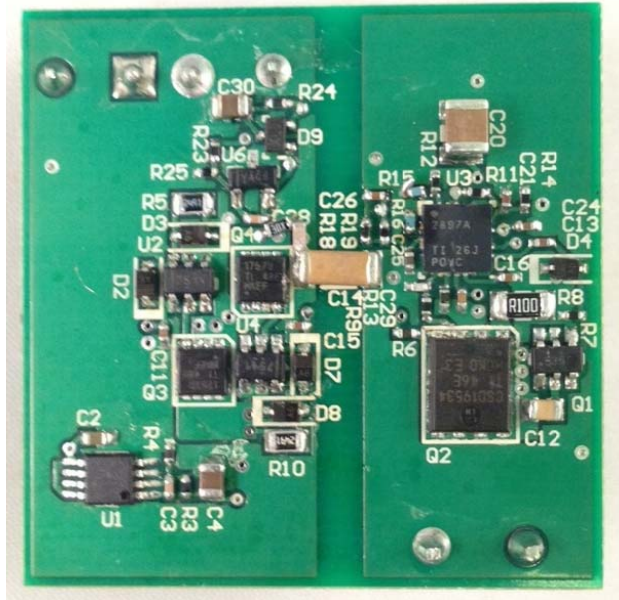
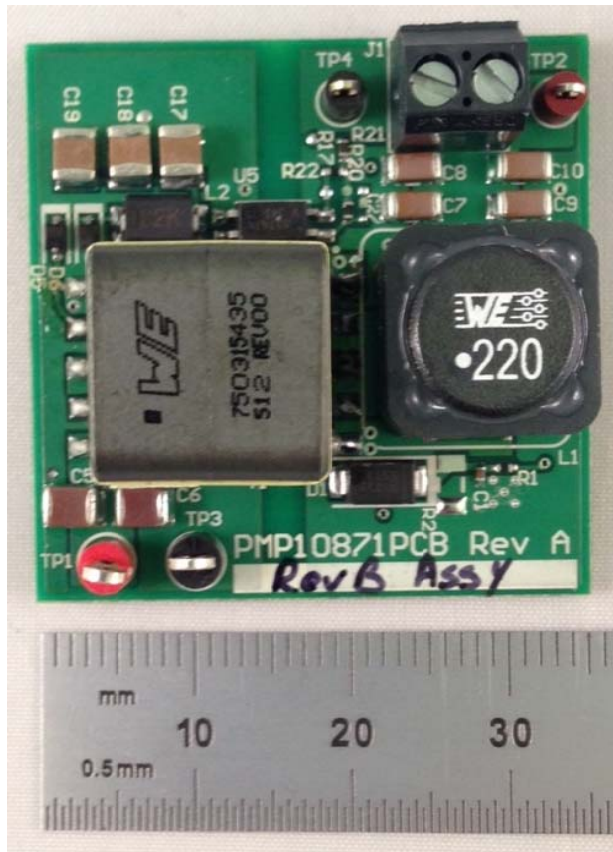
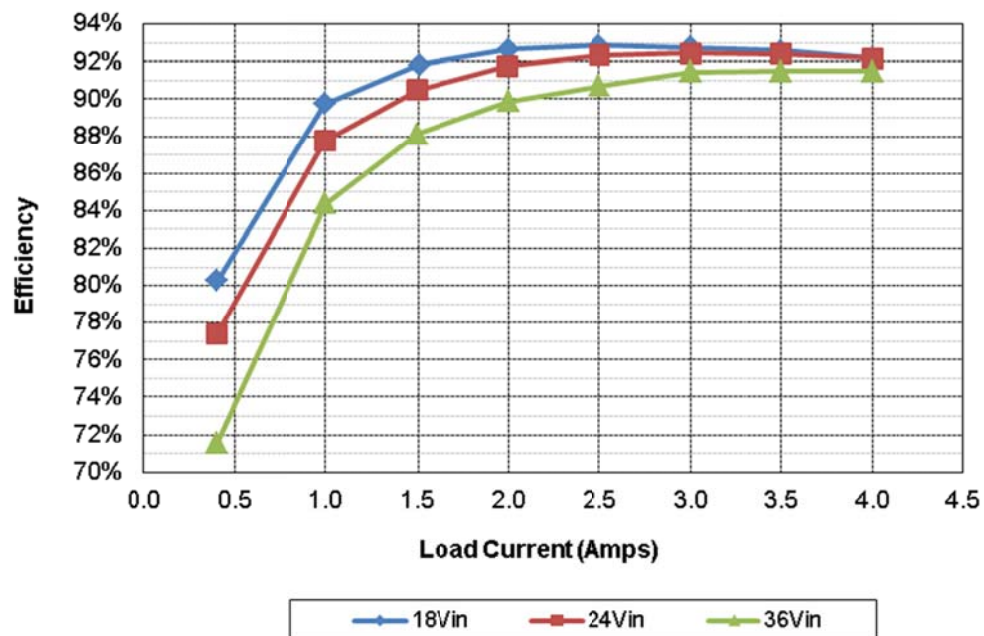


