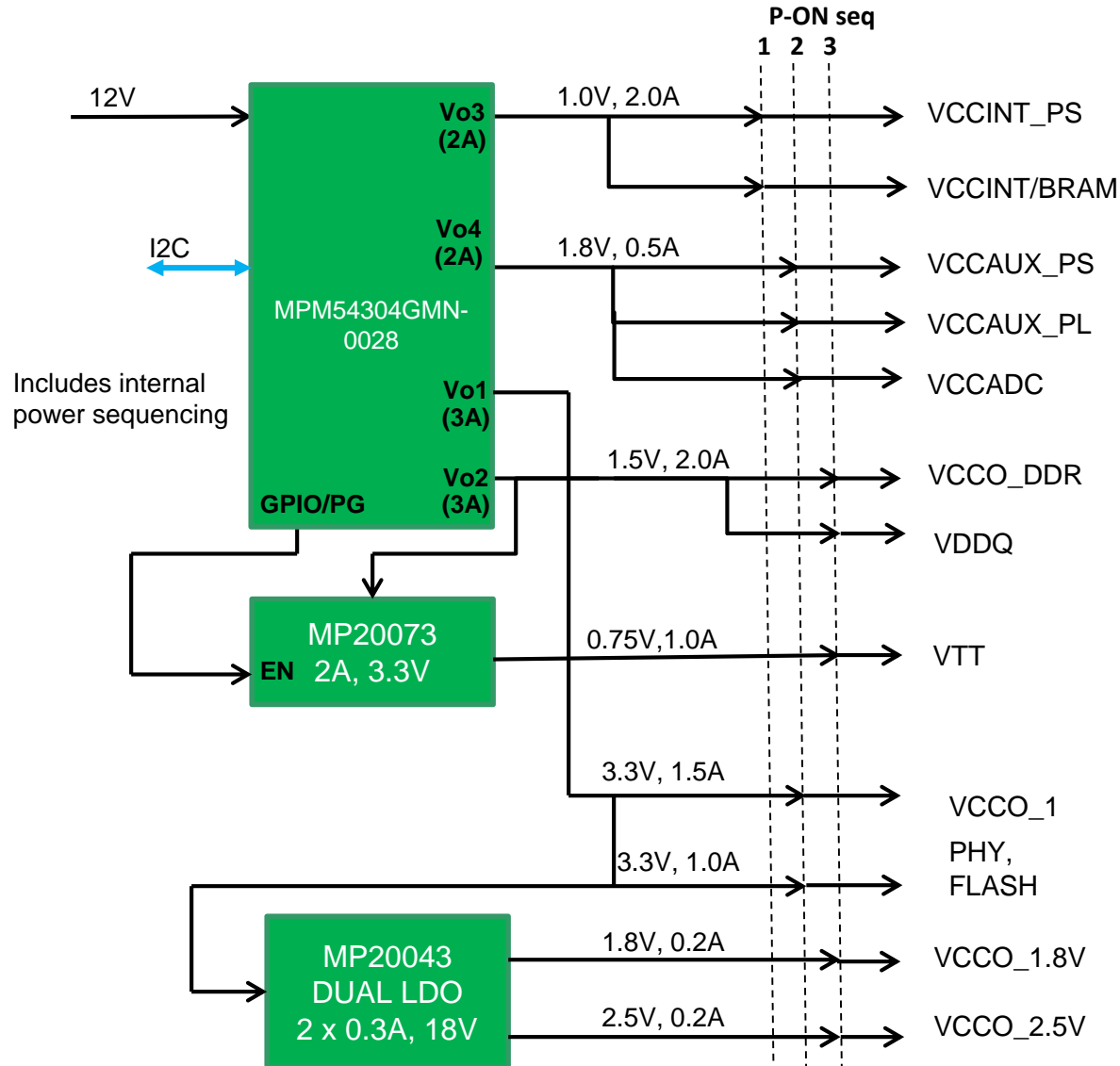
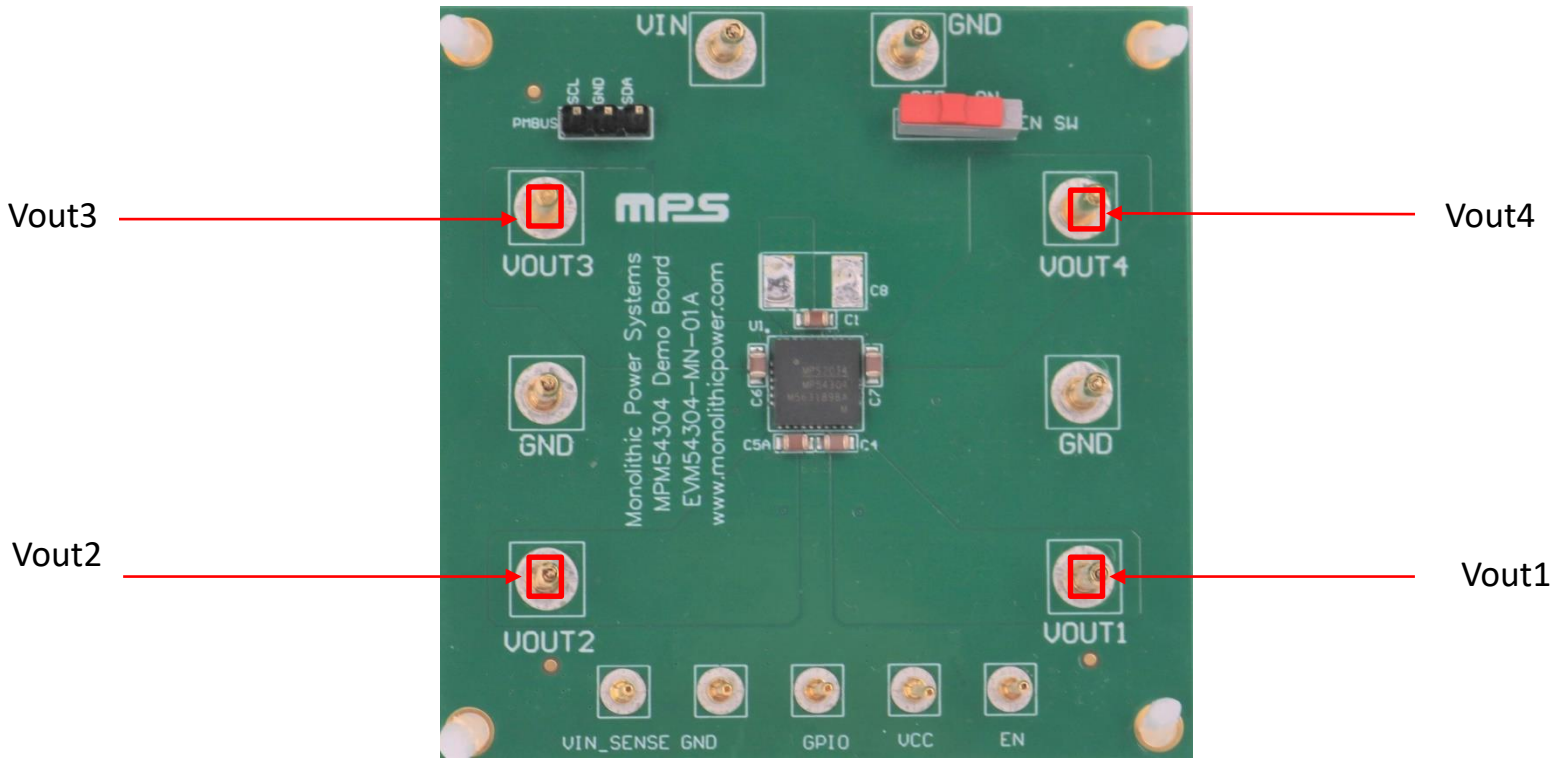
