All measurements taken with a 48V input unless otherwise noted.

Efficiency

PMP11420 Rev C Efficiency, 48V Input
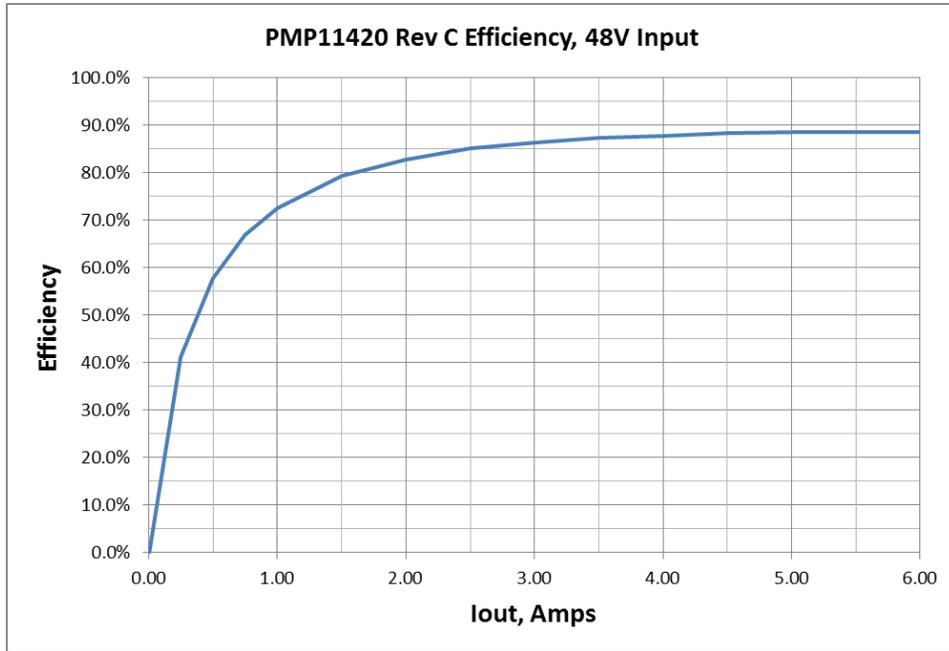
J2 Iout	J2 Vout	J1 Iin	J1 Vin	Eff
0.00	5.051	0.038	48.00	0.0%
0.25	5.050	0.064	48.00	41.1%
0.50	5.050	0.091	48.00	57.8%
0.75	5.050	0.118	48.00	66.9%
1.00	5.049	0.145	48.00	72.5%
1.50	5.049	0.199	48.00	79.3%
2.00	5.048	0.254	48.00	82.8%
2.50	5.047	0.309	48.00	85.1%
3.00	5.046	0.365	48.00	86.4%
3.50	5.046	0.421	48.00	87.4%
4.00	5.045	0.479	48.00	87.8%
4.50	5.044	0.536	48.00	88.2%
5.00	5.043	0.594	48.00	88.4%
5.50	5.042	0.653	48.00	88.5%
6.00	5.041	0.712	48.00	88.5%

Ripple and Noise

Ripple measurements taken with a 6A load and 20MHz BWL.

Output Ripple (J2)   Input Ripple (J1)
20mV/div, 2usec/div   20mV/div, 2usec/div
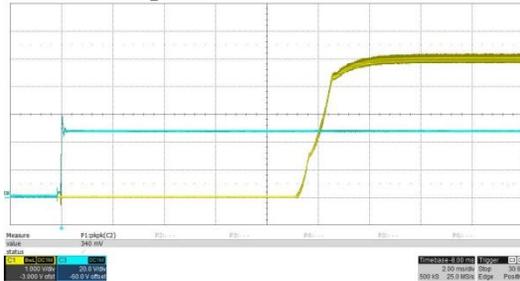Measured 33.3mV pk-pk: Measured 41.3mV pk-pk:

Dynamic Loading

Load Step
3A to 6A step load
200mV/div, 500usec/div
Measured 407mVpp:
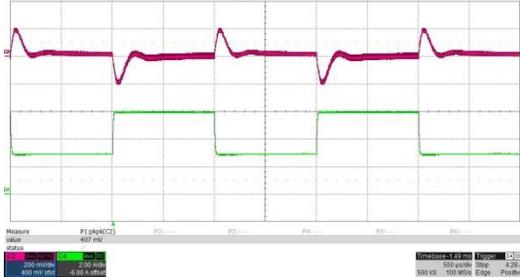
Turn On Response