1 Photos



2 Efficiency



PMP10871 Rev B Test Results

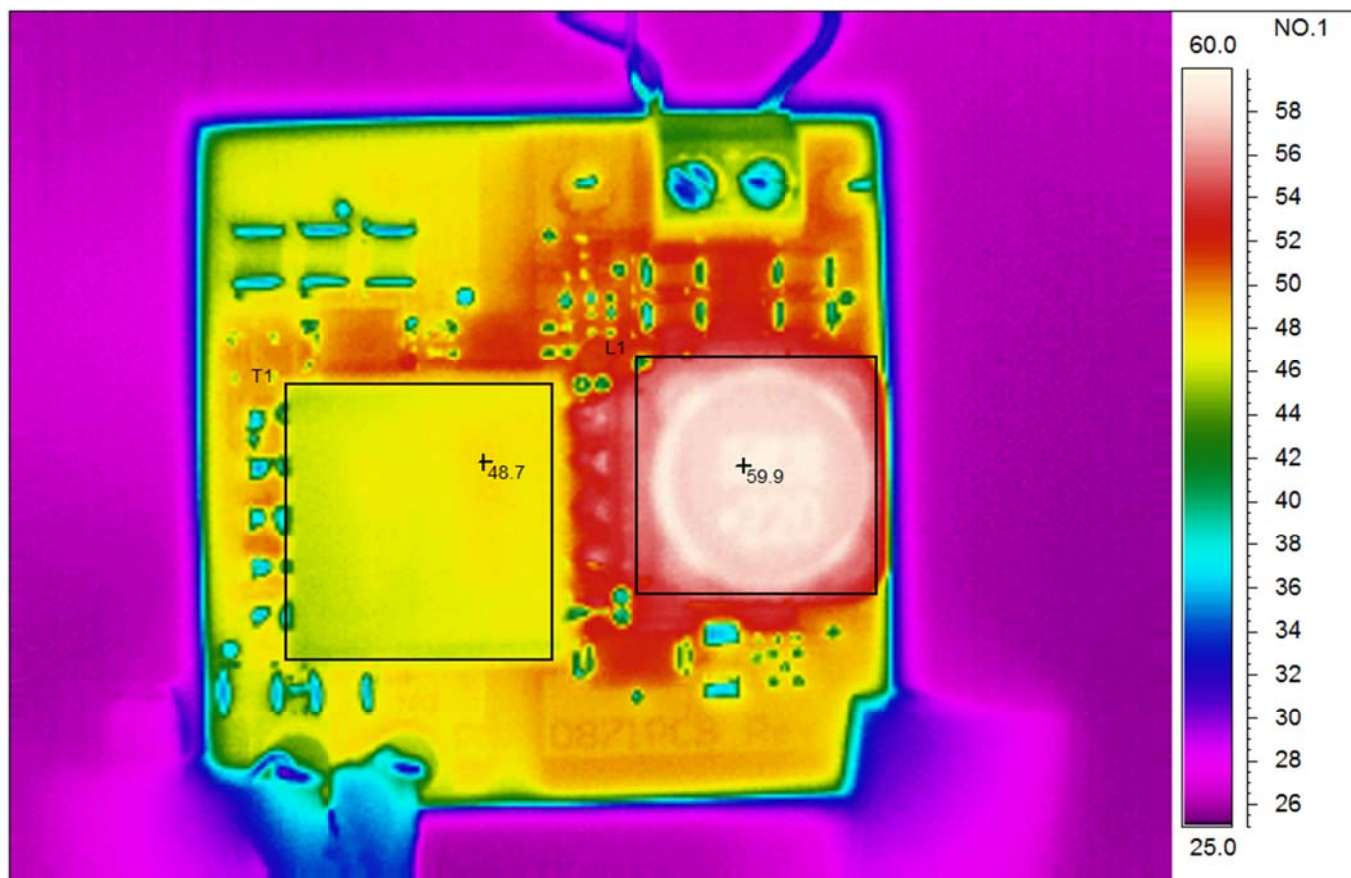
18Vin							
Iout	Vout	Vin	Iin	Pin	Pout	Losses	Efficiency
0.000	4.96	17.98	0.026	0.47	0.00	0.47	
0.401	4.96	17.96	0.138	2.48	1.99	0.49	80.2%
0.996	4.96	17.99	0.306	5.50	4.94	0.56	89.7%
1.509	4.96	18.03	0.452	8.15	7.48	0.66	91.8%
2.004	4.96	18.00	0.596	10.73	9.94	0.79	92.7%
2.504	4.96	18.00	0.743	13.37	12.42	0.95	92.9%
3.001	4.96	18.01	0.891	16.05	14.88	1.16	92.8%
3.503	4.96	18.01	1.042	18.77	17.37	1.39	92.6%
4.003	4.96	18.01	1.196	21.54	19.85	1.69	92.2%