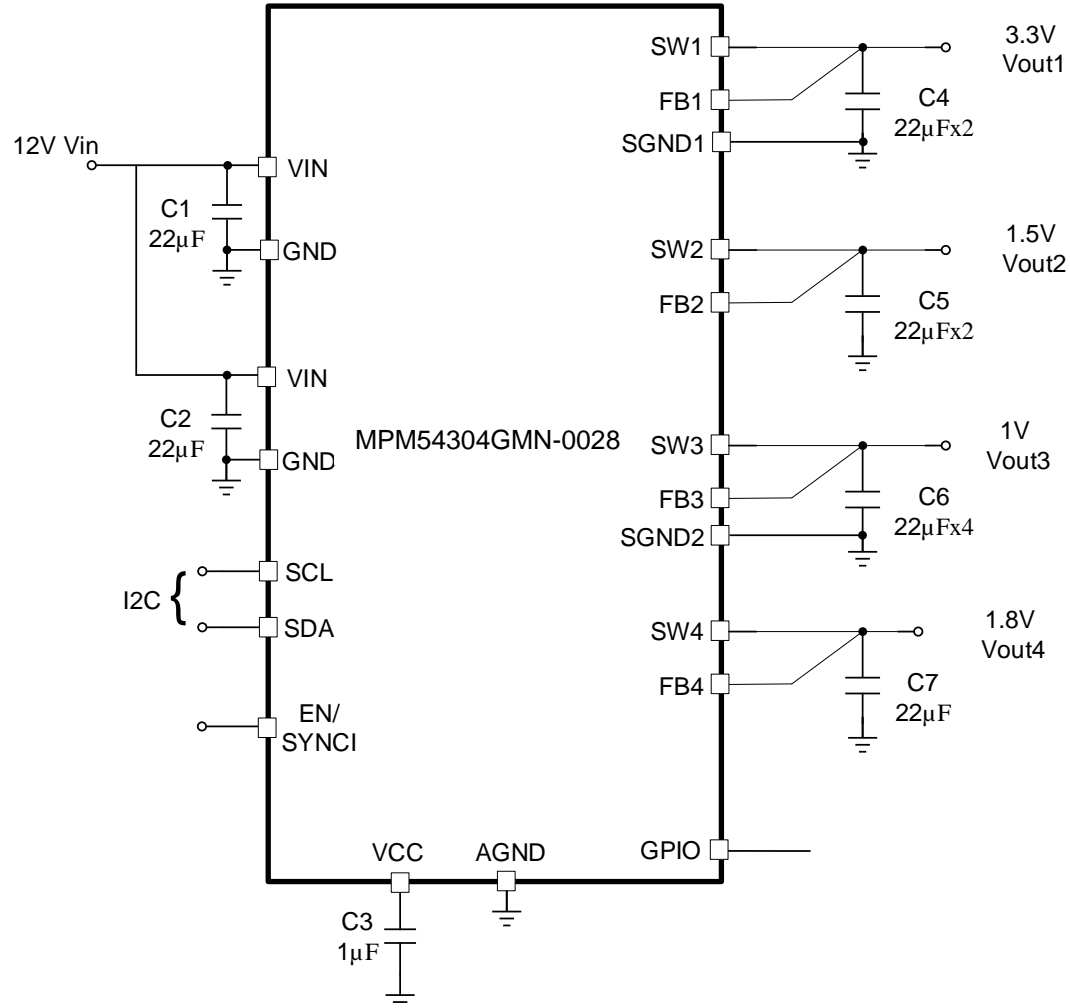




