

All testing performed with 48VIN, 1A load and 20MHz BW unless otherwise noted.

Efficiency

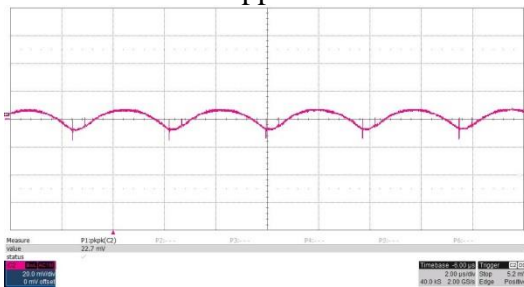
The end-to-end efficiency and converter only efficiency are shown below:

		-----End To End-----			-----Converter Only-----			
		J1	J1	J1		J3	J3	J3
I_{out}	V_{out}	I_{lin}	V_{in}	Eff	V_{out}	I_{lin}	V_{in}	Eff
0.000	5.043	0.0014	36.00	0.0%	5.044	0.0014	36.00	0.0%
0.100	5.067	0.0200	36.00	70.4%	5.067	0.0195	36.00	72.2%
0.200	5.068	0.0386	36.00	72.9%	5.069	0.0373	36.00	75.5%
0.300	5.068	0.0553	36.00	76.4%	5.069	0.0534	36.00	79.1%
0.400	5.069	0.0723	36.00	77.9%	5.069	0.0696	36.00	80.9%
0.500	5.068	0.0895	36.00	78.6%	5.069	0.0861	36.00	81.8%
0.600	5.068	0.1071	36.00	78.9%	5.068	0.1028	36.00	82.2%
0.700	5.068	0.1249	36.00	78.9%	5.068	0.1198	36.00	82.3%
0.800	5.067	0.1429	36.00	78.8%	5.067	0.1370	36.00	82.2%
0.900	5.066	0.1612	36.00	78.6%	5.066	0.1544	36.00	82.0%
1.000	5.065	0.1798	36.00	78.3%	5.065	0.1718	36.00	81.9%
		-----End To End-----			-----Converter Only-----			
I_{out}	V_{out}	I_{lin}	V_{in}	Eff	V_{out}	I_{lin}	V_{in}	Eff
0.000	5.046	0.0014	48.00	0.0%	5.046	0.0015	48.00	0.0%
0.100	5.071	0.0159	48.00	66.4%	5.071	0.0156	48.00	67.7%
0.200	5.076	0.0303	48.00	69.8%	5.078	0.0295	48.00	71.7%
0.300	5.074	0.0431	48.00	73.6%	5.074	0.0418	48.00	75.9%
0.400	5.074	0.0557	48.00	75.9%	5.074	0.0541	48.00	78.2%
0.500	5.074	0.0686	48.00	77.0%	5.074	0.0665	48.00	79.5%
0.600	5.073	0.0816	48.00	77.7%	5.074	0.0792	48.00	80.1%
0.700	5.073	0.0949	48.00	78.0%	5.073	0.0920	48.00	80.4%
0.800	5.072	0.1083	48.00	78.1%	5.072	0.1050	48.00	80.5%
0.900	5.071	0.1221	48.00	77.9%	5.071	0.1183	48.00	80.4%
1.000	5.070	0.1359	48.00	77.7%	5.070	0.1316	48.00	80.3%

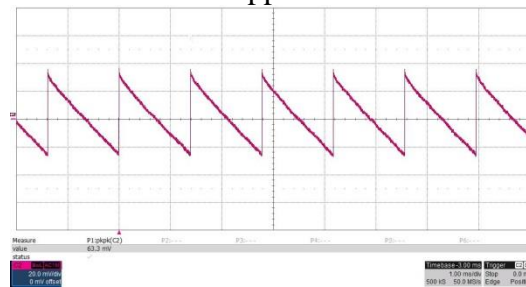
	-----End To End-----				-----Converter Only-----			
<u>I_{out}</u>	<u>V_{out}</u>	<u>I_{in}</u>	<u>V_{in}</u>	<u>Eff</u>	<u>V_{out}</u>	<u>I_{in}</u>	<u>V_{in}</u>	<u>Eff</u>
0.000	5.048	0.0015	57.00	0.0%	5.048	0.0015	57.00	0.0%
0.100	5.073	0.0140	57.00	63.6%	5.074	0.0137	57.00	65.0%
0.200	5.082	0.0264	57.00	67.5%	5.083	0.0259	57.00	68.9%
0.300	5.077	0.0374	57.00	71.4%	5.078	0.0365	57.00	73.2%
0.400	5.077	0.0480	57.00	74.2%	5.077	0.0468	57.00	76.1%
0.500	5.077	0.0588	57.00	75.7%	5.078	0.0574	57.00	77.6%
0.600	5.076	0.0698	57.00	76.5%	5.077	0.0681	57.00	78.5%
0.700	5.076	0.0810	57.00	77.0%	5.077	0.0790	57.00	78.9%
0.800	5.075	0.0923	57.00	77.2%	5.076	0.0900	57.00	79.2%
0.900	5.074	0.1038	57.00	77.2%	5.075	0.1012	57.00	79.2%
1.000	5.073	0.1154	57.00	77.1%	5.074	0.1124	57.00	79.2%