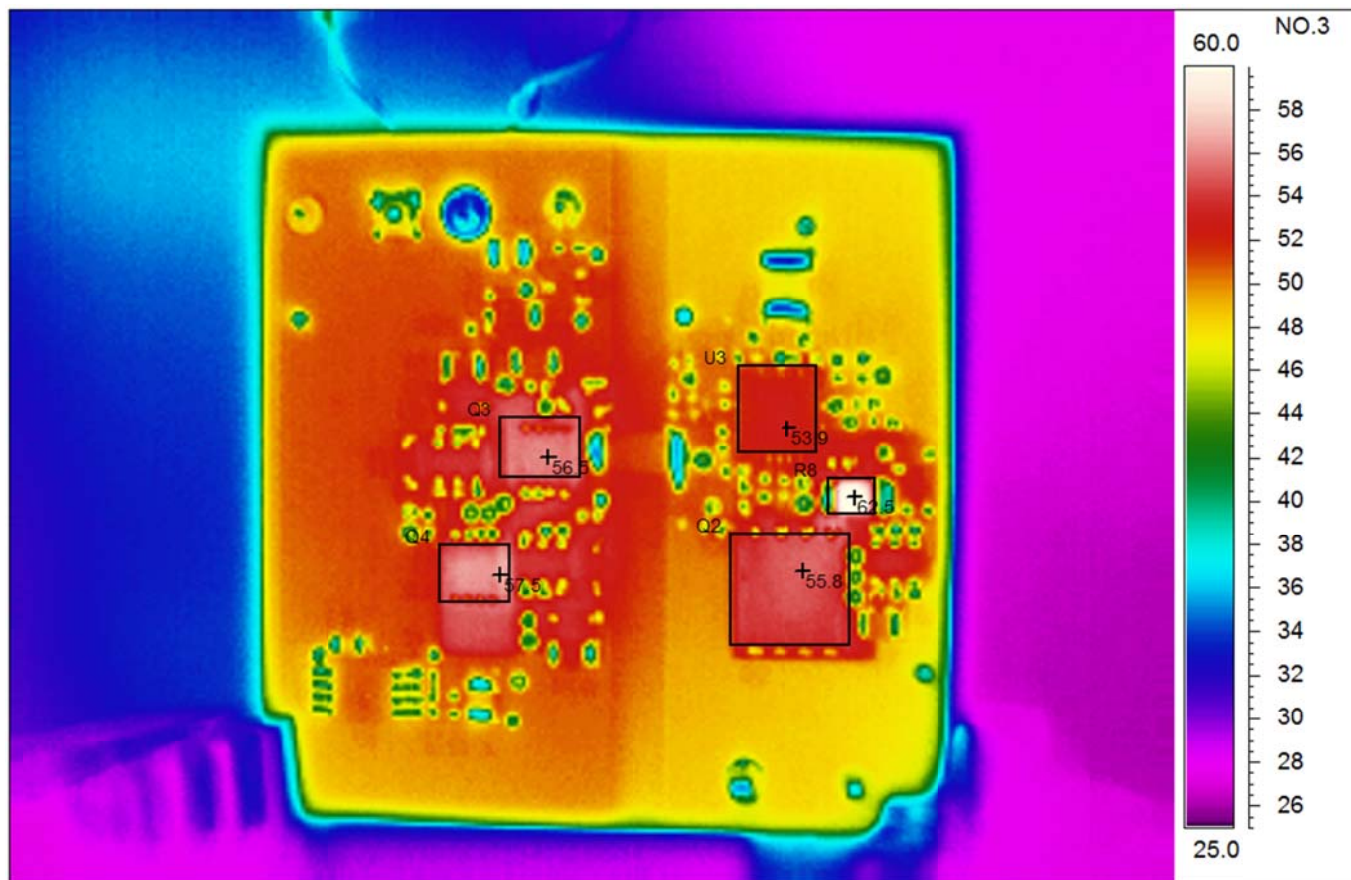
24Vin							
Iout	Vout	Vin	Iin	Pin	Pout	Losses	Efficiency
0.000	4.96	23.99	0.023	0.55	0.00	0.55	
0.401	4.96	24.01	0.107	2.57	1.99	0.58	77.4%
0.994	4.96	24.01	0.234	5.62	4.93	0.69	87.8%
1.497	4.96	23.99	0.342	8.20	7.43	0.78	90.5%
1.998	4.96	24.00	0.450	10.80	9.91	0.89	91.8%
2.503	4.96	24.01	0.560	13.45	12.41	1.03	92.3%
3.000	4.96	23.99	0.671	16.10	14.88	1.22	92.4%
3.501	4.96	24.00	0.783	18.79	17.36	1.43	92.4%
4.003	4.96	24.01	0.897	21.54	19.85	1.68	92.2%

36Vin							
Iout	Vout	Vin	Iin	Pin	Pout	Losses	Efficiency
0.000	4.96	36.01	0.022	0.79	0.00	0.79	
0.400	4.96	36.00	0.077	2.77	1.98	0.79	71.6%
0.998	4.96	35.99	0.163	5.87	4.95	0.92	84.4%
1.497	4.96	36.00	0.234	8.42	7.43	1.00	88.1%
2.002	4.96	35.99	0.307	11.05	9.93	1.12	89.9%
2.502	4.96	36.01	0.380	13.68	12.41	1.27	90.7%
3.000	4.96	35.99	0.452	16.27	14.88	1.39	91.5%
3.501	4.96	36.01	0.527	18.98	17.36	1.61	91.5%
4.003	4.96	35.99	0.603	21.70	19.85	1.85	91.5%

3 Thermal

The thermal images below show the circuit board with a 24VDC input, a 4A load. The ambient temperature was 25C with no air flow.