**PMIC Module solution for Zynq7000**  
**Test Report**  
11/12/2020







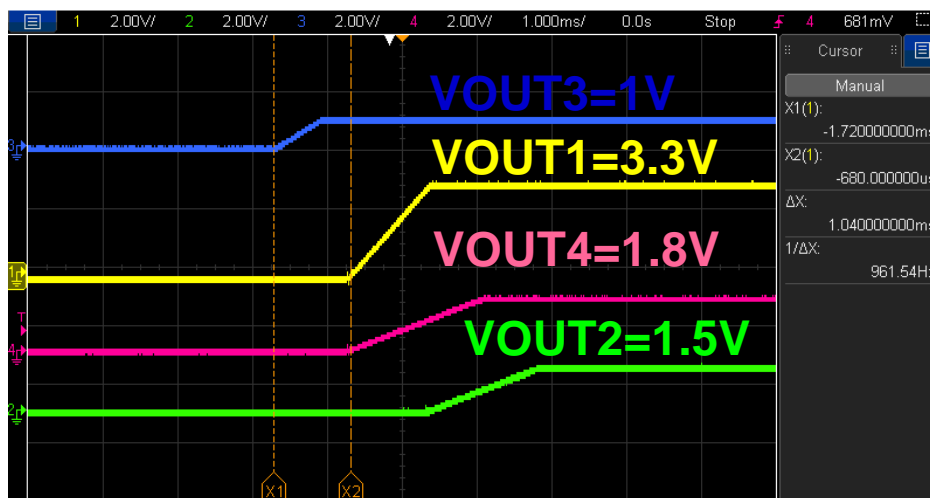
1. Power Rails and requirements
2. DC Voltage measurements
3. Power up sequence
4. VCCINT, VCCBRAM
5. VCCAUX, VCCADC
6. VCCIO
7. VCCDDR

	Rail Name	Voltage (V)	Power up Seq	Ripple	Load (A)	Load Step 25% → 75% → 25%	Slew Rate
Vout-3	VCCINT, VCCBRAM	1V	1	+/-3%	1.5A	0.5A→1.5A→0.5A	4A/uS
Vout-4	VCCAUX, VCCADC	1.8V	2	+/-3%	0.5A	0.25A→0.75A→0.25A	4A/uS
Vout-1	VCCIO	3.3V	2	+/-5%	1.5A	1.0A→2.0A→1.0A	4A/uS
Vout-2	VCCDDR	1.5V	3	+/-5%	2A	1.0A→2.0A→1.0A	4A/uS



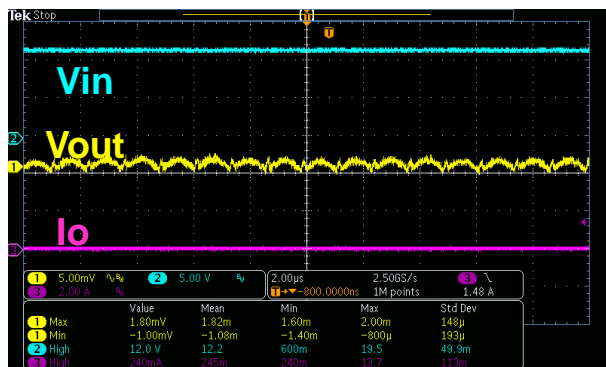
## MPM54304 - DC Voltage Accuracy

Power Rail	Design Target (V)	Vout No Load (V)	Vout Typ Load (V)	Vout Max Load (V)	Max Error (%)
Vout3 – VCCINT, VCCBRAM	1.0V Typ 1.5A, Max 2.0A	1.0017	1.00154	1.00148	0.22%
Vout4 - VCCAUX, VCCADC	1.8V Typ 0.5A, Max 1A	1.80698	1.80727	1.80807	0.06%
Vout1 - VCCIO	3.3V Typ 1.5A, Max 2.5A	3.28553	3.28394	3.2789	0.2%
Vout2 - VCCDDR	1.5V Typ 2A, Max 3A	1.517	1.5162	1.51538	0.43%

