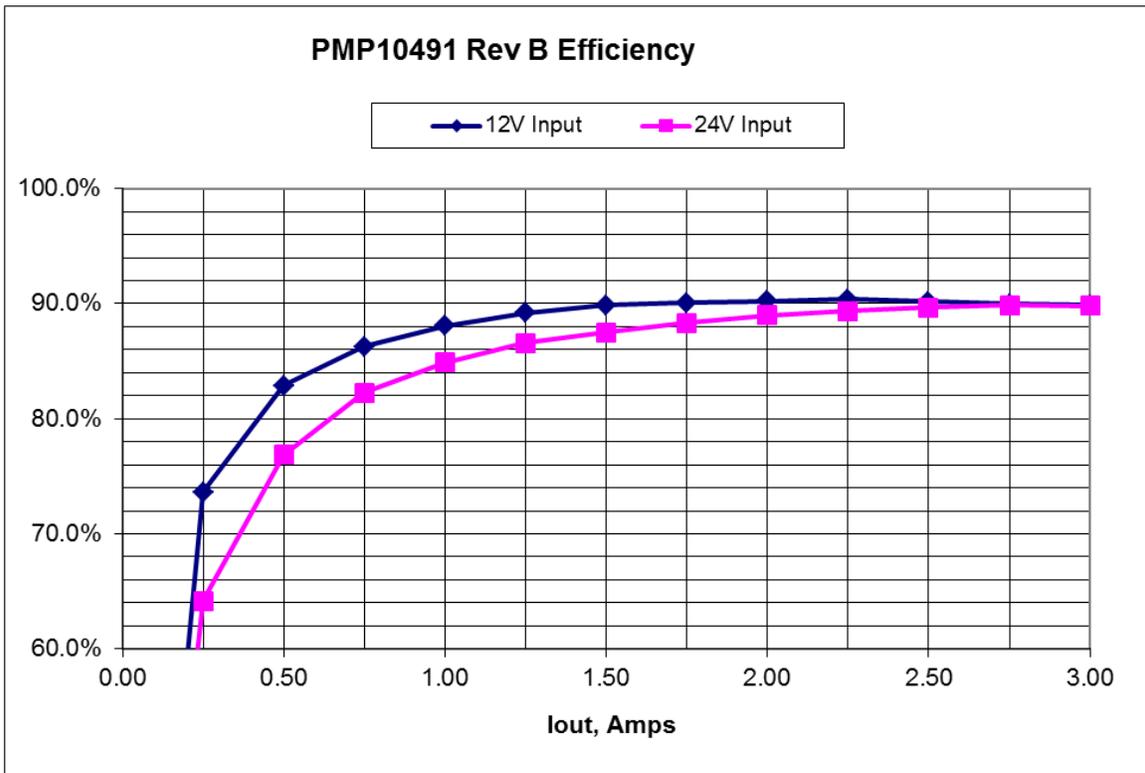


**Efficiency**

The efficiency of the converter is shown below:

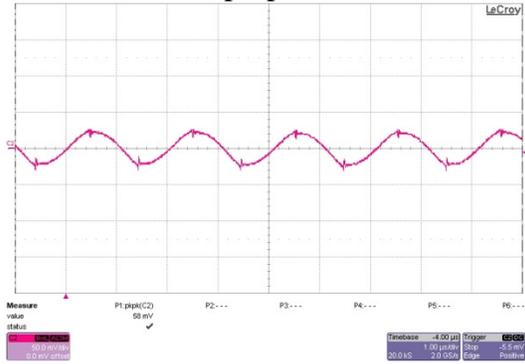
<b>I<sub>out</sub></b>	<b>V<sub>out</sub></b>	<b>I<sub>in</sub></b>	<b>V<sub>in</sub></b>	<b>Eff</b>	<b>V<sub>out</sub></b>	<b>I<sub>in</sub></b>	<b>V<sub>in</sub></b>	<b>Eff</b>
0.00	5.054	0.035	12.00	0.0%	5.054	0.028	24.00	0.0%
0.25	5.053	0.143	12.00	73.6%	5.053	0.082	24.00	64.2%
0.50	5.053	0.254	12.00	82.9%	5.053	0.137	24.00	76.8%
0.75	5.053	0.366	12.00	86.3%	5.053	0.192	24.00	82.2%
1.00	5.053	0.478	12.00	88.1%	5.053	0.248	24.00	84.9%
1.25	5.053	0.590	12.00	89.2%	5.053	0.304	24.00	86.6%
1.50	5.053	0.703	12.00	89.8%	5.053	0.361	24.00	87.5%
1.75	5.052	0.818	12.00	90.1%	5.052	0.417	24.00	88.3%
2.00	5.052	0.933	12.00	90.2%	5.052	0.473	24.00	89.0%
2.25	5.052	1.048	12.00	90.4%	5.052	0.530	24.00	89.4%
2.50	5.052	1.167	12.00	90.2%	5.052	0.587	24.00	89.7%
2.75	5.052	1.287	12.00	90.0%	5.052	0.644	24.00	89.9%
3.00	5.051	1.405	12.00	89.9%	5.051	0.703	24.00	89.8%