Area analysis	Value	NO.1
T1Max	48.7°C	
L1 Max	59.9°C	

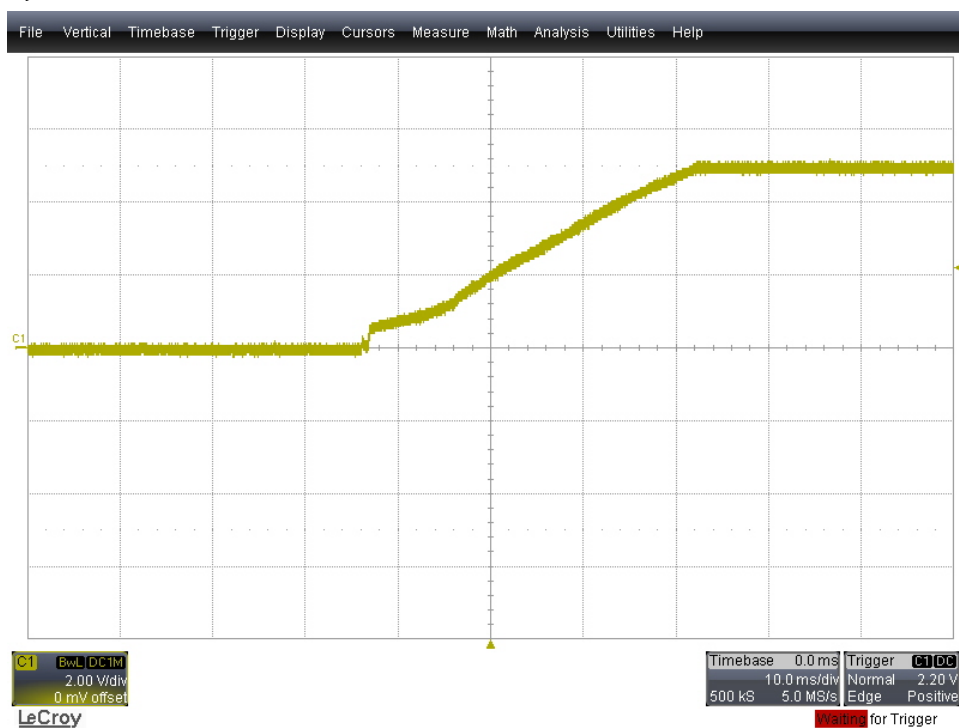
Area analysis	Value	NO.3
Q4Max	57.5°C	
Q3Max	56.5°C	
U3Max	53.9°C	
Q2Max	55.8°C	
R8 Max	62.5°C	