Ripple and Noise

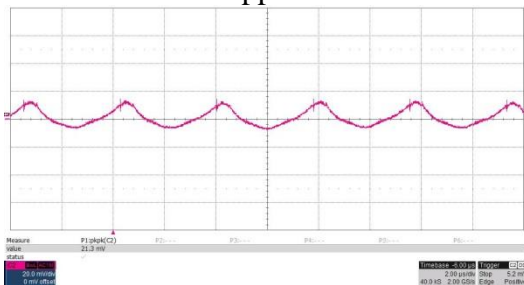
Output Ripple across C13
20mV/div, 2usec/div
Measured 22.7mVpp:



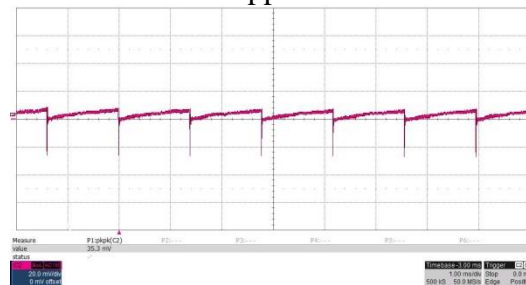
Output Ripple, 0A Load, across C13
20mV/div, 1msec/div
Measured 63.3mVpp:



Input Ripple across C2
20mV/div, 2usec/div
Measured 21.3mVpp:

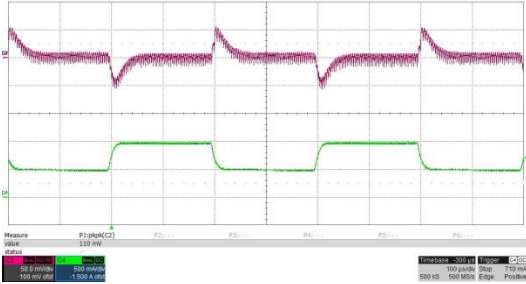


Input Ripple, 0A Load, across C2
20mV/div, 1msec/div
Measured 35.3mVpp:

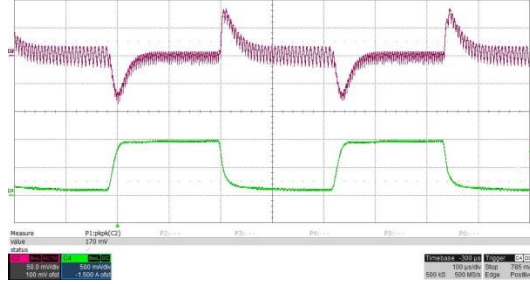


Dynamic Loading

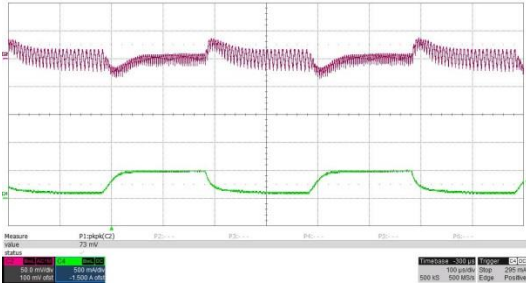
Load Step; 500mA to 1A
Slew Rate = 100mA/usec
50mV/div, 500mA/div, 100usec/div
Measured 110mVpp:



Load Step, 100mA to 1A
Slew Rate=100mA/usec
50mV/div, 500mA/div, 100usec/div
Measured 170Vpp

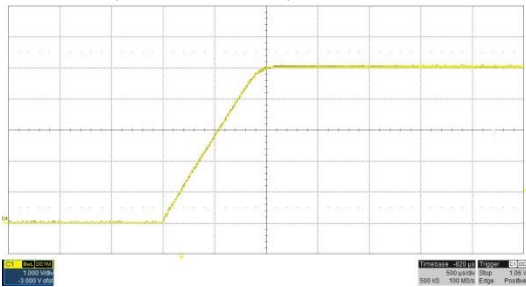


Load Step; 100mA to 500mA
Slew Rate = 100mA/usec
50mV/div, 500mA/div, 100usec/div
Measured 73mVpp:

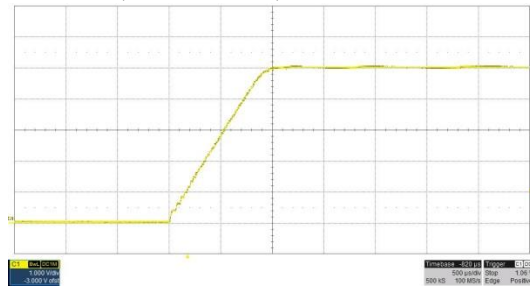


Turn On Response

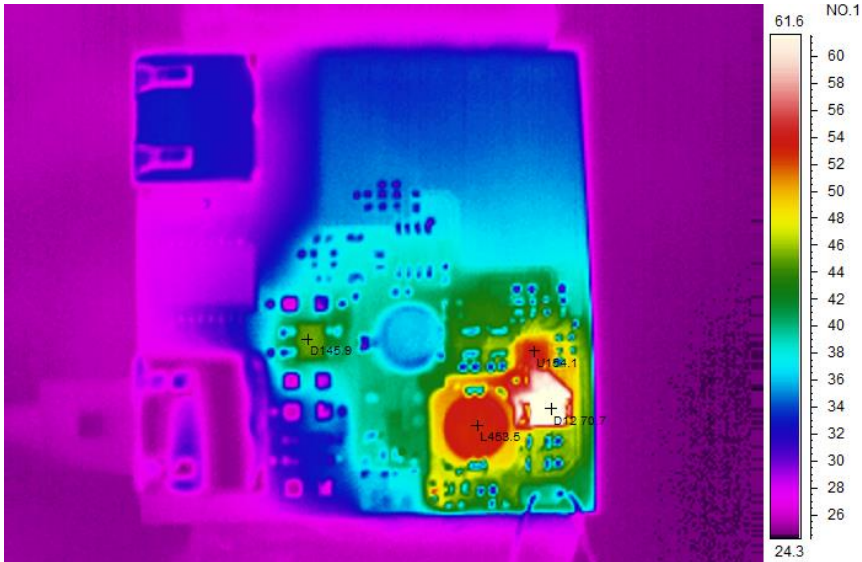
1A Load, 500usec/div, 1V/div:



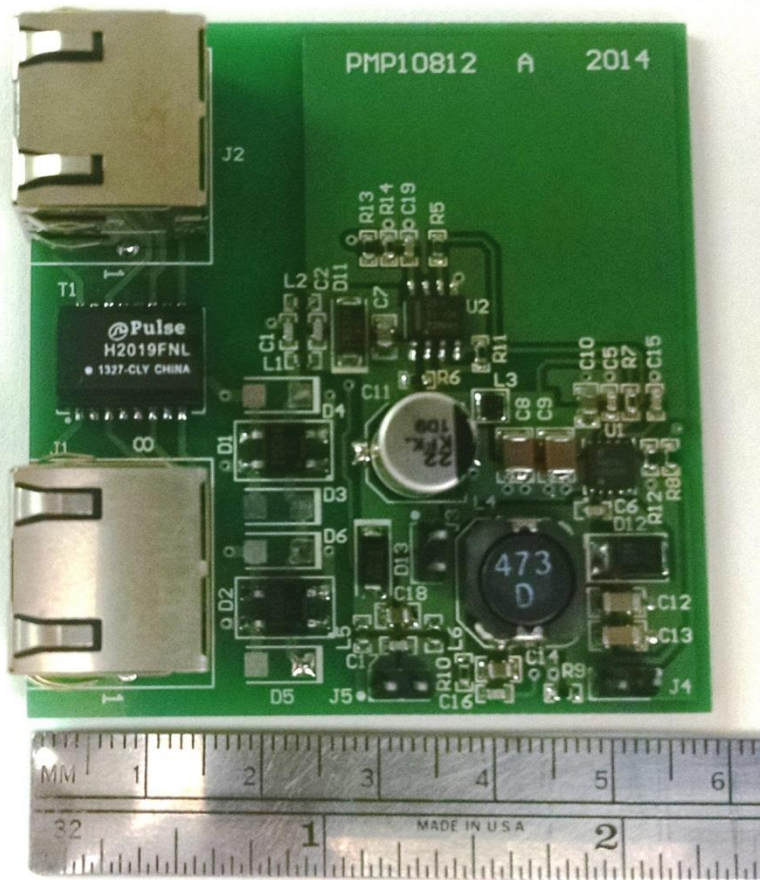
0A Load, 50usec.div, 1V/div:



Thermal Plot



Photo



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