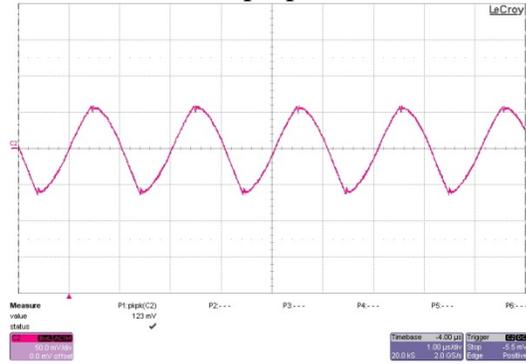
**Ripple and Noise**

Ripple measurements taken with a 3A load and 20MHz BWL.

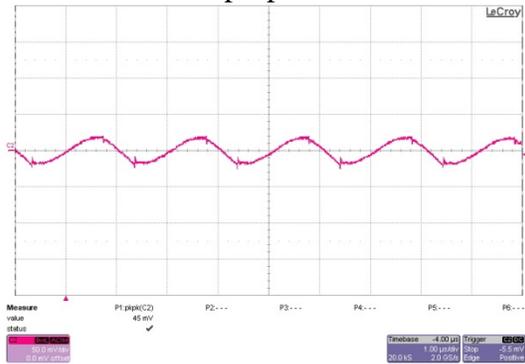
Output Ripple (C9), 12Vin  
50mV/div, 1usec/div  
Measured 58mV pk-pk:



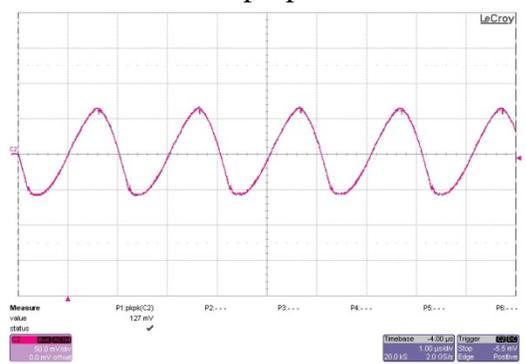
Input Ripple (C1), 12Vin  
50mV/div, 1usec/div  
Measured 123mV pk-pk:



Output Ripple (C9), 24Vin  
50mV/div, 1usec/div  
Measured 45mV pk-pk:

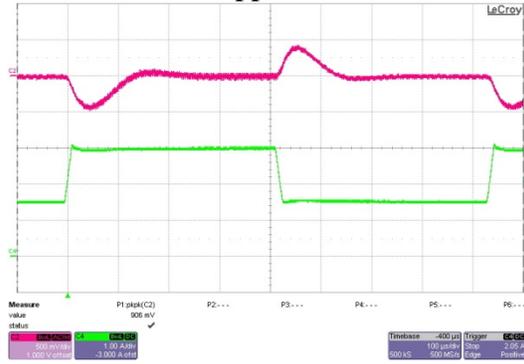


Input Ripple (C1), 24Vin  
50mV/div, 1usec/div  
Measured 127mV pk-pk:

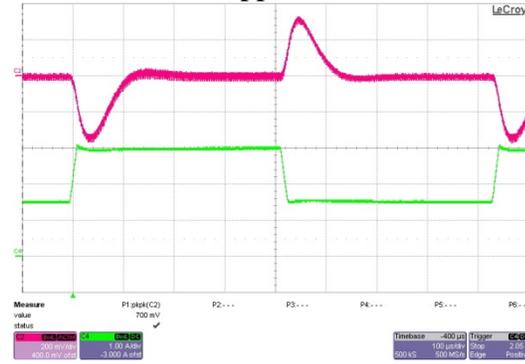


**Dynamic Loading**

Load Step, 12Vin  
 1.5A to 3A step load  
 100mA/usec slew rate  
 500mV/div, 100usec/div  
 Measured 906mVpp:

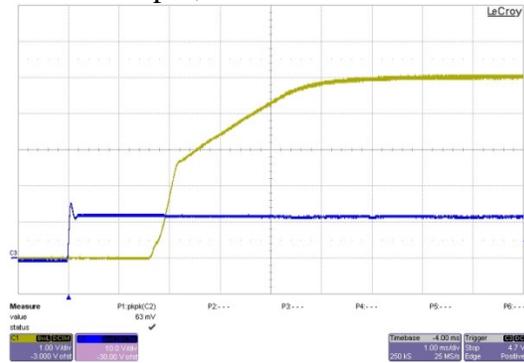


Load Step, 24Vin  
 1.5A to 3A step load  
 100mA/usec slew rate  
 200mV/div, 100usec/div  
 Measured 700mVpp:

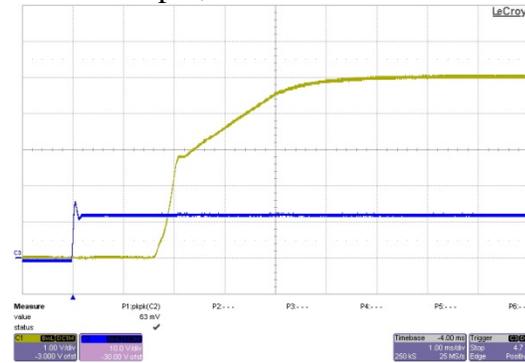


**Turn On Response**

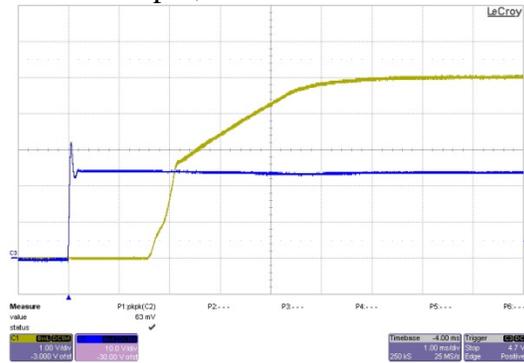
12Vin, 3A Load, 1msec/div  
 Top: Output, 1V/div  
 Bottom: Input, 10V/div:



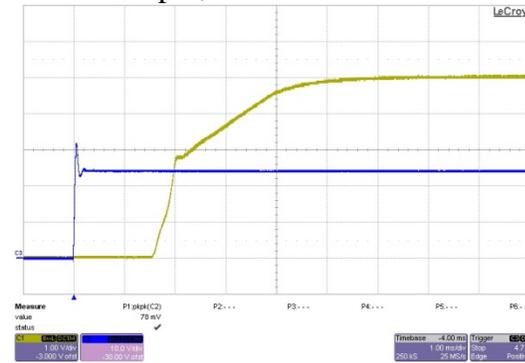
12Vin, 0A Load, 1msec/div  
 Top: Output, 1V/div  
 Bottom: Input, 10V/div:



24Vin, 3A Load, 1msec/div  
 Top: Output, 1V/div  
 Bottom: Input, 10V/div:



24Vin, 0A Load, 1msec/div  
 Top: Output, 1V/div  
 Bottom: Input, 10V/div:

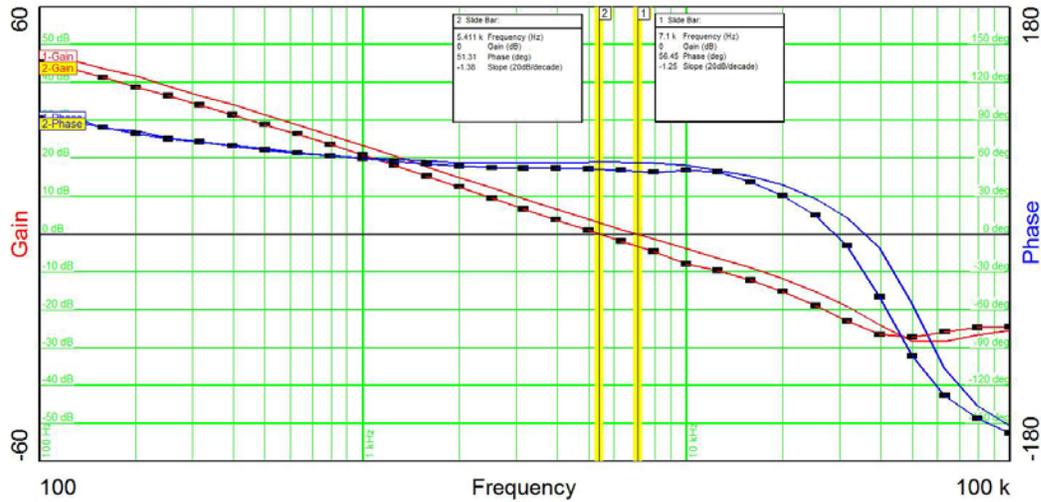


**Stability**

Loop response of the converter with a 3A load.

