	50	0.9	3.3	3	3.6	FCLGA-39L (5x5)	Dual-channel, Accu-Sense™ current sense, ZCD, junction temp sense

48V Modules & Components

GaN/MOSFET Drivers

Part Number	V_{CC} (Min) (V)	V_{CC} (Max) (V)	V_{PWM} (V)	# of Driver Channels	t_{RISE} (ns)	t_{FALL} (ns)	Pull-Down/Pull-Up Resistance (Ω)	Package	Notes
N MP8699B	4.5	5.5	3.3/5	2	10	10	0.2/1.3	WLCSP-12L (2x2)	Half-bridge, bootstrap technique for high-side driver voltages up to 100V

48V Modules & Components

Buck Converters

Part Number	V_{IN} (Min) (V)	V_{IN} (Max) (V)	I_{OUT} (Max) (A)	f_{SW} (Max) (kHz)	I_b (Typ) (mA)	V_{FB} (V)	PG	SS	Max Duty Cycle (%)	Package	Notes
S MP4588	8	100	0.8	380	0.015	1.025	No	External	N/A	QFN-14L (3x3)	High-efficiency, synchronous, integrated power MOSFETS

INTELLI-MODULES™ | USB/LOAD SWITCHES, USB PORT & USB PD CONTROLLERS, E-FUSES

Part Number	V _{in} (Min) (V)	V _{in} (Max) (V)	V _{out} (Min) (V)	V _{out} (Max) (V)	I _{out} (Max) (A)	f _{sw} (Min) (kHz)	f _{sw} (Max) (kHz)	Dimensions (WxL) (mm)	Dimensions (H) (mm)	Mounting Type	Notes
MPC22163-130	4	16	0.5	2	130	600	1500	9x10	7.65	Surface-Mount	Current sense, OCP, OTP, parallel operation, temp sense
N MPC22161-120	4	16	0.5	2	120	600	1500	9x10	7.65	Surface-Mount	Current sense, OCP, OTP, parallel operation, temp sense
N MPC22164-130	4	16	0.5	2	130	400	1500	9x10	9.65	Surface-Mount	Current sense, OCP, OTP, parallel operation, temp sense
N MPC22167-130	4	16	0.5	2	130	500	1500	9x10	7.65	Surface-Mount	Current sense, OCP, OTP, parallel operation, temp sense
N MPC22165-170	4	16	0.5	2	170	500	1500	9x10	9.65	Surface-Mount	Current sense, OCP, OTP, parallel operation, temp sense
N MPC22168-170	4	16	0.5	2	170	500	1500	9x10	7.65	Surface-Mount	Current sense, OCP, OTP, parallel operation, temp sense
S MPC22166 -A-130	4	16	0.5	2	130	600	1500	9x10	3.9	Surface-Mount	Quiet Switcher™ technology, current sense, OCP, OTP, parallel operation, temp sense
S MPC22166 -B-130	4	16	0.4	2	130	500	1500	9x10	3.9	Surface-Mount	Quiet Switcher™ technology, current sense, OCP, OTP, parallel operation, temp sense
N MPC22157-130	4	16	0.5	2	130	500	1500	9x10	7.7	Surface-Mount	Quiet Switcher™ technology, current sense, OCP, OTP, parallel operation, temp sense

HIGH-VOLTAGE ANALOG SWITCHES | ULTRASOUND MUX

Serial Shift Register Control

Part Number	# of Channels	V _{DD} Bias (V)	V _{SW} (Max) (V)	R _{SWITCH} (Ω)	Output Bleed Resistor	Switch Configuration	Bandwidth (MHz)	Package	Notes
MP4816A	16	9.5	±90	12.5	✓	SPST, 1:1	80	TQFP-48 (7x7)	16-bit
MP4816	16	9.5	±90	12.5	-	SPST, 1:1	80	TQFP-48 (7x7)	16-bit
N MP4832A	32	12	±90	14	✓	SPST, 1:1	80	QFN-72 (10x10)	32-bit with bank switching
MP4833A	32	9.5	±90	12.5	✓	SPST, 1:1	80	BGA-80 (7x7)	32-bit
MP4835A	32	5	±100	14	✓	SPST, 1:1	80	QFN-72 (10x10)	32-bit with bank switching
MP4864A	64	12	±90	14	✓	SPST, 1:1	80	BGA-144 (10x10)	64-bit
MP4865A	64	5	±90	14	✓	SPST, 1:1	80	BGA-144 (10x10)	64-bit
S MP4895A	96	5	±90	14	✓	SPST, 1:3	80	BGA-144 (10x10)	96-bit

