

MPL Molded Power Inductors



	MPL-AT2010	MPL-AT2512	MPL-AL4020	MPL-AL5030	MPL-AL5050	MPL-AL6050	MPL-AL6060	MPL-AY3020	MPL-AY4020	MPL-AY1050	MPL-AY1265																										
Base (mm)	2x1.6	2.5x2	4.1x4.1	5.5x5.3	5.5x5.3	6.6x6.4	6.6x6.4	3.5x3.2	4.45x4.1	11x10	13.5x12.6	Base (mm)																									
Height (mm)	1	1.2	1.9	2.9	4.8	4.8	5.8	1.8	1.8	4.8	6.2	Height (mm)																									
	R_{DC} (mΩ)	$I_{R@40k}$ (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	$I_{R@40k}$ (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	$I_{R@40k}$ (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	$I_{R@40k}$ (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	$I_{R@40k}$ (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	$I_{R@40k}$ (A)	$I_{SAT@30\%}$ (A)																			
0.33μH				13	6.4	7.8													0.33μH																		
0.47μH	27	4.5	5.7	14	5.8	6.4	6.2	9.2	12.5	3.78	13.6	26.5				19.5	6.3	9	1.25	25	41	0.89	33	64	0.47μH												
0.56μH							3.92	13.2	22													1.1	31	58	0.56μH												
0.68μH	41	3.6	4.9	23	4.8	6	7.5	8.7	11							26	5.15	8.6	1.75	23	36	1.25	29	51	0.68μH												
0.82μH							9	8.4	9.5	5	12.8	18				3.9	16.9	24				1.3	27	46	0.82μH												
1.0μH	50	3.3	4.2	33	4.1	5.2	10.1	7.9	8.6	6.5	11.2	16				4.3	16.2	21				30	4.3	6.2	2.6	19	33	1.5	25.5	43	1.0μH						
1.2μH							12.2	7.4	7.5	8	10	14				5.3	14.6	20									1.8	24	37	1.2μH							
1.5μH	85	2.4	3.2	43	3.4	4.2	14.5	6.4	7.1	9.7	9	12.5				6	13.3	18				35	3.4	5.9	3.4	17	26.5	2.3	22	34	1.5μH						
1.8μH							10.5	8.8	12																		3.3	20	29	1.8μH							
2.2μH	125	2	2.6	68	2.8	3.4	21.5	5.5	6.2	12.3	8.2	11				8.3	12	15				64	3	5.3	4.9	15	19.5	3.7	17	26.5	2.2μH						
3.3μH				116	2.2	3	34.5	4.4	5.2	21	6	10				11.7	10.1	12				121	2.5	3.7	8	12.5	17	5.5	16	25	3.3μH						
4.7μH	215	1.5	1.9	170	1.8	2.4	52.2	3.65	4.2	33	5.3	8				16.5	7.5	11				12	10	9	173	2	3.1	9.5	11.5	15	7	14	23	4.7μH			
5.6μH										20	6.8	8				19	7	10				13	9.4	8.6	209	1.8	2.8	97	2.45	2.6	13	9.8	14	8.6	13	20	5.6μH
6.8μH				280	1.4	2.2				25	6.1	7.6				16	8.5	8				250	1.65	2.6	129	2.2	2.4	15	9	13	9.9	12	19.5	6.8μH			
8.2μH										28	5.8	7.2				19	8	7				345	1.4	1.95	136	2.1	2.1			12.5	11.5	18	8.2μH				
10μH				355	1.2	1.7				37	4.8	5.5				24	6.9	6.6				370	1.3	1.75	163	1.9	2	19	7.8	12	13.3	10.7	16	10μH			
15μH																35	5.8	5.5											21.8	8.5	12	15μH					
22μH																													31.4	7	9	22μH					

Easy Product Selection MPL-XX XXXX-XXX

XX MPS Inductor Series
(AT / AL / AY / SE)

XXXX Size Code
(2010 / 2512 / 3020 / ...)

XXX Inductance Code
(R47 = 0.47μH / 4R7 = 4.7μH / 470 = 47μH ...)