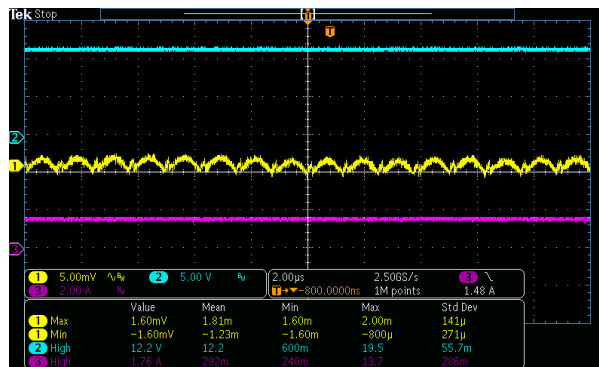




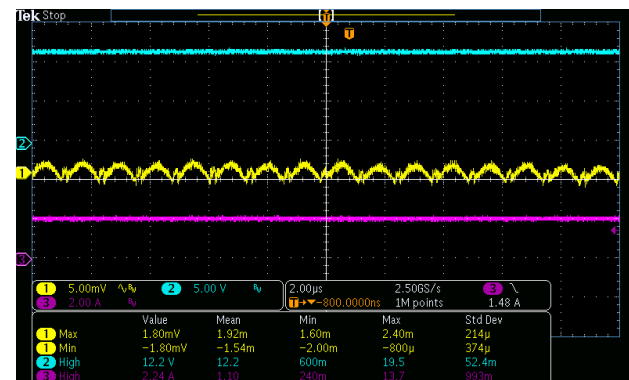
## STANDBY



## Typical Load



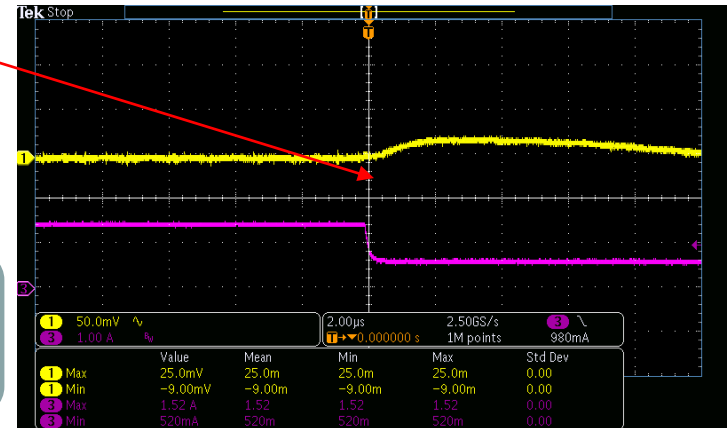
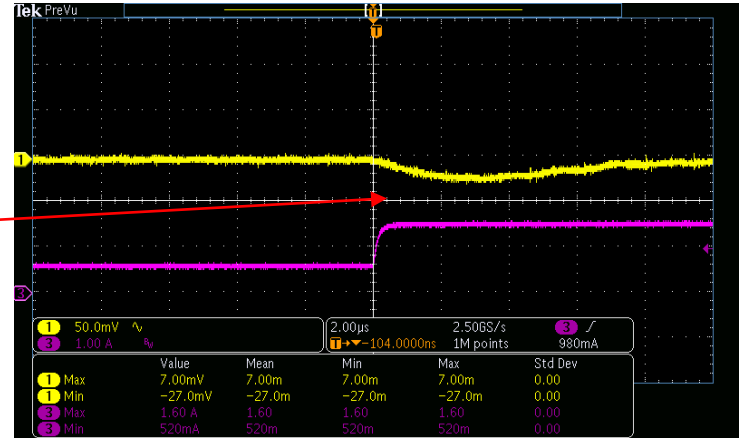
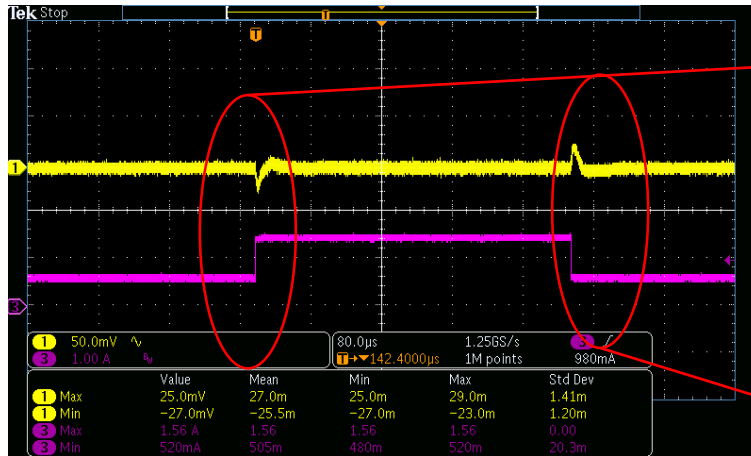
## Max Load



