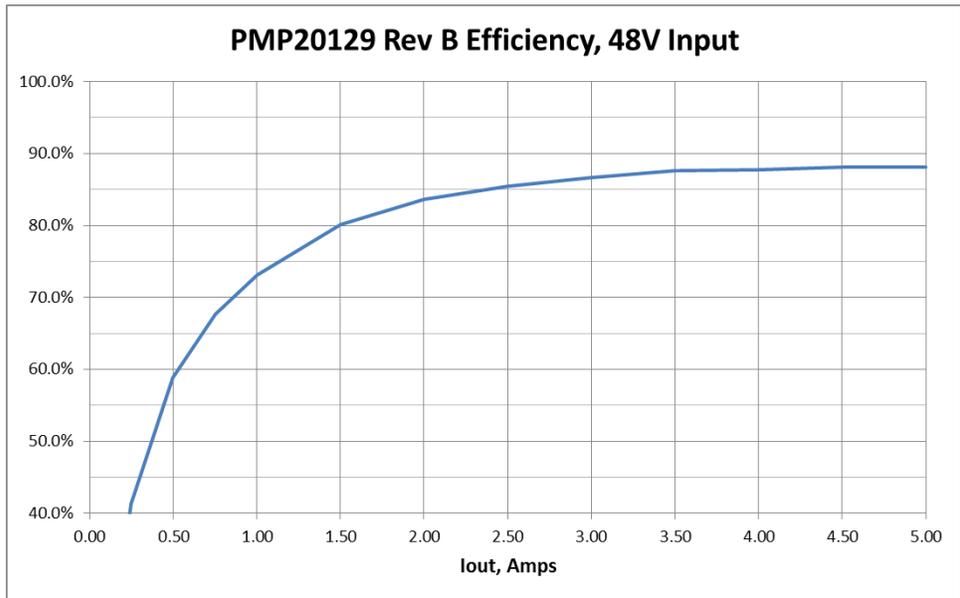


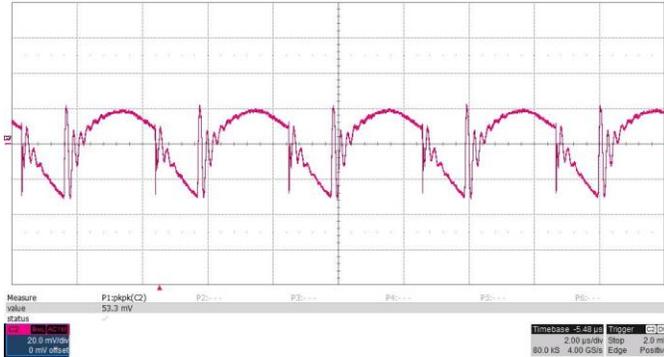
**Efficiency**



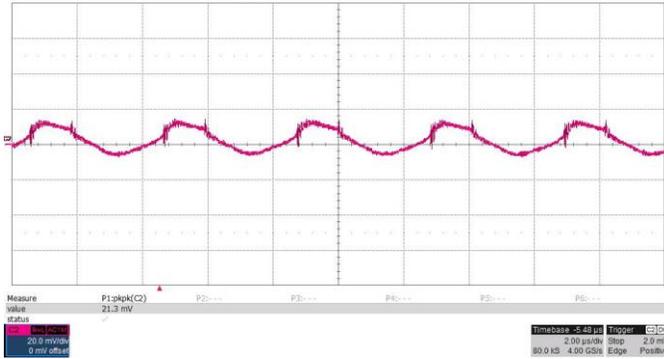
| <b>Iout</b> | <b>Vout</b> | <b>J1<br/>lin</b> | <b>J1<br/>Vin</b> | <b>J1<br/>Eff</b> |
|-------------|-------------|-------------------|-------------------|-------------------|
| 0.00        | 3.333       | 0.025             | 48.00             | 0.0%              |
| 0.25        | 3.333       | 0.042             | 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:

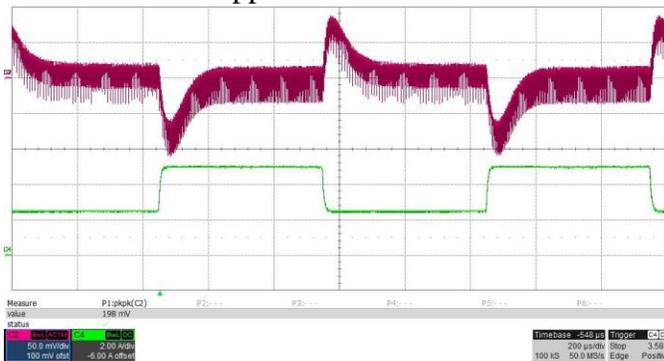


Input Ripple (J1), 20mV/div, 2usec/div  
Measured 21.3mVpp:



**Dynamic Loading**

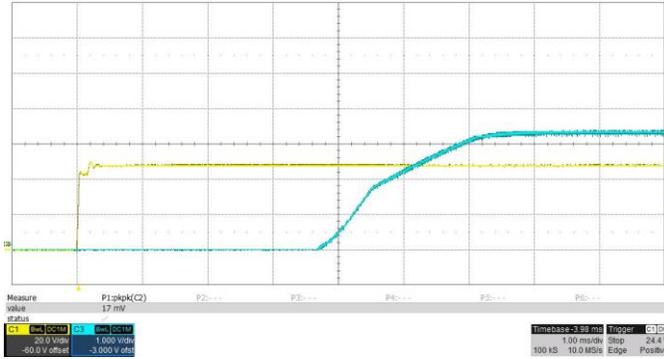
Output response to load step  
2.5A to 5A load step  
50mV/div, 2A/div, 200usec/div  
Slew Rate = 500mA/usec  
Measured 198mVpp across C12:



### Turn On Response

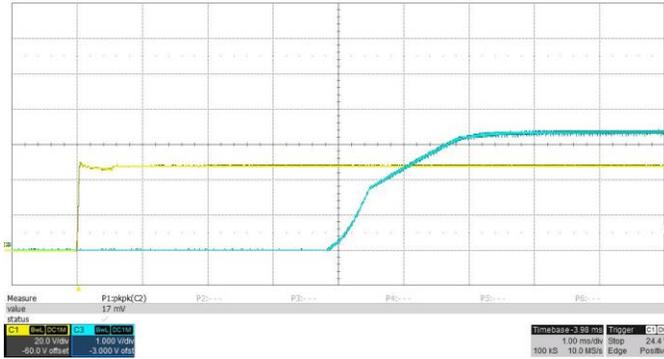
5A load, 1msec/div

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



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

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

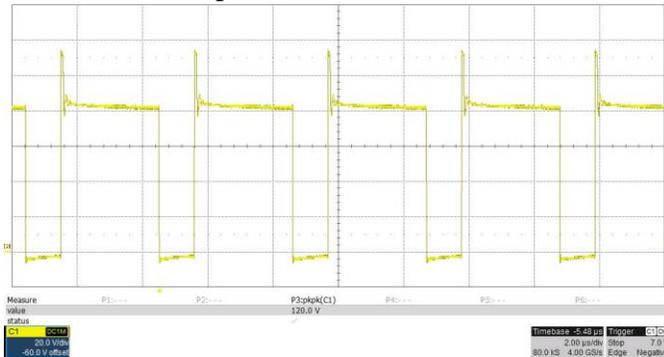


### Waveforms

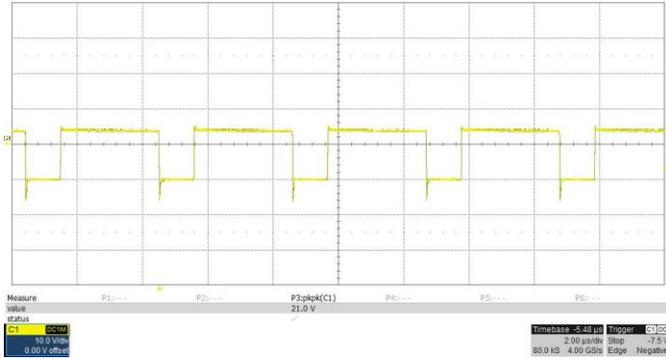
Drain to source, Q3, 60V input, 5A load

20V/div, 2usec/div

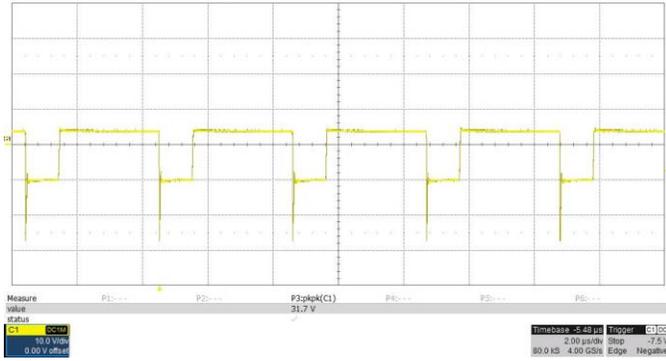
Measured 120V peak:



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

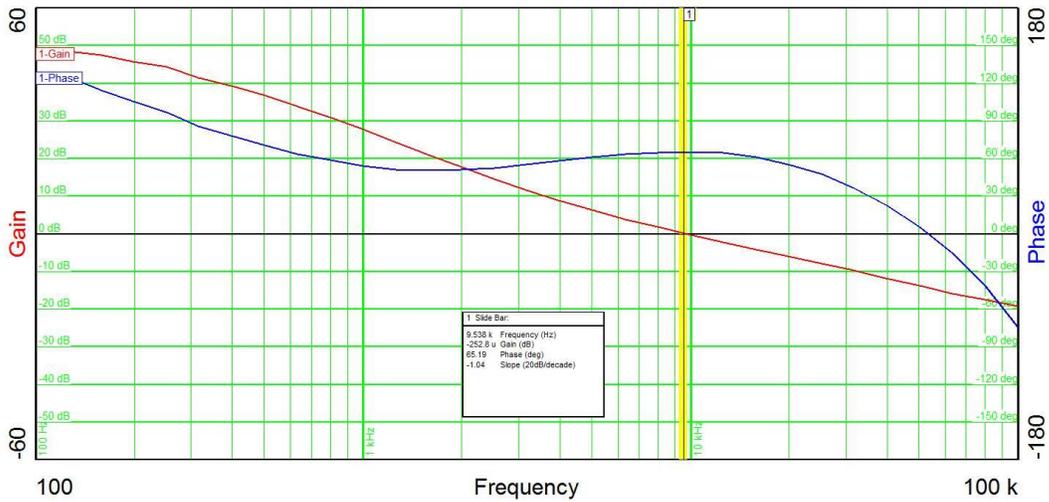


Drain to source, Q1, 60V input, 0A load  
 10V/div, 2usec/div  
 Measured 31.7V peak:



**Loop Stability**

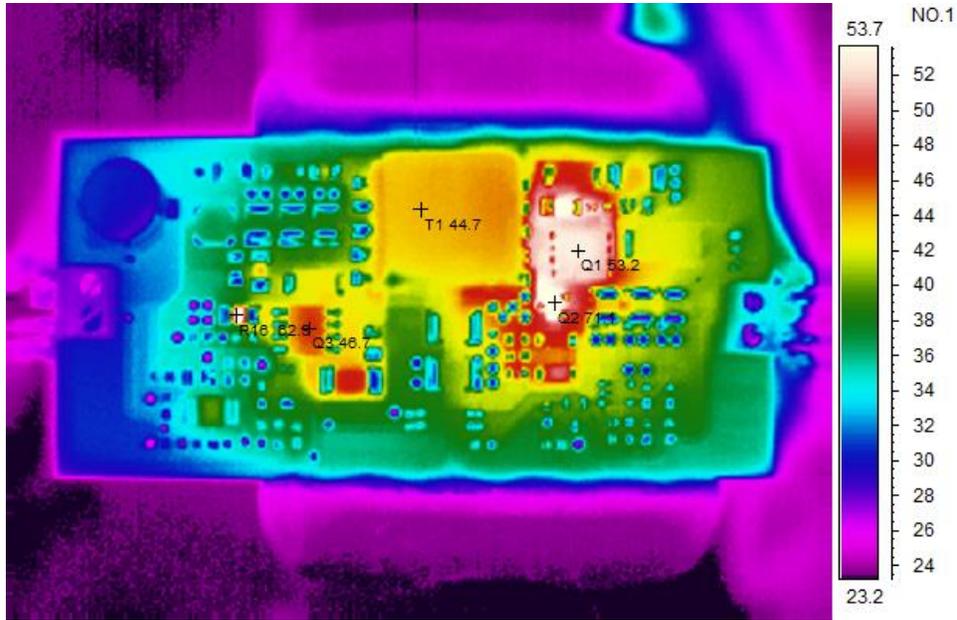
48V input, 5A load:



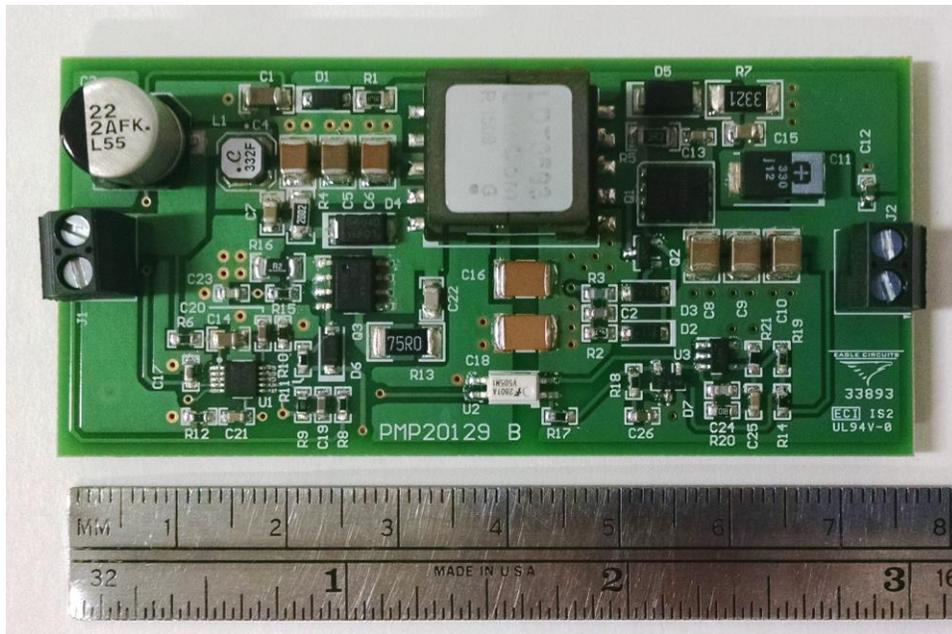
Bandwidth= 9.5 kHz Phase Margin=65 degrees Gain Margin=15dB

Thermal Plot

48V input, 5A load



Photo



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