MPL Semi-Shielded Power Inductors



	MPL-SE2512			MPL-SE4030			MPL-SE5040			MPL-SE6040		
Base (mm)	2.5x2			4x4			4.9x4.9			6x6		
Height (mm)	1.2			3			4			4		
	R _{DC} (mΩ)	I _{RIG40k} (A)	I _{SAT@30%} (A)	R _{DC} (mΩ)	I _{RIG40k} (A)	I _{SAT@30%} (A)	R _{DC} (mΩ)	I _{RIG40k} (A)	I _{SAT@30%} (A)	R _{DC} (mΩ)	I _{RIG40k} (A)	I _{SAT@30%} (A)
0.47μH	20	4.5	6.5				7.3	8	16			
0.68μH	28	3.9	5	10	6	7.5						
1.0μH	35	3.4	4.2	14	5.5	7	9.4	7.6	10.5			
1.5μH	50	2.9	3.2				14	6.2	9.3	11.5	6.8	8.9
2.2μH	72	2.5	2.7	30	3.7	5.5	16	5.4	7.9	14.5	6.3	7.2
3.3μH	90	2.1	2.4	40	3.3	4.1	22	5.2	6.4	19.5	5.6	5.6
4.7μH	165	1.6	1.9	62	2.6	3.4	33	4.3	5	23	5.2	5
6.8μH	305	1.2	1.6	90	2.2	2.9	45	3.5	4.6	33	4.4	4.1
8.2μH										39	4	3.6
10μH	410	1.1	1.3	100	2	2.2	56	3.2	3.6	41	3.8	3.4
15μH	620	0.85	0.9	185	1.4	1.8	83	2.5	2.9	70	2.8	2.7
22μH	885	0.7	0.8	220	1.3	1.5	124	2.1	2.4	97	2.35	2.25
33μH				330	1.1	1.2						
47μH				480	0.9	1						

Power Inductor Sample Kits

Part Number	Inductance [L]	Inductor Series / Sizes
EVSX-001	12	MPL-AT / 2010 2512
EVSX-002	16	MPL-AY / 3020 4020
EVSX-003	18	MPL-AY / 1050 1265
EVSX-004	24	MPL-AL / 4020 5030 5050 6050 6060
EVSX-005	24	MPL-SE / 4030 5040 6040
EVSX-006	11	MPL-SE / 2512



Contact MPS Sales in your area for pricing and additional information.

Easy Product Selection MPL-XX XXXX-XXX

XX MPS Inductor Series
(AT / AL / AY / SE)

XXXX Size Code
(2010 / 2512 / 3020 / ...)

XXX Inductance Code
(R47 = 0.47μH / 4R7 = 4.7μH / 470 = 47μH ...)

MPS Power Inductor Family

Optimized Performance with MPS ICs

The new surface-mounted power inductors from Monolithic Power Systems are designed for applications ranging from power supplies to power converters. The molded and semi-shielded series inductors comprise inductance ranges from 0.33μH to 47μH, and saturation current ranges from 0.8A to 64A.

- ✓ Designed for optimal performance with MPS ICs to provide an easy, complete power solution
- ✓ Highly efficient molded and semi-shielded options, with operating temperatures up to 155°C
- ✓ Include a wide range of specifications and sizes that cover use cases across our entire portfolio of ICs

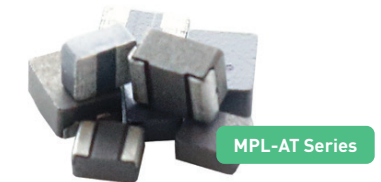
Semi-Shielded Series (MPL-SE)

The MPL-SE semi-shielded power inductors are shielded by an external magnetic epoxy resin for better magnetic characteristics. Their design offers a lower DCR and higher current capabilities.



Molded Series (MPL-AT / AY / AL)

This series includes molded, magnetic-shielded power inductors that offer soft saturation due to their molded design, delivering a stable high-temperature behavior.

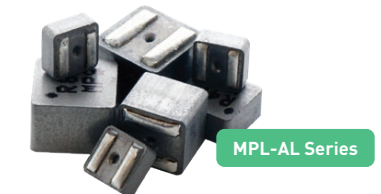


Their molded construction decreases the audible noise generated from alternating currents and pulse wave frequencies.



The MPL-AT Series offers a very low profile where height is a design restriction. This series also offers low DCR/ACR and the ability to handle high currents.

The MPL-AY Series offers low DCR/ACR and the ability to handle high currents.



The MPL-AL Series offers low DCR/ACR and a flat-wire construction, which provides even higher current ratings than round-wire molded inductors.

For more information: visit MonolithicPower.com or email PowerMagnetics@monolithicpower.com