- ❑ 2.8 mV peak-peak ripple at Standby
- ❑ 3.2 mV peak-peak ripple at Typical load
- ❑ 3.6 mV peak-peak ripple at Max load

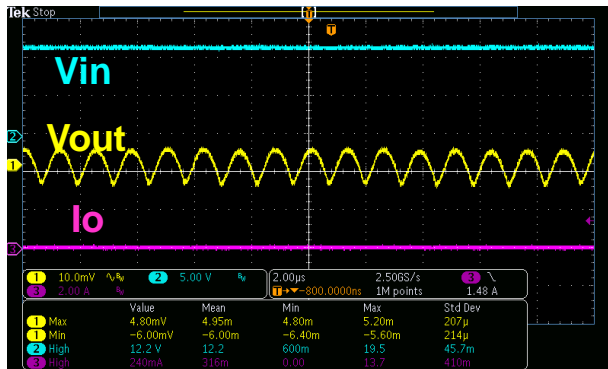
Step Load 0.5→1.5A→0.5A, 4A/us

Vout  
Io

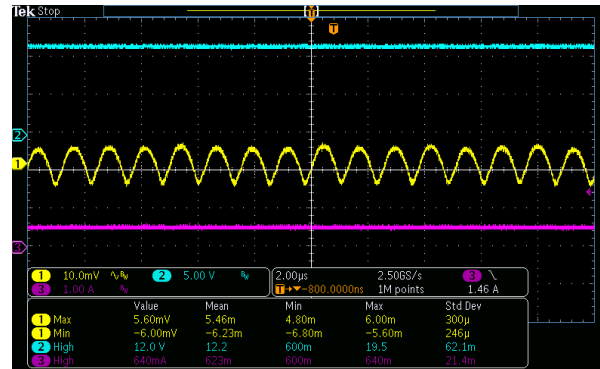


Vout ripple -2.7% (-27mV) to +2.5% (25mV) with load transient

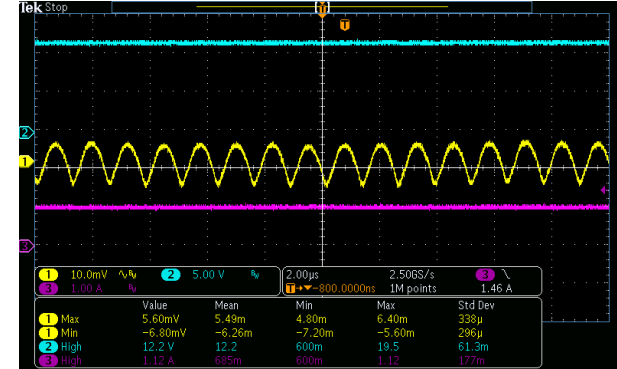
## STANDBY



## Typical Load

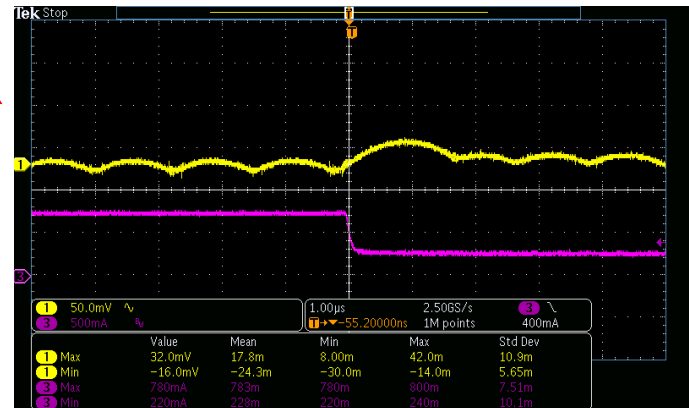
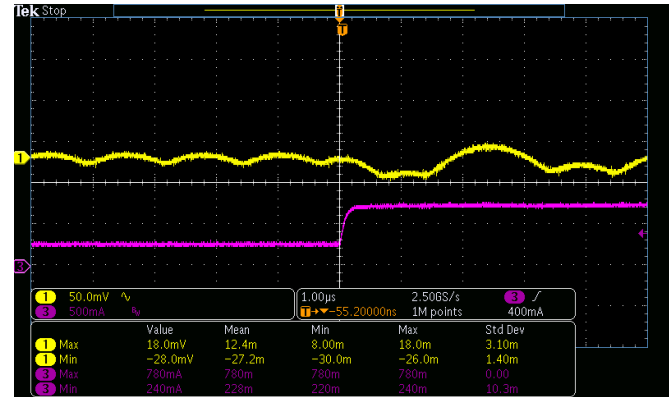
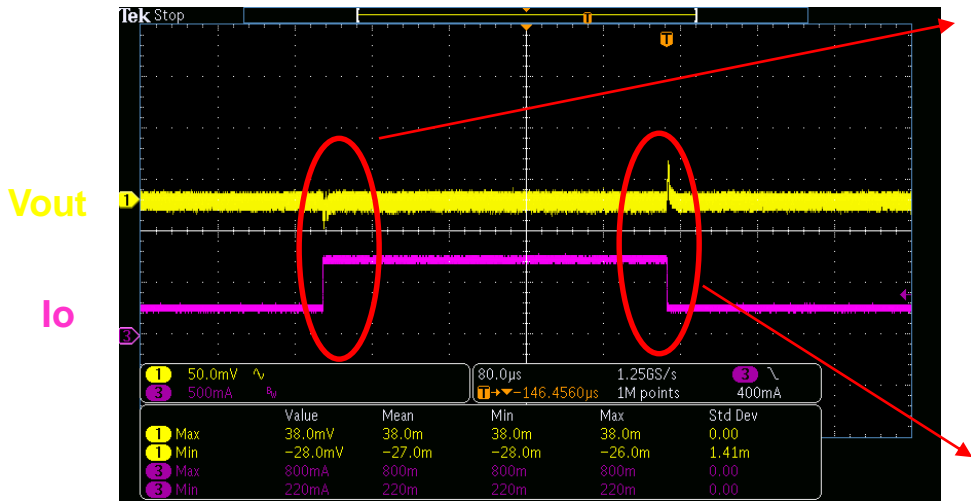


## Max Load



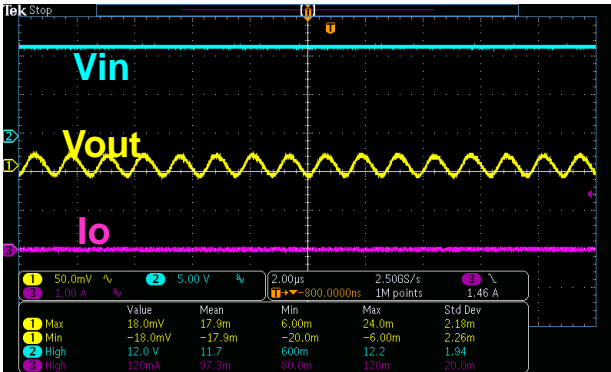
- 10.8mV peak-peak ripple at Standby
- 11.6mV peak-peak ripple at Typical load
- 12.4 mV peak-peak ripple at Max load