Plot 1 (no markers): 24Vin. BW=7.1KHz; PM=56 degrees; GM=23dB.

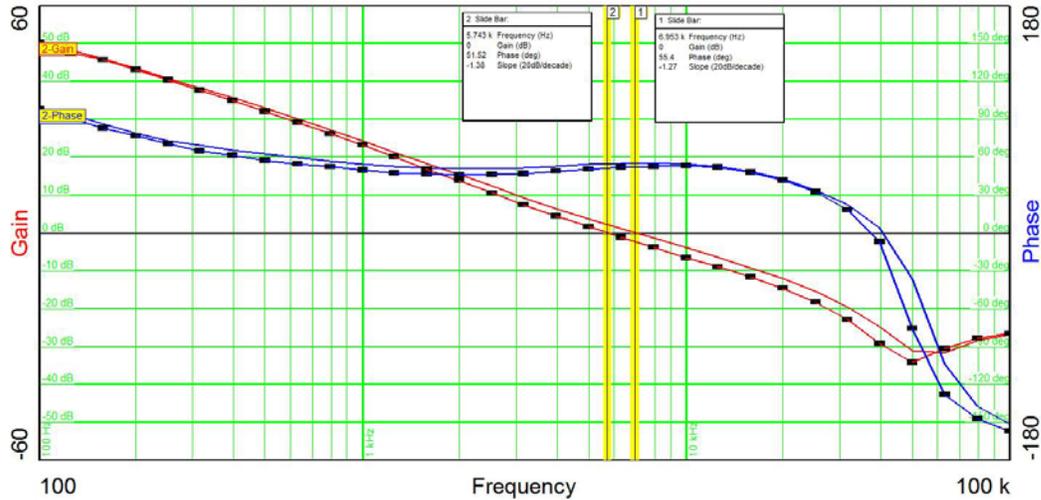
Plot 2 (markers): 12Vin. BW=5.4KHz; PM=51 degrees; GM=22dB.



Loop response of the converter with a 300mA load:

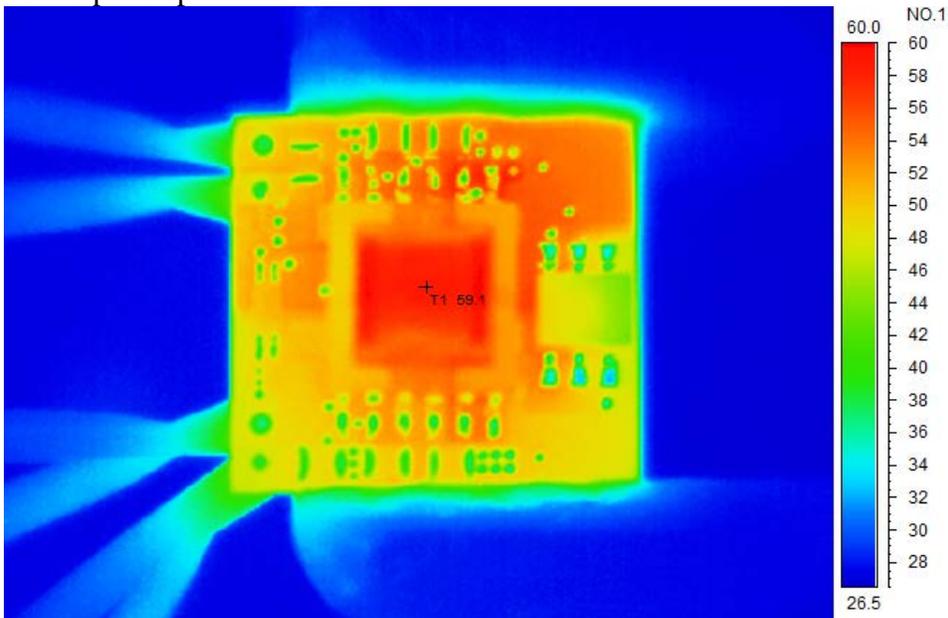
Plot 1 (no markers): 24Vin. BW=6.9KHz; PM=55 degrees; GM=26dB.

