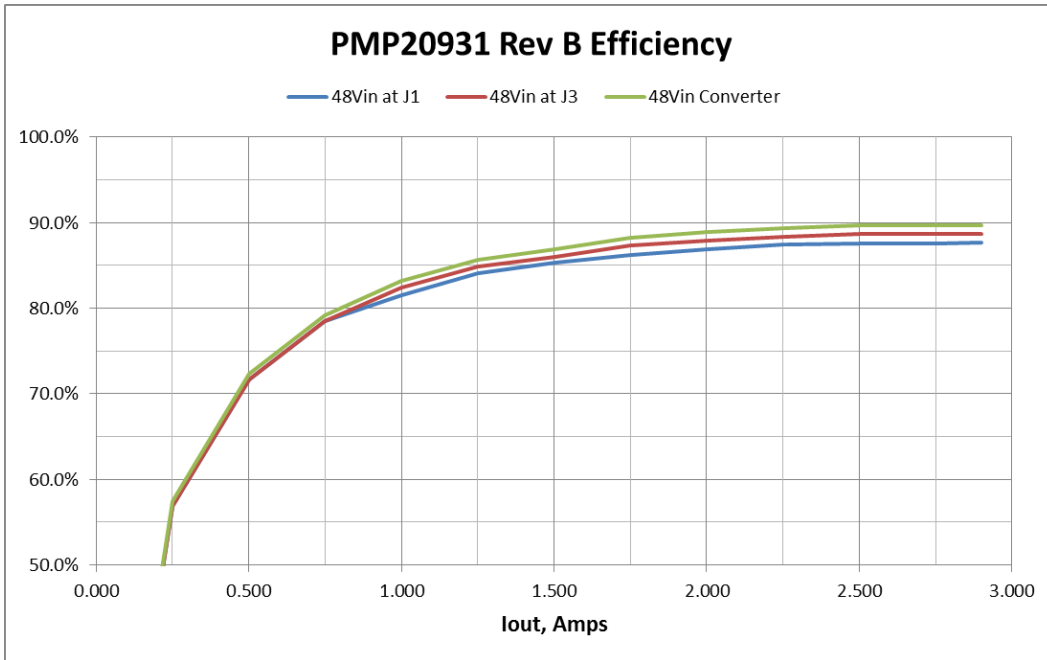


All measurement taken with 48V input, 2.9A load and 20MHz bandwidth unless noted.

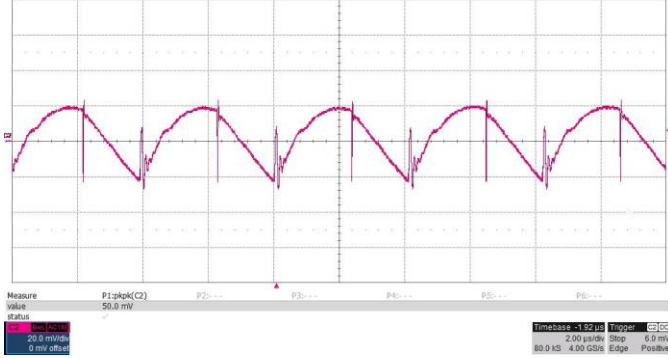
Efficiency



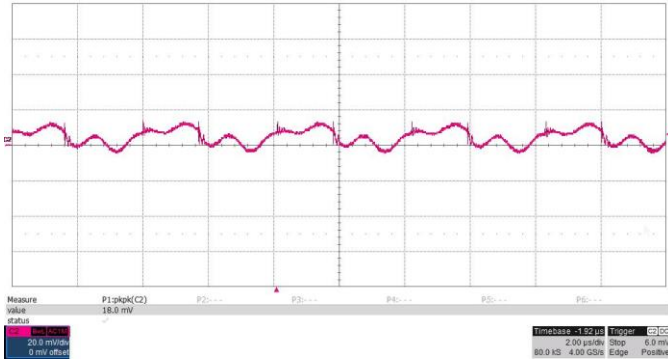
J4	J4	J1	J1	J1	J3	J3	J3	Conv	Conv
Iout	Vout	Iin	Vin	Eff	Iin	Vin	Eff	Vin	Eff
0.000	3.718	0.014	48.01	0.0%	0.015	48.02	0.0%	47.66	0.0%
0.250	3.717	0.034	48.01	56.9%	0.034	48.01	56.9%	47.62	57.4%
0.500	3.717	0.054	48.02	71.7%	0.054	48.01	71.7%	47.59	72.3%
0.750	3.716	0.074	48.01	78.4%	0.074	48.00	78.5%	47.57	79.2%
1.000	3.716	0.095	48.01	81.5%	0.094	48.00	82.4%	47.55	83.1%
1.250	3.715	0.115	48.00	84.1%	0.114	48.01	84.8%	47.54	85.7%
1.500	3.715	0.136	48.00	85.4%	0.135	48.00	86.0%	47.52	86.9%
1.750	3.714	0.157	48.00	86.2%	0.155	48.01	87.3%	47.51	88.3%
2.000	3.714	0.178	48.00	86.9%	0.176	48.01	87.9%	47.49	88.9%
2.250	3.713	0.199	48.01	87.4%	0.197	48.00	88.3%	47.47	89.3%
2.500	3.713	0.221	48.00	87.5%	0.218	48.01	88.7%	47.47	89.7%
2.750	3.713	0.243	48.00	87.5%	0.240	48.00	88.6%	47.45	89.7%
2.900	3.714	0.256	48.00	87.7%	0.253	48.01	88.7%	47.45	89.7%