Step Load 0.25A → 0.75A → 0.25A, 4A/us

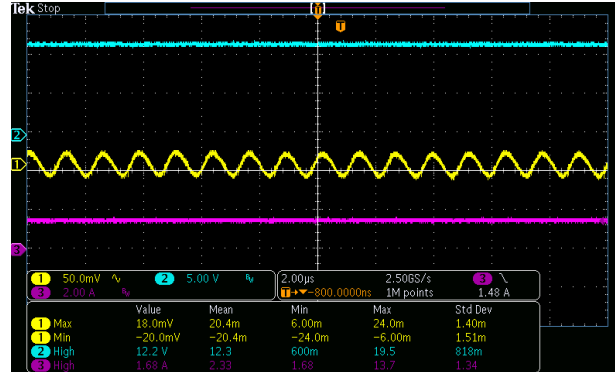


Vout ripple -1.55% (-28mV) to +2.1% (38mV) with load transient

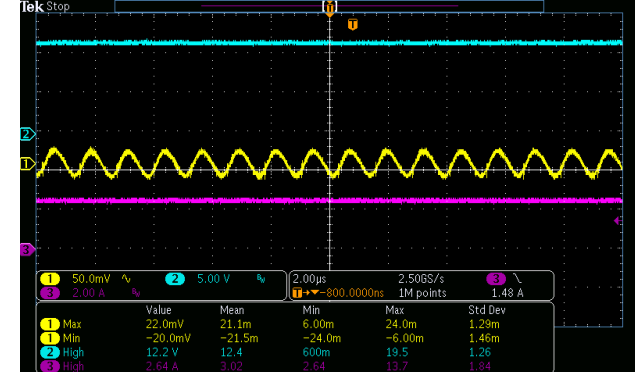
## STANDBY



## Typical Load

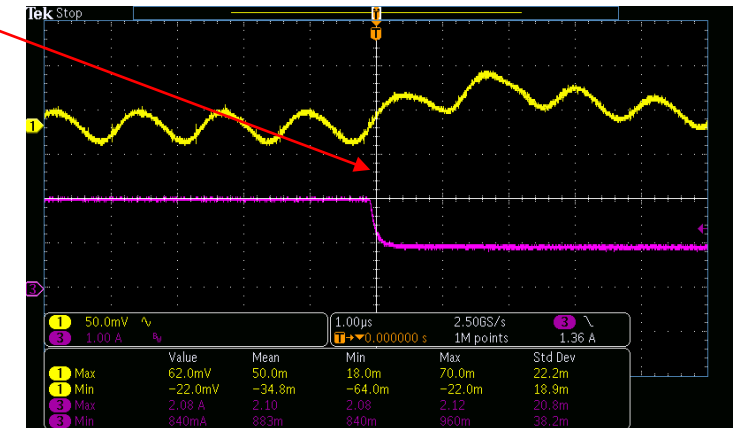
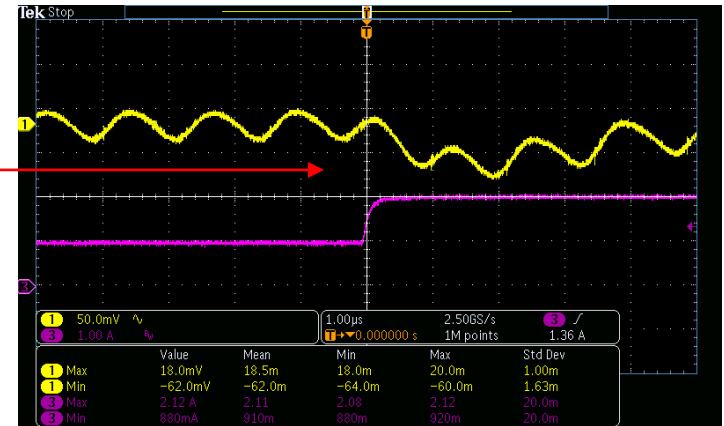