4 Startup

4.1 24V Input, No Load

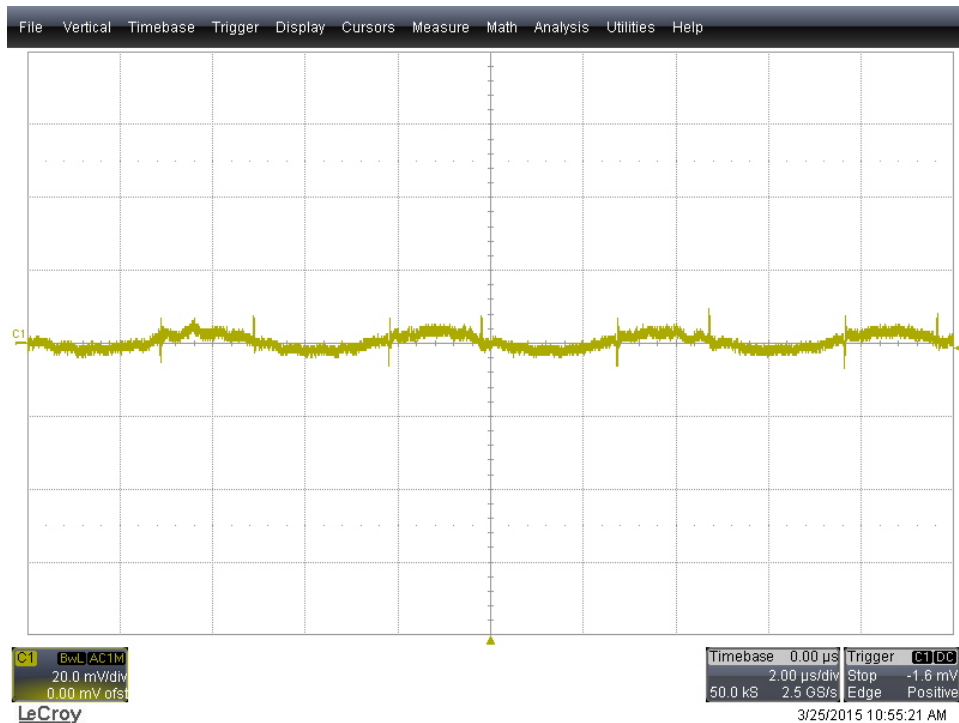


4.2 60V Input, 1Ω Load

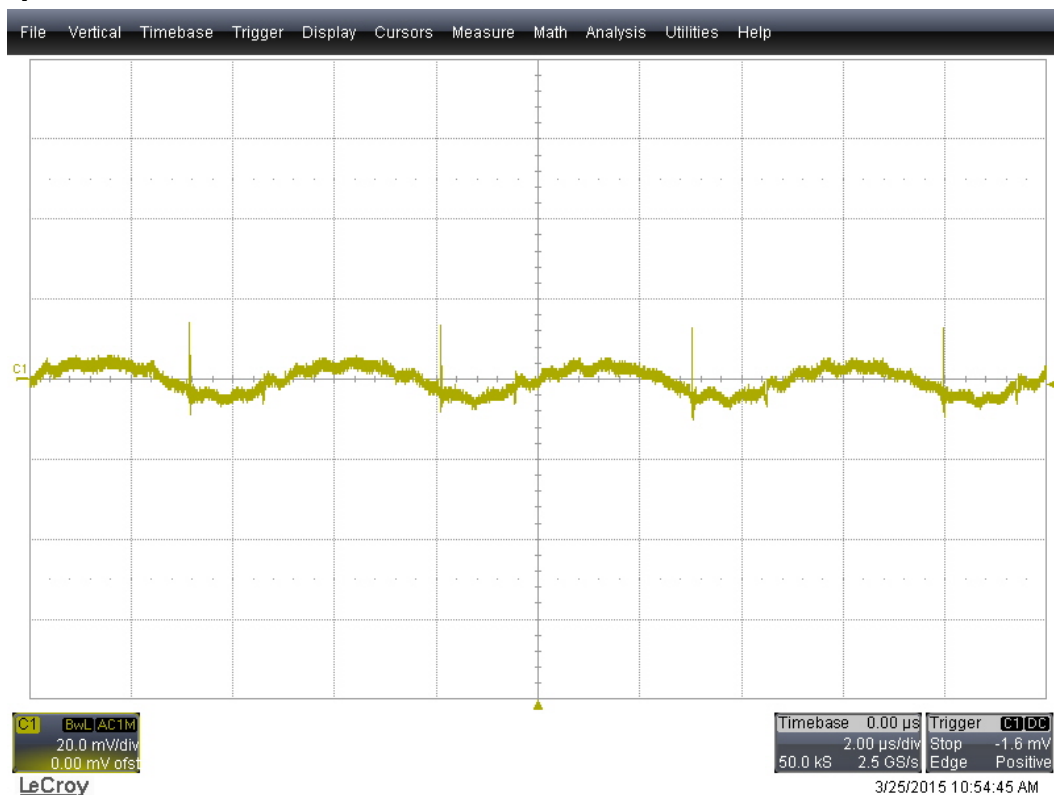


5 Output Ripple Voltage

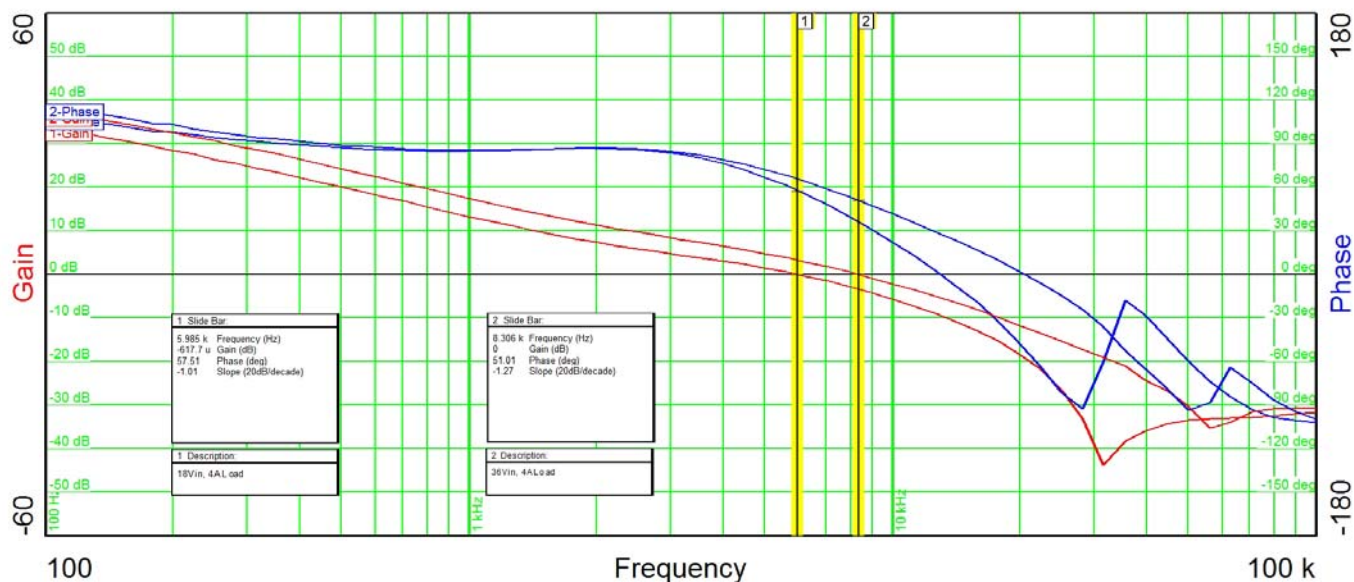