Ripple and Noise

Output ripple
20mV/div, 2usec/div
Measured 50mVpp across C16:

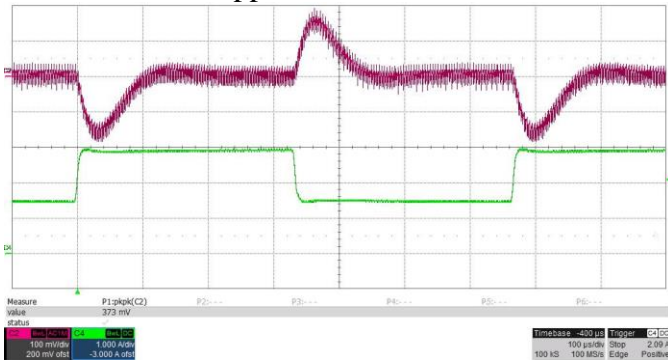


Input ripple
20mV/div, 2usec/div
Measured 18mVpp across C11:



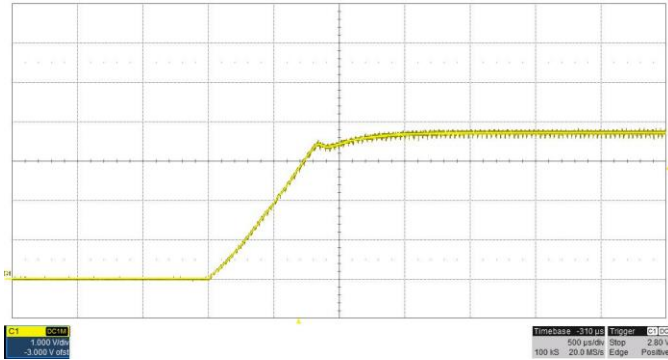
Dynamic Loading

Output load step response, 1.45A to 2.9A load step
100mV/div, 1A/div, 100usec/div, slew rate = 250mA/usec
Measured 373mVpp across C16:

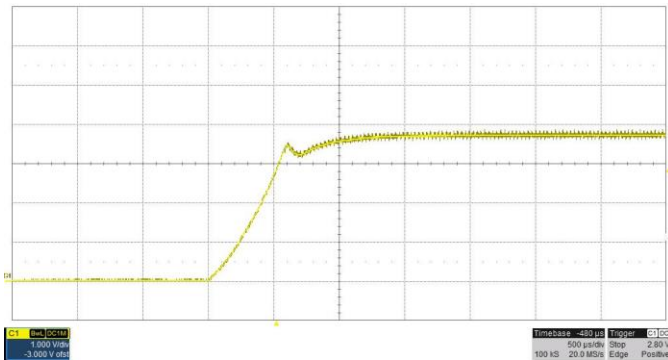


Turn On Response

2.9A load, 1V/div, 500usec/div:

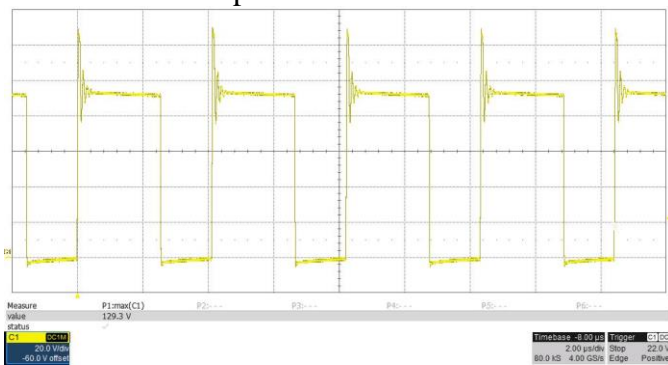


0A load, 1V/div, 500usec/div:



Waveforms

Vds, Q3, 20V/div, 2usec/div, 57VDC input, 2.9A load, 750MHz bandwidth
Measured 129.3Vpeak:



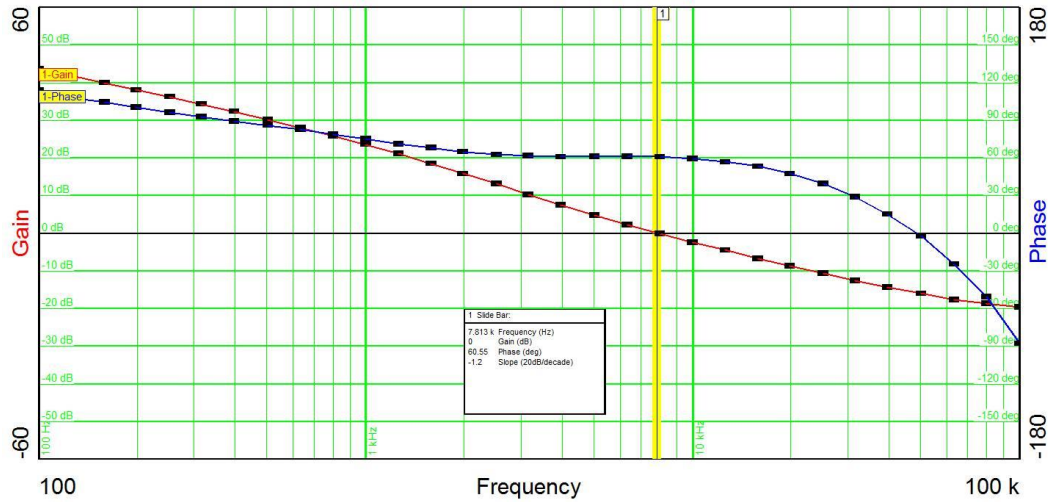
V_{ds}, Q2, 5V/div, 2usec/div, 57VDC input, 0A load, 750MHz bandwidth
 Measured 26.3Vpeak:



V_{ds}, Q2, 5V/div, 2usec/div, 57VDC input, 2.9A load, 750MHz bandwidth
 Measured 16.3Vpeak:



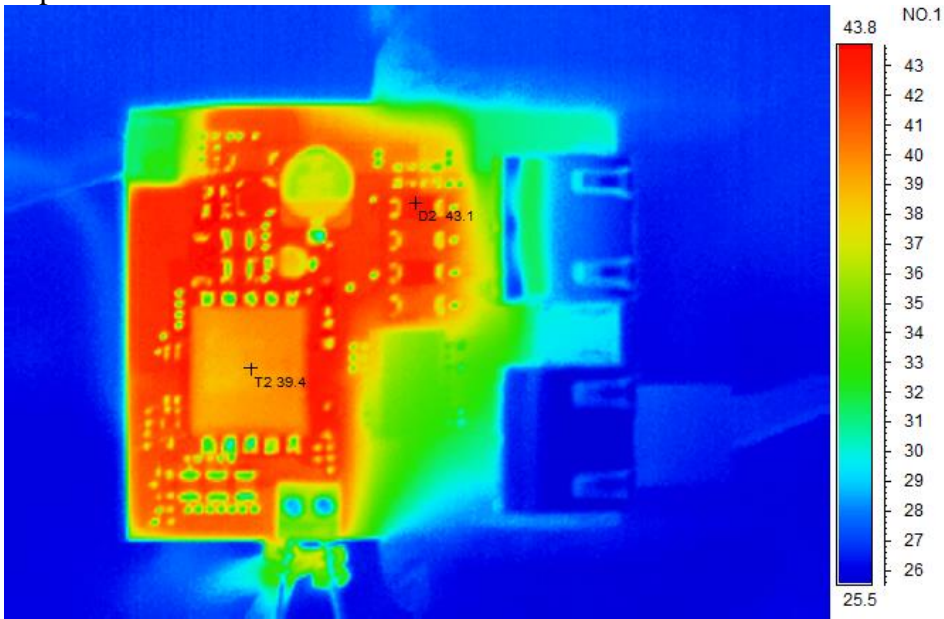
Loop Stability



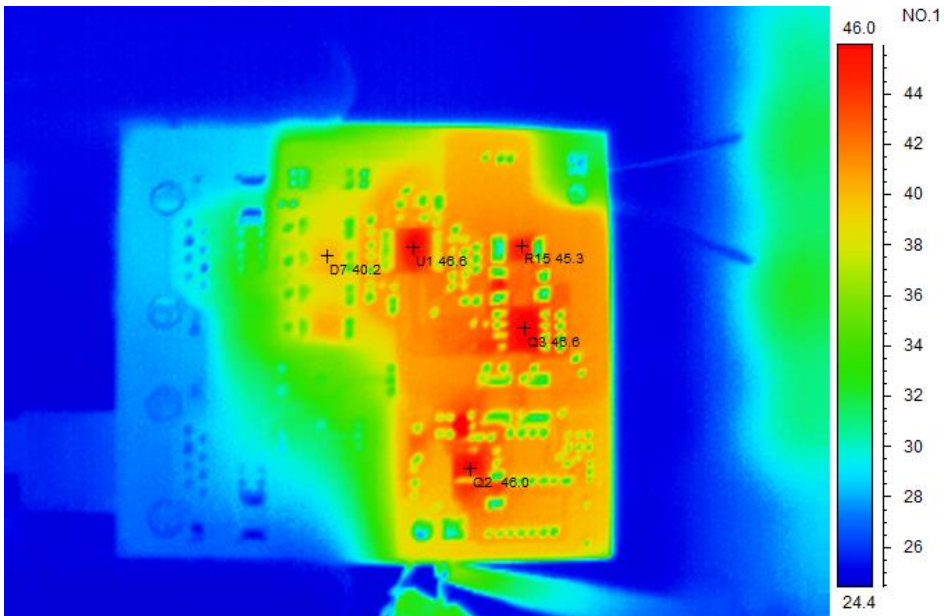
Bandwidth= 7.8 kHz Phase Margin=60 degrees Gain Margin=16dB

Thermal

Top:

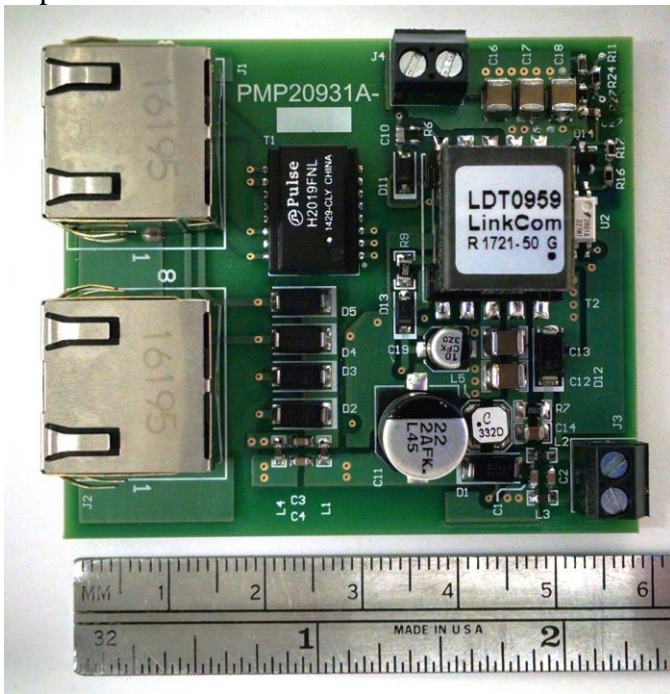


Bottom:

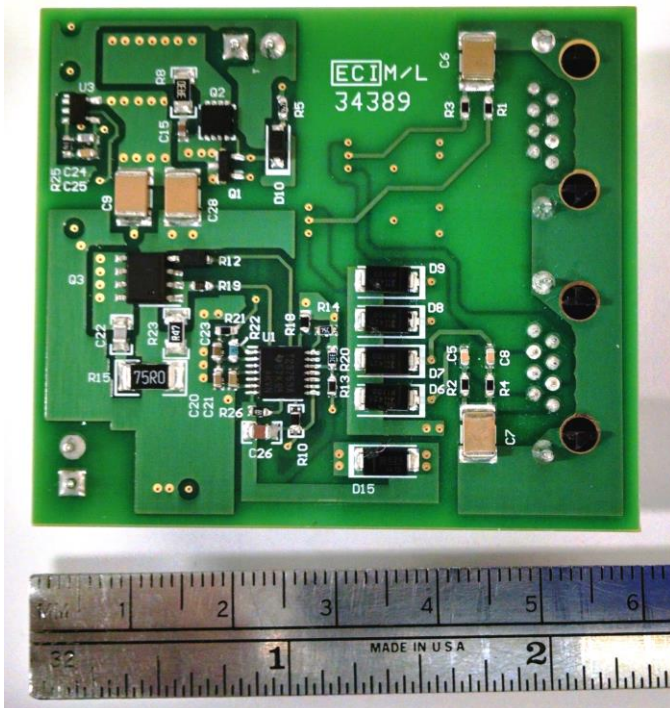


Photo

Top:



Bottom:



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