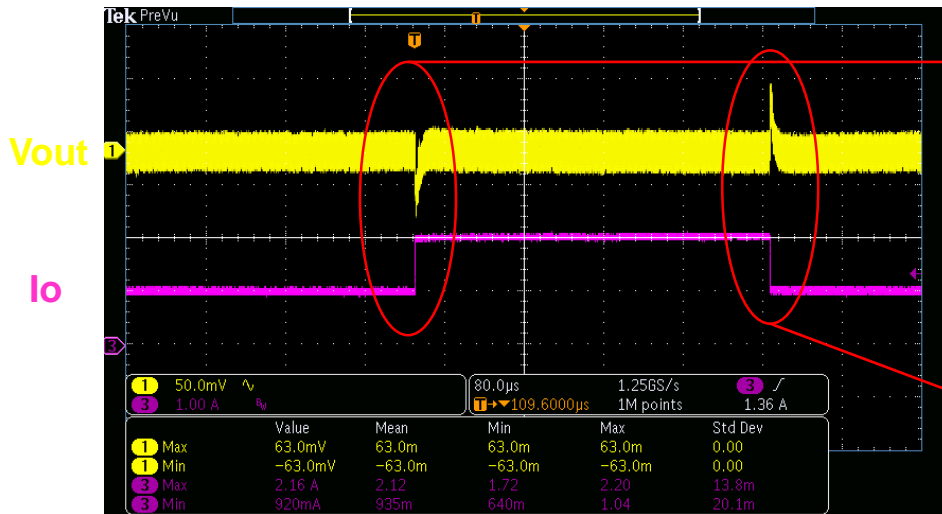


## Max Load



- ❑ 36 mV peak-peak ripple at Standby
- ❑ 38 mV peak-peak ripple at Typical load
- ❑ 42 mV peak-peak ripple at Max load

Step Load 1.0A→2.0A→1.0A, 4A/us

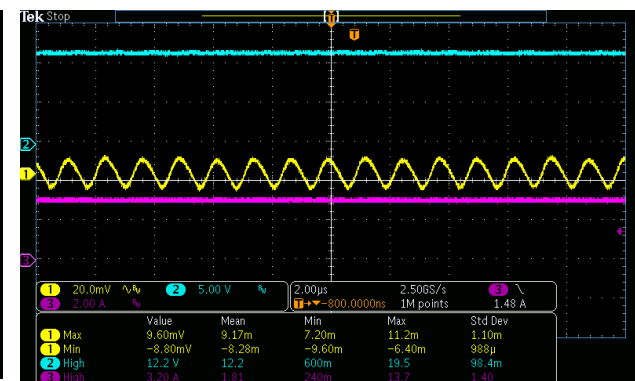
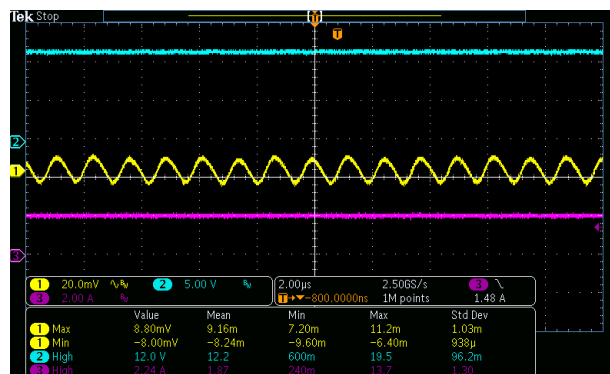
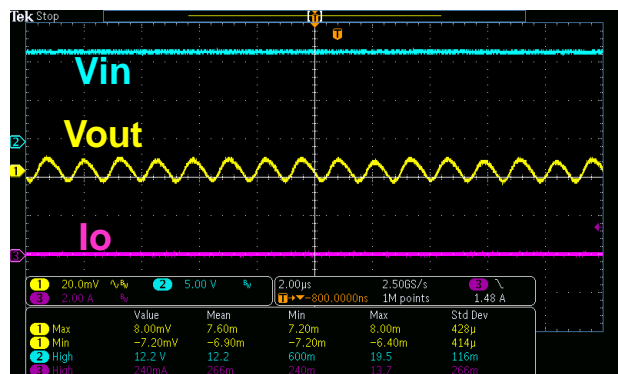