5.1 18V Input, 4A Load



5.2 36V Input, 4A Load

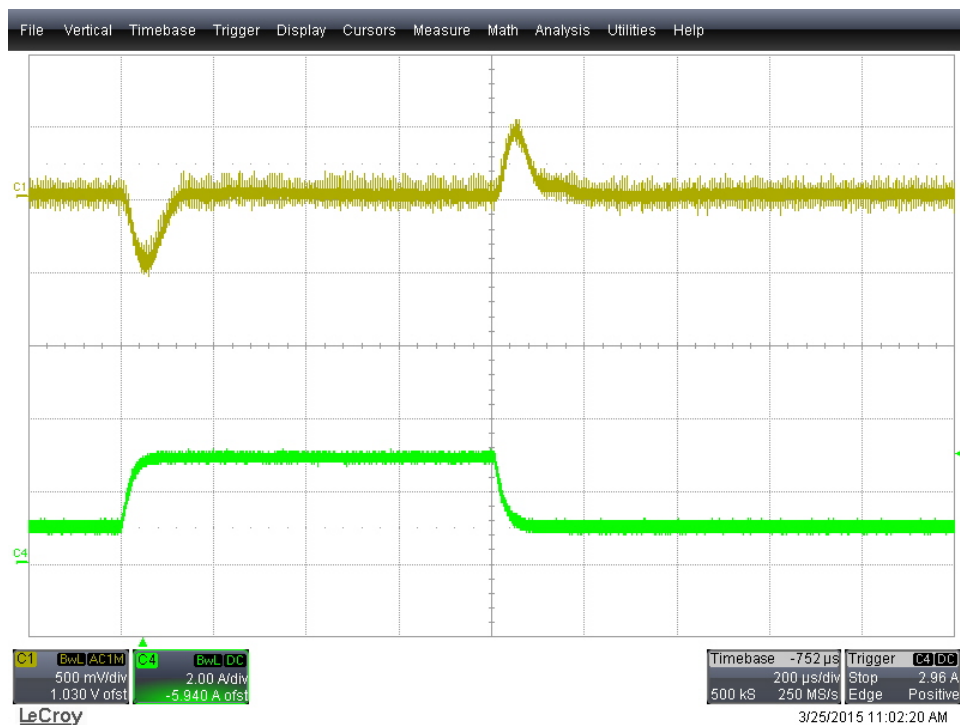


6 Frequency Response



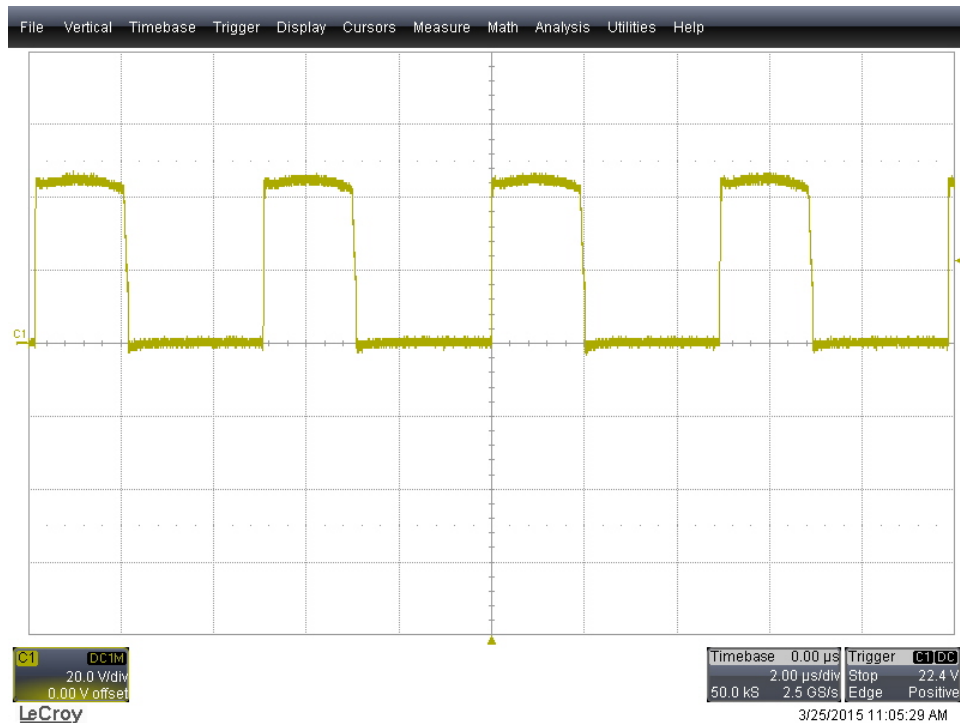
7 Load Transients

24V Input

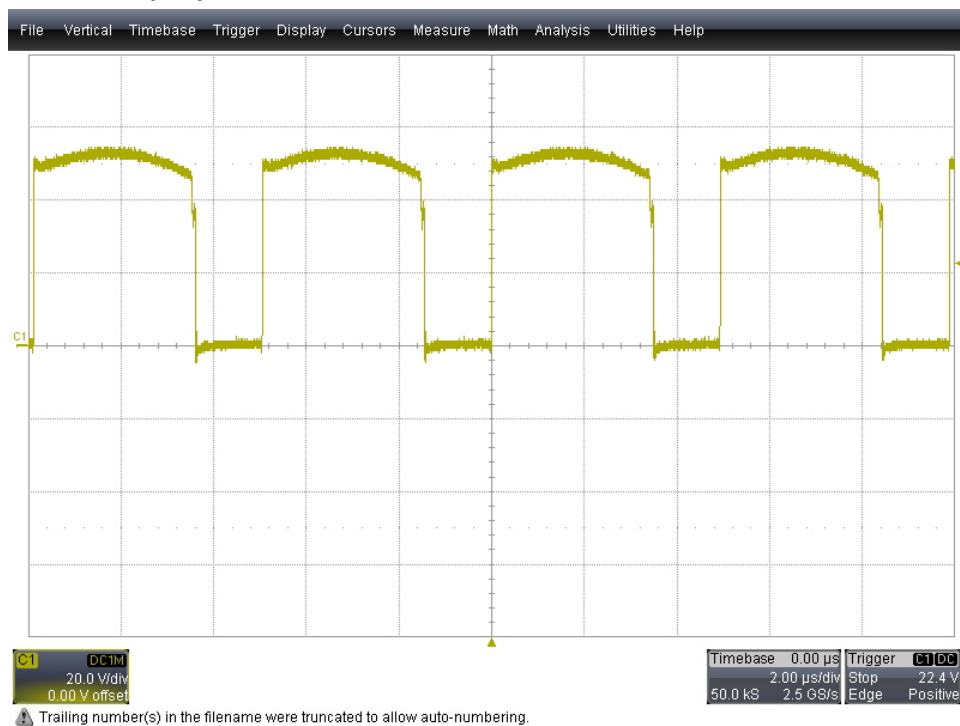