Plot 2 (markers): 12Vin. BW=5.7KHz; PM=51 degrees; GM=28dB.

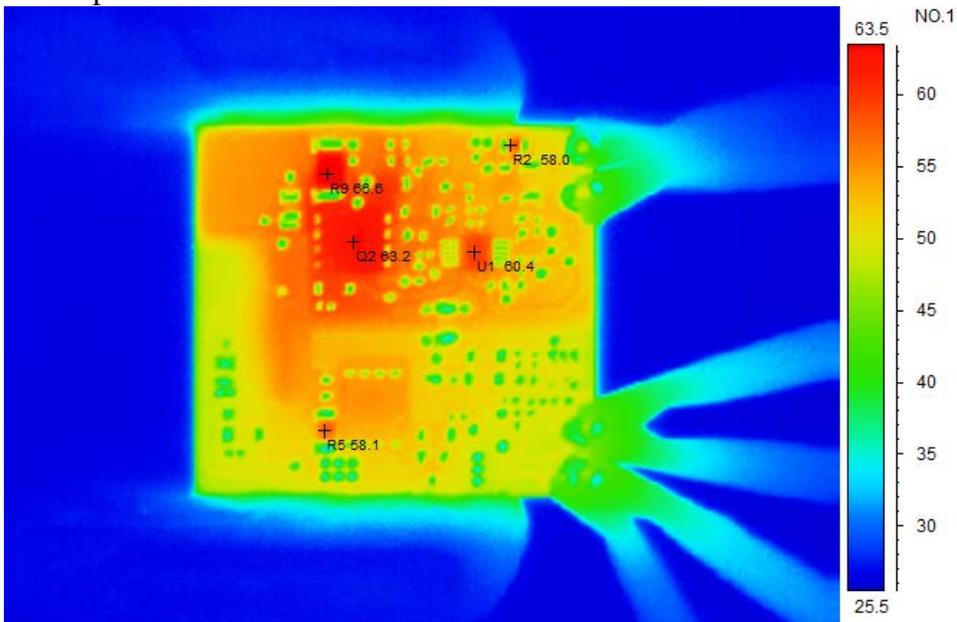


**Thermal:**

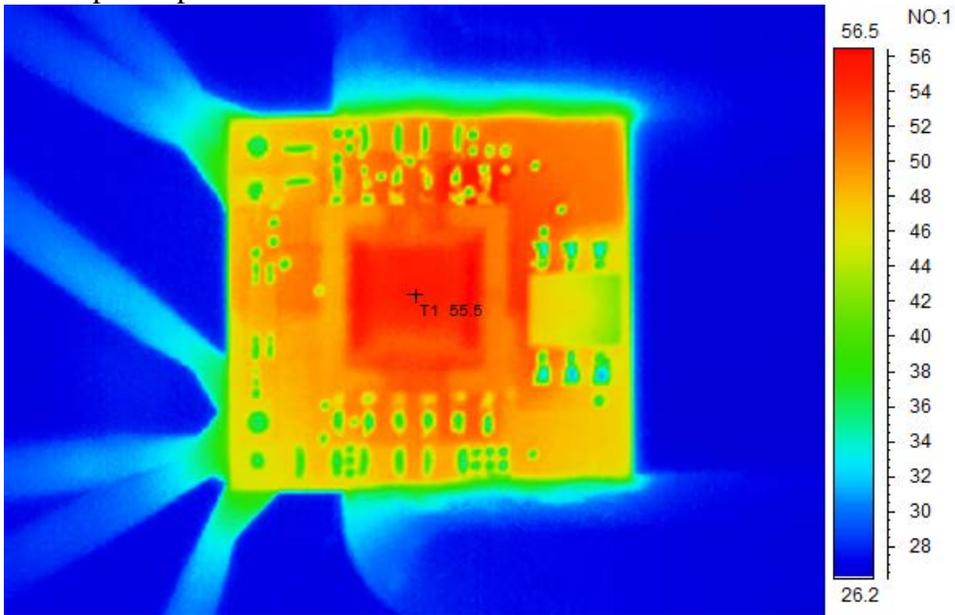
12V Input Top:



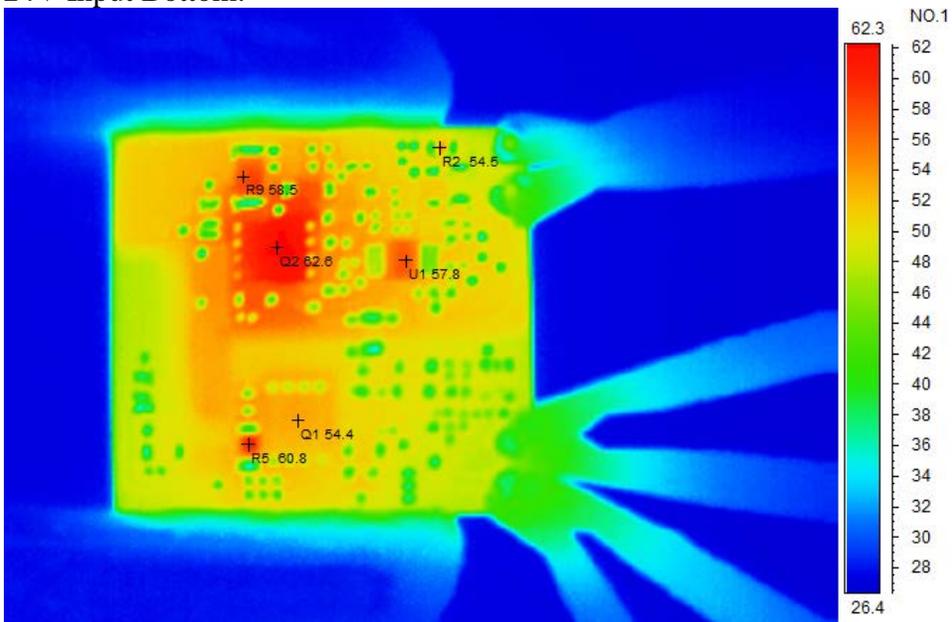
12V Input Bottom:



24V Input Top:

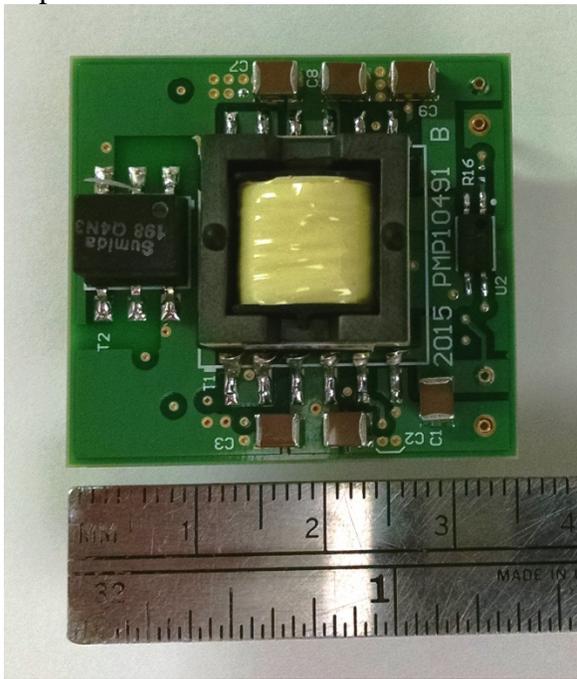


24V Input Bottom:

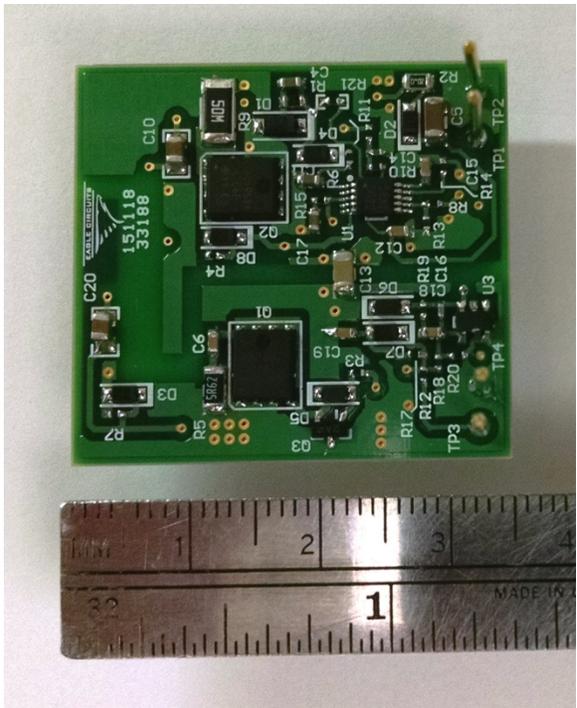


**Photo:**

Top:



Bottom:



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