6A Load, 2msec/div   0A Load, 2msec/div
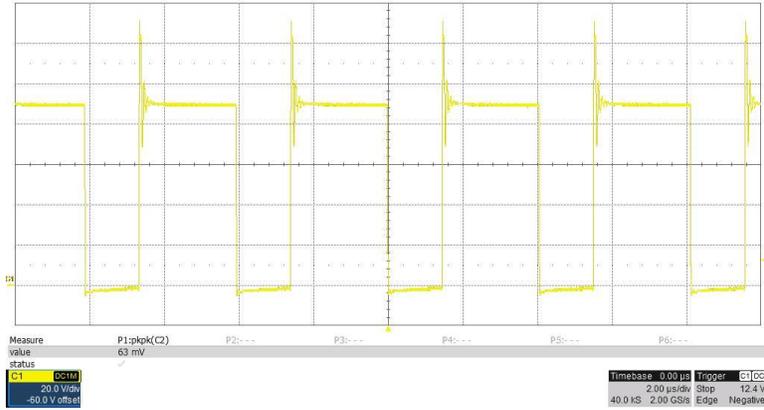Top: Output, 1V/div   Top: Output, 1V/div
Bottom: Input, 20V/div: Bottom: Input, 20V/div:
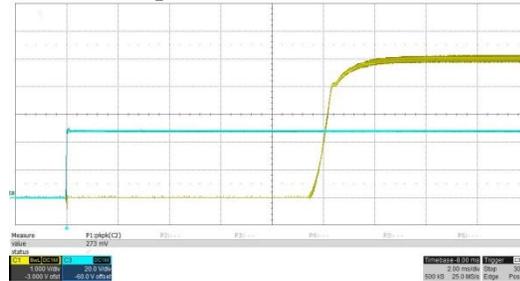
Waveforms

Vds, Q3, 60V Input, 6A Load
20V/div, 2usec/div

Vds, Q1, 60V Input, 0A Load
10V/div, 2usec/div
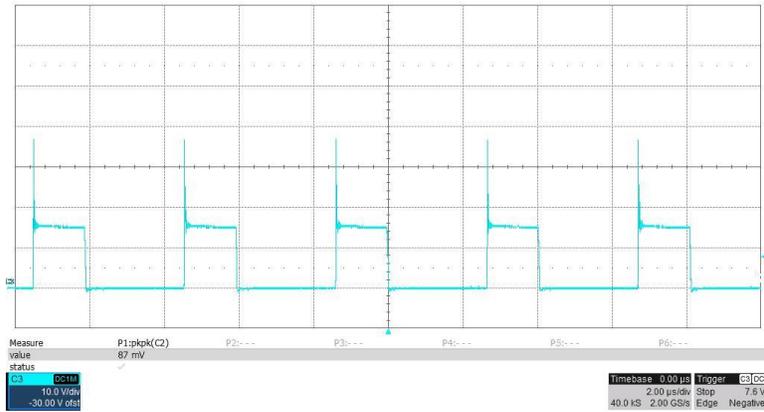
Vds, Q1, 60V Input, 6A Load
10V/div, 20usec/div
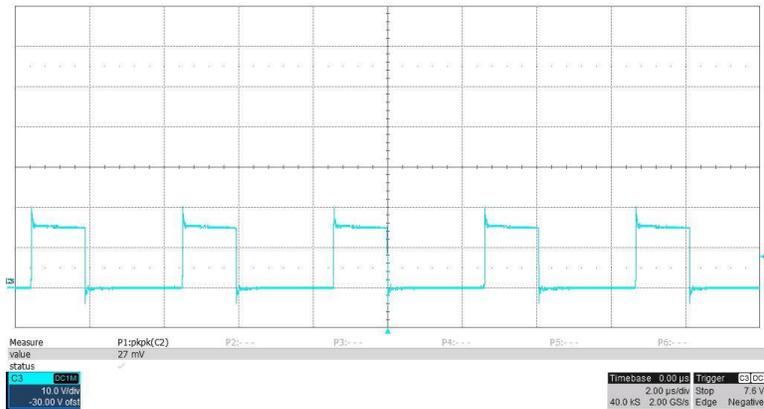
Stability