8 Switching Waveforms

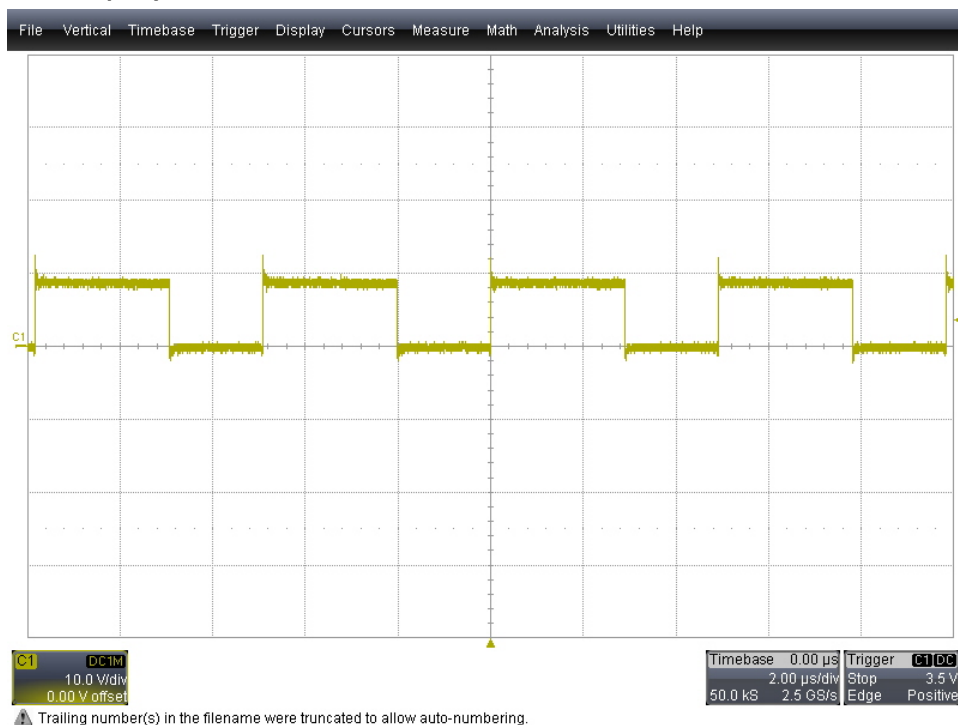
8.1 Primary FET V_{ds} (Q2) – 18Vin, 4A Load



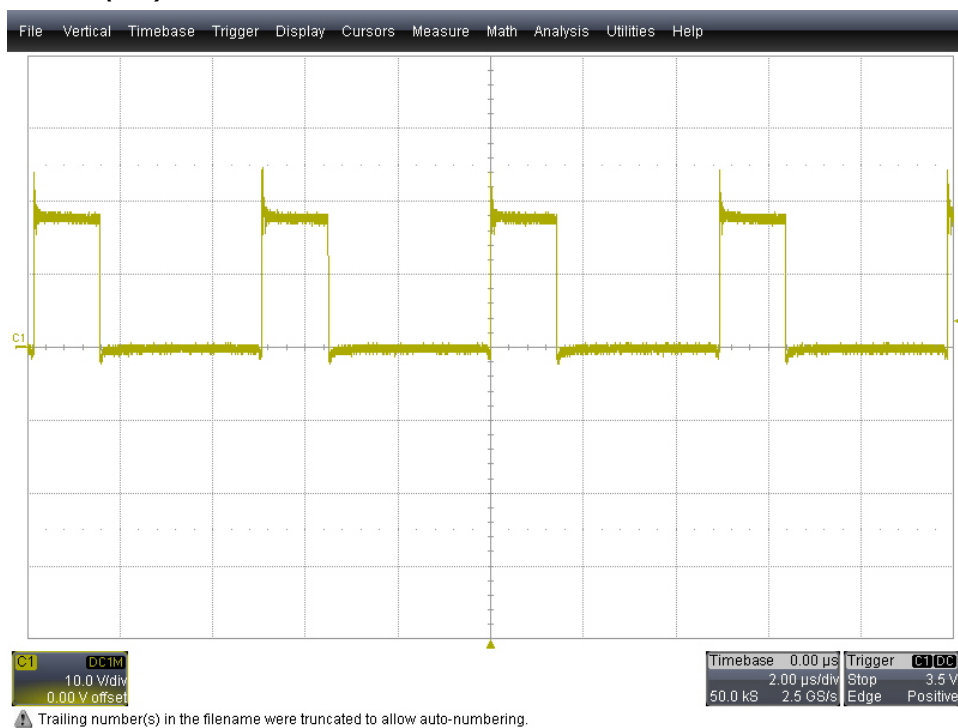
8.2 Primary FET V_{ds} (Q2) – 36Vin, 4A Load