SEMI-SHIELDED INDUCTORS | INDUCTORS

Part Number	L (µH)	R _{DC} (Typ) (mΩ)	I _r (40K Rise) (A)	I _{SAT} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
MPL-SE2512-R47	0.47	20	4.5	6.5	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
MPL-SE2512-R68	0.68	28	3.9	5	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
MPL-SE2512-1R0	1	35	3.4	4.2	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
MPL-SE2512-1R5	1.5	50	2.9	3.2	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
MPL-SE2512-2R2	2.2	72	2.5	2.7	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
MPL-SE2512-3R3	3.3	90	2.1	2.4	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
MPL-SE2512-4R7	4.7	165	1.6	1.9	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
MPL-SE2512-6R8	6.8	305	1.2	1.6	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
MPL-SE2512-100	10	410	1.1	1.3	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
MPL-SE2512-150	15	620	0.85	0.9	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
MPL-SE2512-220	22	885	0.7	0.8	125	2512	2.5	2	1.2	SMD	Low profile, external epoxy resin for better magnetic characteristics
MPL-SE4030-R68	0.68	10	6	7.5	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-1R0	1	14	5.5	7	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-2R2	2.2	30	3.7	5.5	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-3R3	3.3	40	3.3	4.1	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-4R7	4.7	62	2.6	3.4	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-6R8	6.8	90	2.2	2.9	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-100	10	100	2	2.2	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-150	15	185	1.4	1.8	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-220	22	220	1.3	1.5	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-330	33	330	1.1	1.2	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE4030-470	47	480	0.9	1	125	4030	4	4	3	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-R47	0.47	7.3	8	16	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-1R0	1	9.4	7.6	10.5	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-1R5	1.5	14	6.2	9.3	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-2R2	2.2	16	5.4	7.9	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-3R3	3.3	22	5.2	6.4	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-4R7	4.7	33	4.3	5	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-6R8	6.8	45	3.5	4.6	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-100	10	56	3.2	3.6	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-150	15	83	2.5	2.9	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE5040-220	22	124	2.1	2.4	125	5040	4.9	4.9	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-1R5	1.5	11.5	6.8	8.9	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-2R2	2.2	14.5	6.3	7.2	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-3R3	3.3	19.5	5.6	5.6	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-4R7	4.7	23	5.2	5	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics

SEMI-SHIELDED INDUCTORS | INDUCTORS

Part Number	L (µH)	R _{DC} (Typ) (mΩ)	I _R (40K Rise) (A)	I _{SAT} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
MPL-SE6040-6R8	6.8	33	4.4	4.1	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-8R2	8.2	39	4	3.6	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-100	10	41	3.8	3.4	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-150	15	70	2.8	2.7	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics
MPL-SE6040-220	22	97	2.35	2.25	125	6040	6	6	4	SMD	External epoxy resin for better magnetic characteristics