☐ Vout ripple -1.9% (-63mV) to +1.9% (63mV) with load transient

## STANDBY

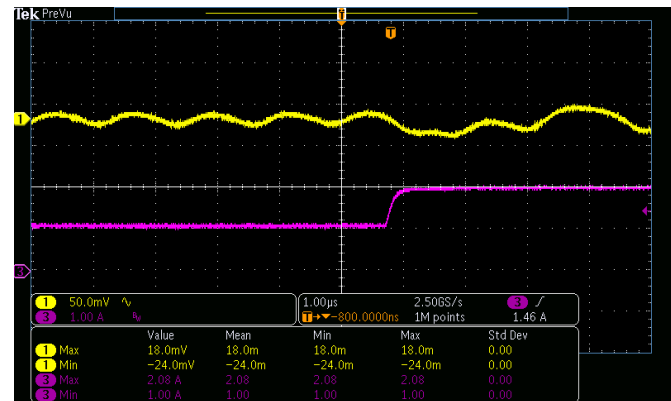
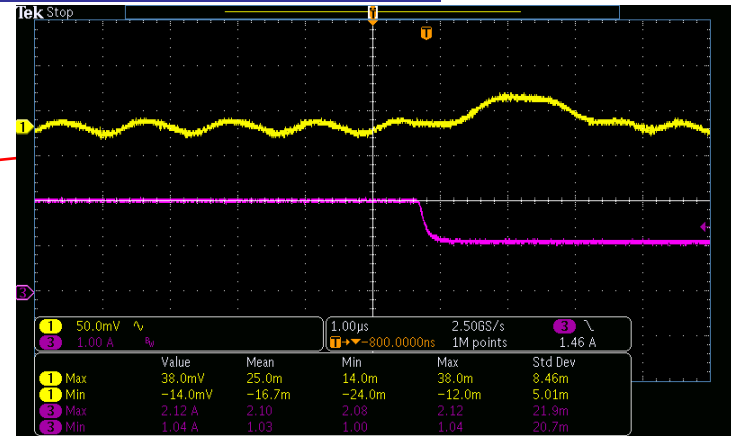
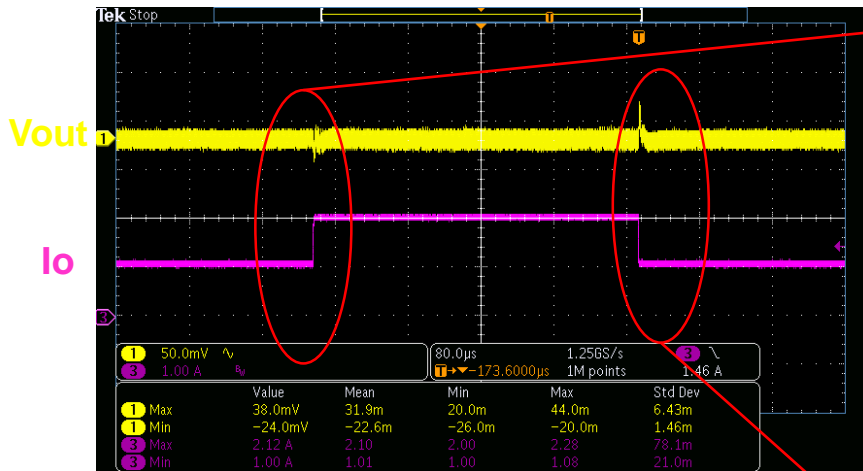
## Typical Load

## Max Load



- ☐ 15.2 mV peak-peak ripple at Standby
- ☐ 16 mV peak-peak ripple at Typical load
- ☐ 18.4 mV peak-peak ripple at Max load

Step Load 1.0A→2.0A→1.0A, 4A/us



☐ Vout ripple -1.6% (-24mV) to +2.53% (38mV) with load transient