Loop response of the converter with a 6A load.
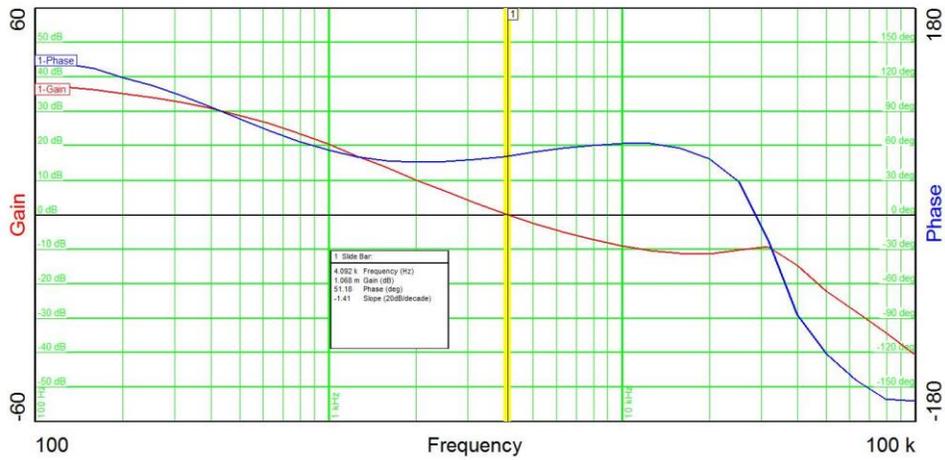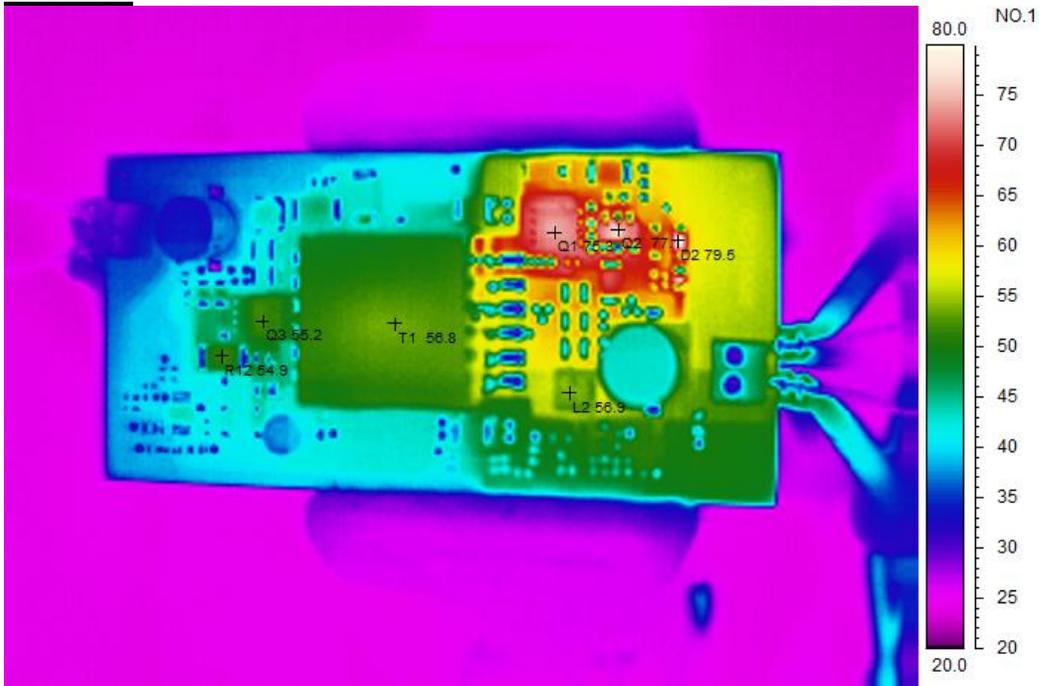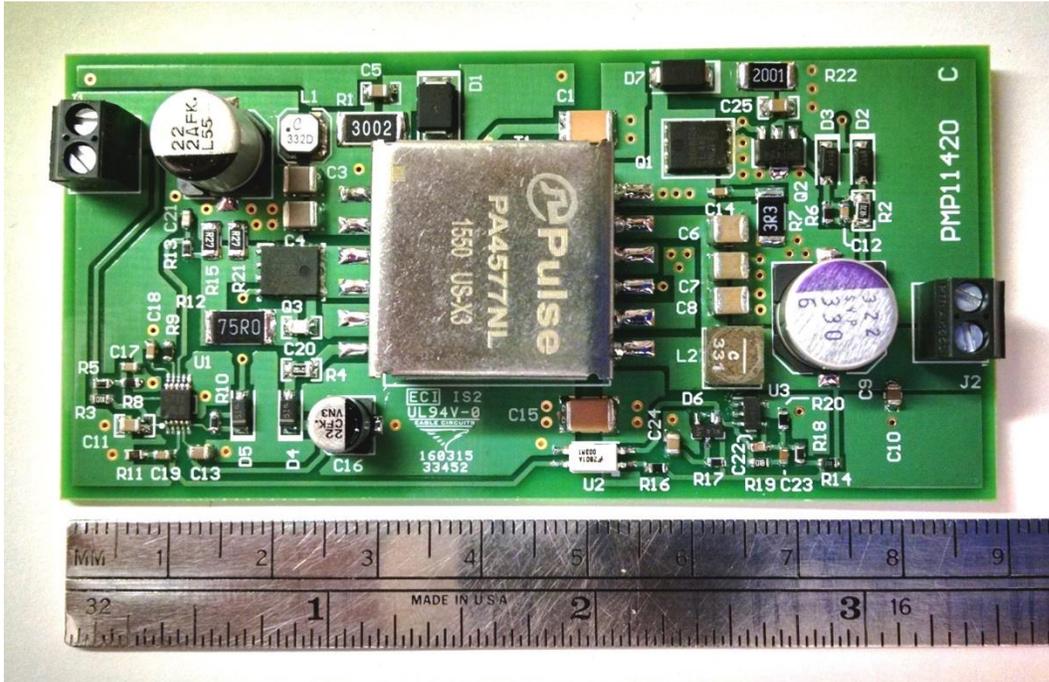

BW=4Khz   PM=51 degrees   GM=10dB

Thermal:

Photo:

IMPORTANT NOTICE AND DISCLAIMER