MOLDED INDUCTORS | INDUCTORS

Part Number	L (µH)	R _{DC} (Typ) (mΩ)	I _R (40K Rise) (A)	I _{SAT} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
MPL-AT2010-R47	0.47	27	4.5	5.7	125	2010	2	1.6	1	SMD	Low profile
MPL-AT2010-R68	0.68	41	3.6	4.9	125	2010	2	1.6	1	SMD	Low profile
MPL-AT2010-1R0	1	50	3.3	4.2	125	2010	2	1.6	1	SMD	Low profile
MPL-AT2010-1R5	1.5	85	2.4	3.2	125	2010	2	1.6	1	SMD	Low profile
MPL-AT2010-2R2	2.2	125	2	2.6	125	2010	2	1.6	1	SMD	Low profile
MPL-AT2010-4R7	4.7	215	1.5	1.9	125	2010	2	1.6	1	SMD	Low profile
MPL-AT2512-R33	0.33	13	6.4	7.8	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2512-R47	0.47	14	5.8	6.4	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2512-R68	0.68	23	4.8	6	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2512-1R0	1	33	4.1	5.2	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2512-1R5	1.5	43	3.4	4.2	125	2512	2.5	2	1.2	SMD	Low profile
N MPL-AT2512-2R2	2.2	68	2.8	3.4	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2512-3R3	3.3	116	2.2	3	125	2512	2.5	2	1.2	SMD	Low profile
N MPL-AT2512-4R7	4.7	170	1.8	2.4	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2512-6R8	6.8	280	1.4	2.2	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AT2512-100	10	355	1.2	1.7	125	2512	2.5	2	1.2	SMD	Low profile
MPL-AY3020-R47	0.47	19.5	6.3	9	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-R68	0.68	26	5.15	8.6	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-R82	0.82	28	4.7	8	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-1R0	1	30	4.3	6.2	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-1R5	1.5	35	3.4	5.9	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-2R2	2.2	64	3	5.3	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-3R3	3.3	121	2.5	3.7	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-4R7	4.7	173	2	3.1	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-5R6	5.6	209	1.8	2.8	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-6R8	6.8	250	1.65	2.6	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-8R2	8.2	345	1.4	1.95	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY3020-100	10	370	1.3	1.75	125	3020	3.5	3.2	1.8	SMD	-
MPL-AY4020-5R6	5.6	97	2.45	2.6	155	4020	4.45	4.1	1.8	SMD	High-temperature capabilities
MPL-AY4020-6R8	6.8	129	2.2	2.4	155	4020	4.45	4.1	1.8	SMD	High-temperature capabilities

Part Number	L (µH)	R _{DC} (Typ) (mΩ)	I _R (40K Rise) (A)	I _{SAT} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
MPL-AY4020-8R2	8.2	136	2.1	2.1	155	4020	4.45	4.1	1.8	SMD	High-temperature capabilities
MPL-AY4020-100	10	163	1.9	2	155	4020	4.45	4.1	1.8	SMD	High-temperature capabilities
MPL-AY1050-R47	0.47	1.25	25	41	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-R68	0.68	1.75	23	36	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-1R0	1	2.6	19	33	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-1R5	1.5	3.4	17	26.5	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-2R2	2.2	4.9	15	19.5	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-3R3	3.3	8	12.5	17	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-4R7	4.7	9.5	11.5	15	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-5R6	5.6	13	9.8	14	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-6R8	6.8	15	9	13	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1050-100	10	19	7.8	12	155	1050	11	10	4.8	SMD	High-temperature capabilities
MPL-AY1265-R47	0.47	0.89	33	64	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-R56	0.56	1.1	31	58	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-R68	0.68	1.25	29	51	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-R82	0.82	1.3	27	46	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-1R0	1	1.5	25.5	43	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-1R2	1.2	1.8	24	37	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-1R5	1.5	2.3	22	34	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-1R8	1.8	3.3	20	29	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-2R2	2.2	3.7	17	26.5	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-3R3	3.3	5.5	16	25	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-4R7	4.7	7	14	23	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-5R6	5.6	8.6	13	20	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-6R8	6.8	9.9	12	19.5	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-8R2	8.2	12.5	11.5	18	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-100	10	13.3	10.7	16	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-150	15	21.8	8.5	12	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AY1265-220	22	31.4	7	9	155	1265	13.5	12.6	6.2	SMD	High-temperature capabilities
MPL-AL4020-R47	0.47	6.2	9.2	12.5	155	4020	4.1	4.1	1.9	SMD	High-temperature capabilities, low resistance
MPL-AL4020-R68	0.68	7.5	8.7	11	155	4020	4.1	4.1	1.9	SMD	High-temperature capabilities, low resistance
MPL-AL4020-R82	0.82	9	8.4	9.5	155	4020	4.1	4.1	1.9	SMD	High-temperature capabilities, low resistance
MPL-AL4020-1R0	1	10.1	7.9	8.6	155	4020	4.1	4.1	1.9	SMD	High-temperature capabilities, low resistance
MPL-AL4020-1R2	1.2	12.2	7.4	7.5	155	4020	4.1	4.1	1.9	SMD	High-temperature capabilities, low resistance
MPL-AL4020-1R5	1.5	14.5	6.4	7.1	155	4020	4.1	4.1	1.9	SMD	High-temperature capabilities, low resistance
MPL-AL4020-2R2	2.2	21.5	5.5	6.2	155	4020	4.1	4.1	1.9	SMD	High-temperature capabilities, low resistance
MPL-AL4020-3R3	3.3	34.5	4.4	5.2	155	4020	4.1	4.1	1.9	SMD	High-temperature capabilities, low resistance
MPL-AL4020-4R7	4.7	52.2	3.65	4.2	155	4020	4.1	4.1	1.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-R47	0.47	3.78	13.6	26.5	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-R56	0.56	3.92	13.2	22	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-R82	0.82	5	12.8	18	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-1R0	1	6.5	11.2	16	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-1R2	1.2	8	10	14	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance

MOLDED INDUCTORS | INDUCTORS

Part Number	L (µH)	R _{DC} (Typ) (mΩ)	I _R (40K Rise) (A)	I _{SAT} (30% Drop) (A)	Operating Temp (Max) (°C)	Size	A Dimension (L) (mm)	B Dimension (W) (mm)	C Dimension (H) (mm)	Construction	Notes
MPL-AL5030-1R5	1.5	9.7	9	12.5	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-1R8	1.8	10.5	8.8	12	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-2R2	2.2	12.3	8.2	11	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-3R3	3.3	21	6	10	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5030-4R7	4.7	33	5.3	8	155	5030	5.5	5.3	2.9	SMD	High-temperature capabilities, low resistance
MPL-AL5050-5R6	5.6	20	6.8	8	155	5050	5.5	5.3	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL5050-6R8	6.8	25	6.1	7.6	155	5050	5.5	5.3	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL5050-8R2	8.2	28	5.8	7.2	155	5050	5.5	5.3	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL5050-100	10	37	4.8	5.5	155	5050	5.5	5.3	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-R82	0.82	3.9	16.9	24	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-1R0	1	4.3	16.2	21	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-1R2	1.2	5.3	14.6	20	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-1R5	1.5	6	13.3	18	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-2R2	2.2	8.3	12	15	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-3R3	3.3	11.7	10.1	12	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-4R7	4.7	16.5	7.5	11	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6050-5R6	5.6	19	7	10	155	6050	6.6	6.4	4.8	SMD	High-temperature capabilities, low resistance
MPL-AL6060-4R7	4.7	12	10	9	155	6060	6.6	6.4	5.8	SMD	High-temperature capabilities, low resistance
MPL-AL6060-5R6	5.6	13	9.4	8.6	155	6060	6.6	6.4	5.8	SMD	High-temperature capabilities, low resistance
MPL-AL6060-6R8	6.8	16	8.5	8	155	6060	6.6	6.4	5.8	SMD	High-temperature capabilities, low resistance
MPL-AL6060-8R2	8.2	19	8	7	155	6060	6.6	6.4	5.8	SMD	High-temperature capabilities, low resistance
MPL-AL6060-100	10	24	6.9	6.6	155	6060	6.6	6.4	5.8	SMD	High-temperature capabilities, low resistance
MPL-AL6060-150	15	35	5.8	5.5	155	6060	6.6	6.4	5.8	SMD	High-temperature capabilities, low resistance

PRECISION ADCs | ANALOG-TO-DIGITAL CONVERTERS

Part Number	Resolution (Bits)	Sample Rate (Max) (Msps)	# of Channels	SNR (dB)	INL (LSB)	Architecture	Input Type	Data Interface	Operating Temperature (°C)	Package	Notes
S MDC97476	12	1	1	71	0.5	SAR	Single-Ended	SPI	-40 to +85	SOT-23	V _{REF} = V _{DD}
S MDC97477	10	1	1	61	0.3	SAR	Single-Ended	SPI	-40 to +85	SOT-23	V _{REF} = V _{DD}
S MDC97478	8	1	1	50	0.15	SAR	Single-Ended	SPI	-40 to +85	SOT-23	V _{REF} = V _{DD}