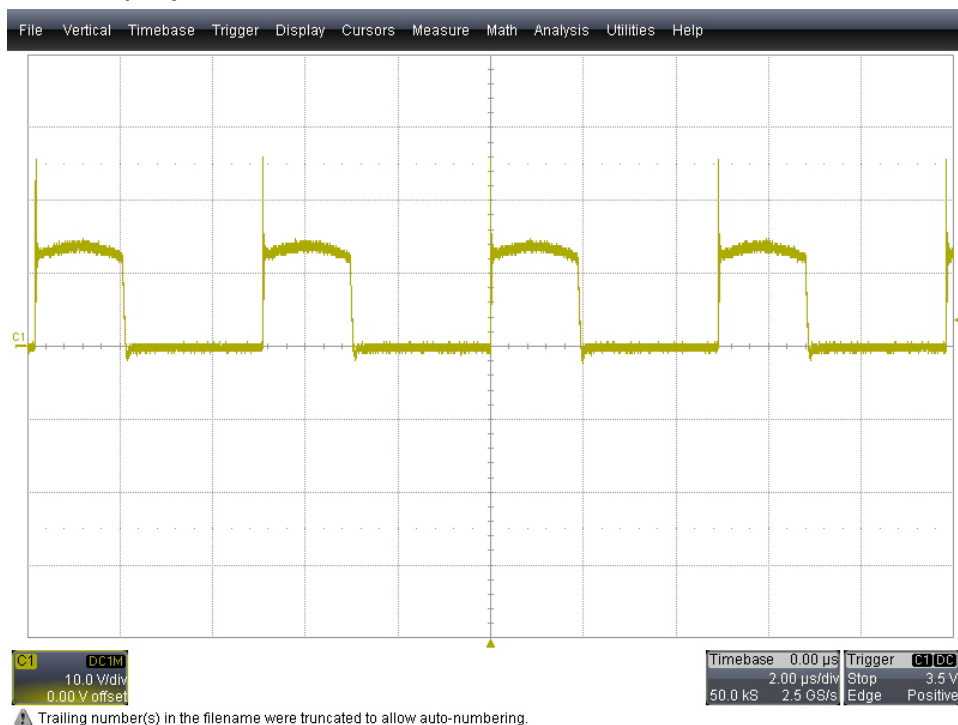
8.3 Sync FET V_{ds} (Q3) – 18Vin, 4A Load



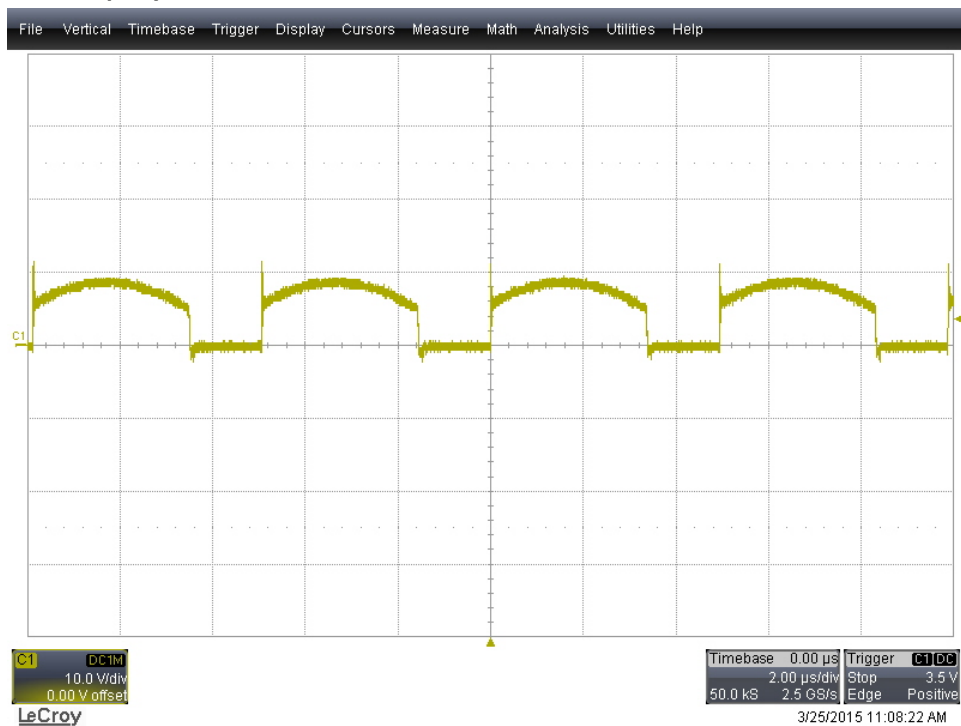
8.4 Sync FET V_{ds} (Q3) – 36Vin, 4A Load



8.5 Sync FETs V_{ds} (Q4) – 18Vin, 4A Load



8.6 Sync FET V_{ds} (Q4) – 36Vin, 4A Load



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