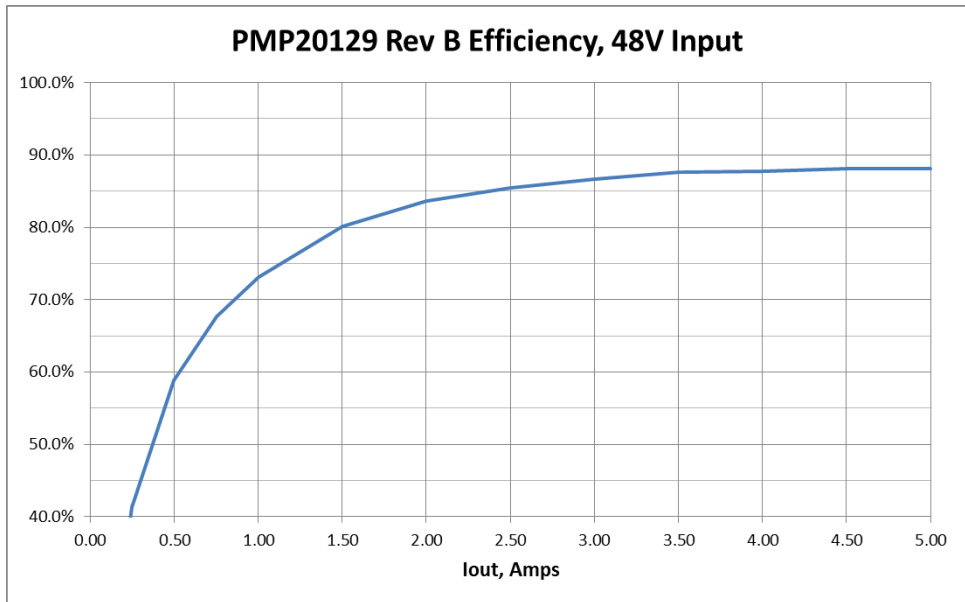


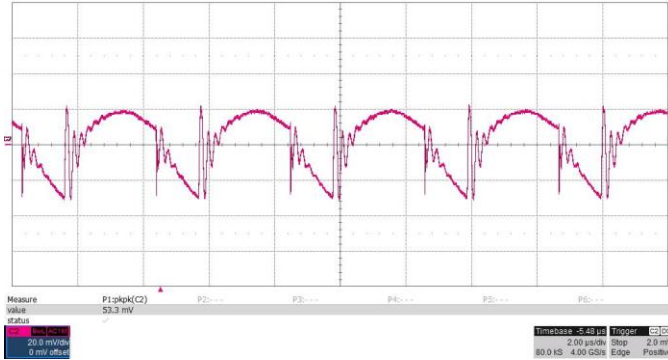
Efficiency



Iout	Vout	J1 lin	J1 Vin	J1 Eff
0.00	3.333	0.025	48.00	0.0%
0.25	3.333	0.042	48.00	41.3%
0.50	3.333	0.059	48.00	58.8%
0.75	3.332	0.077	48.00	67.6%
1.00	3.332	0.095	48.00	73.1%
1.50	3.331	0.130	48.00	80.1%
2.00	3.330	0.166	48.00	83.6%
2.50	3.329	0.203	48.00	85.4%
3.00	3.328	0.240	48.00	86.7%
3.50	3.327	0.277	48.00	87.6%
4.00	3.326	0.316	48.00	87.7%
4.50	3.325	0.354	48.00	88.1%
5.00	3.324	0.393	48.00	88.1%

Ripple and Noise

Output Ripple (C12), 20mV/div, 2usec/div
Measured 53.3mVpp:

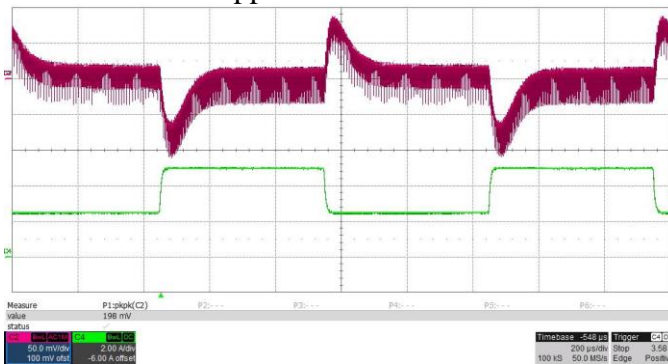


Input Ripple (J1), 20mV/div, 2usec/div
Measured 21.3mVpp:



Dynamic Loading

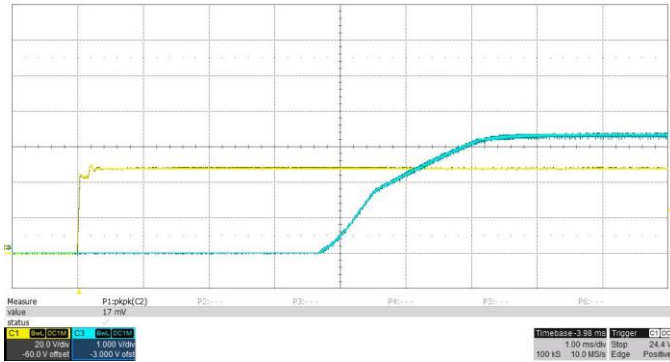
Output response to load step
2.5A to 5A load step
50mV/div, 2A/div, 200usec/div
Slew Rate = 500mA/usec
Measured 198mVpp across C12:



Turn On Response

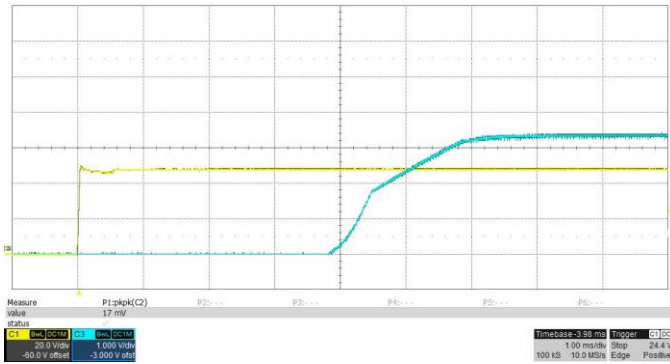
5A load, 1msec/div

CH1: Vin, 20V/div; CH3: Vout, 1V/div:



0A load, 1msec/div, 1V/div:

CH1: Vin, 20V/div; CH3: Vout, 1V/div:

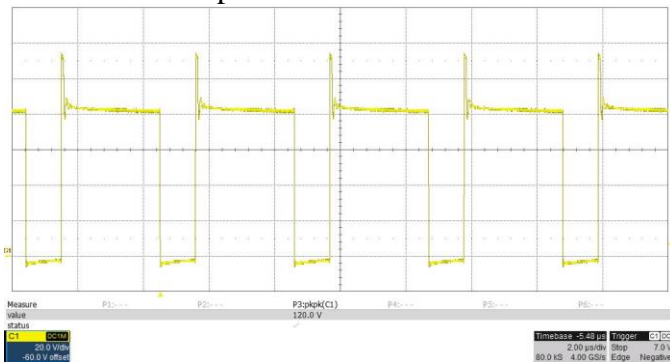


Waveforms

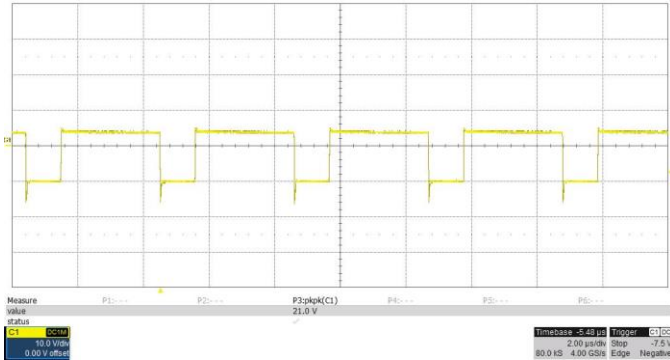
Drain to source, Q3, 60V input, 5A load

20V/div, 2usec/div

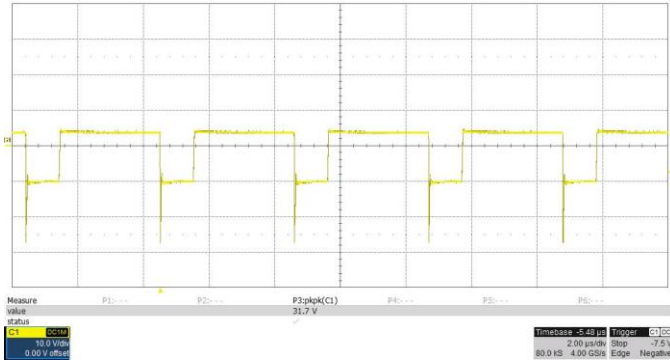
Measured 120V peak:



Drain to source, Q1, 60V input, 5A load
10V/div, 2usec/div
Measured 21V peak:

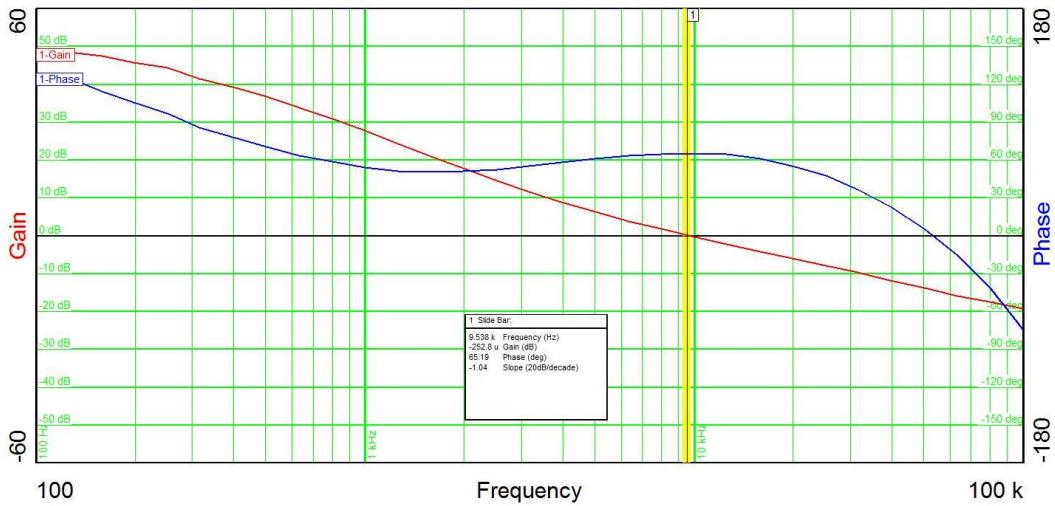


Drain to source, Q1, 60V input, 0A load
10V/div, 2usec/div
Measured 31.7V peak:



Loop Stability

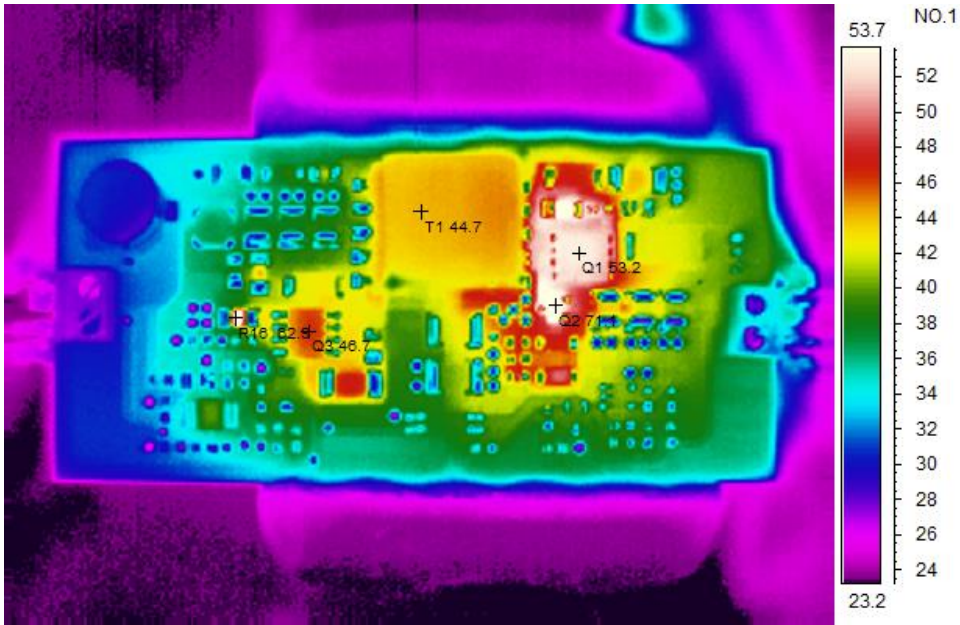
48V input, 5A load:



Bandwidth= 9.5 kHz Phase Margin=65 degrees Gain Margin=15dB

Thermal Plot

48V input, 5A load



Photo



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