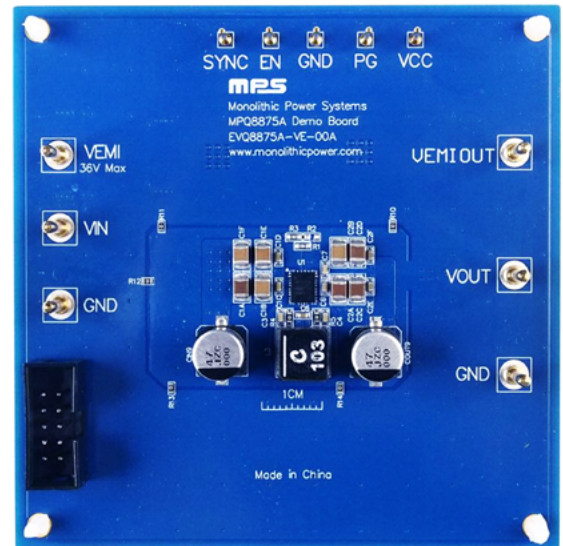
CURRENT-INPUT DELTA-SIGMA AFES | ANALOG-TO-DIGITAL CONVERTERS

Part Number	Resolution (Bits)	Sample Rate (Max) (ksps)	# of Channels	Input Range (µC)	Noise (µgpm of FS, RMS)	AV _{DD} (V)	V _{DD} (V)	Interface	Operating Temperature (°C)	Package	Notes
N MDC91127	16	6	128	4 to 25	44	5	1.8	Dual Serial	-40 to +85	BGA-440 (10x10)	32 x 128 sample data buffer
N MDC91128	20	6	128	4 to 25	20	5	1.8	Dual Serial	-40 to +85	BGA-440 (10x10)	32 x 128 sample data buffer
S MDC91256	20	6	256	4 to 25	20	5	1.8	Quad Serial	-40 to +85	BGA-783 (10x10)	32 x 256 sample data buffer

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PART NUMBERING NOMENCLATURE

EXAMPLE

MP1234GQV-Z

①

②

③

④

⑤

① MP

Prefix

MP###

MP####

MP#####

MPQ####

HF####

NB###

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② 1234

Part Number

③ G

Temperature Grade (T_A)

C 0°C to +70°C

D -40°C to +85°C

E -20°C to +85°C

G -40°C to +125°C

H -40°C to +125°C

K -55°C to +125°C

-----> Temperature Internal to Datasheet; (T_J) Standard

④ QV

Package (mm) and Features

C WLCSP

D QFN (2x3)

E SC70

F TSSOP w/ Exposed Pad

FP QFP

G QFN (2x2)

H MSOP w/ Exposed Pad

J TSOT23 (0.9 Height)

K MSOP

L QFN (3x4)

M TSSOP

N SOIC w/ Exposed Pad

P PDIP (300 Mil)

Q QFN (3x3)

QD QFN (1x1.5)

QF QFN (1.2x1.6)

QG QFN (1.4x1.8)

QH QFN (1.5x2)

QJ QFN (5x6)

QK QFN (6x6)

QM QFN (6x7)

QN QFN (7x7)

QP QFN (7x8)

QQ QFN (8x8)

QV QFN (3x5)

QW QFN (4x6)

QX QFN (6x10)

QY QFN (5x8)

R QFN (4x4)

S SOIC

SD SOD123

T SOT23 (1.1 Height)

U QFN (5x5)

V QFN (4x5)

W SOIC-WB w/ Exposed Pad

X SOIC WB

XN Unsorted Wafer

Y TO220

ZF TO263

C C-Spec

E Enhanced

R Reserve Lead Bend or Top Exposed Pad

S Customer Specific

T Thin Package

U Ultra-Thin Package

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⑤ -Z

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