Efficiency

All testing done with a 48V input, 900mA load, and 20MHz BW unless otherwise noted. The efficiency is shown below:

<table>
<thead>
<tr>
<th>Iout</th>
<th>Vout</th>
<th>Iin</th>
<th>Vin</th>
<th>Eff</th>
<th>J1</th>
<th>J1</th>
<th>J1</th>
<th>J1</th>
<th>C1</th>
<th>C1</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>3.299</td>
<td>0.0046</td>
<td>48.00</td>
<td>0.0%</td>
<td>47.41</td>
<td>0.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.100</td>
<td>3.299</td>
<td>0.0114</td>
<td>48.00</td>
<td>60.3%</td>
<td>47.33</td>
<td>61.1%</td>
<td></td>
<td></td>
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<tr>
<td>0.200</td>
<td>3.299</td>
<td>0.0184</td>
<td>48.00</td>
<td>74.7%</td>
<td>47.28</td>
<td>75.8%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>0.300</td>
<td>3.299</td>
<td>0.0256</td>
<td>48.00</td>
<td>80.5%</td>
<td>47.24</td>
<td>81.8%</td>
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<tr>
<td>0.400</td>
<td>3.299</td>
<td>0.0328</td>
<td>48.00</td>
<td>83.8%</td>
<td>47.20</td>
<td>85.2%</td>
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<tr>
<td>0.500</td>
<td>3.299</td>
<td>0.0402</td>
<td>48.00</td>
<td>85.5%</td>
<td>47.18</td>
<td>87.0%</td>
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<td></td>
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<tr>
<td>0.600</td>
<td>3.299</td>
<td>0.0476</td>
<td>48.00</td>
<td>86.6%</td>
<td>47.13</td>
<td>88.2%</td>
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<tr>
<td>0.700</td>
<td>3.299</td>
<td>0.0552</td>
<td>48.00</td>
<td>87.2%</td>
<td>47.10</td>
<td>88.8%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.800</td>
<td>3.299</td>
<td>0.0629</td>
<td>48.00</td>
<td>87.4%</td>
<td>47.07</td>
<td>89.1%</td>
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<tr>
<td>0.900</td>
<td>3.299</td>
<td>0.0708</td>
<td>48.00</td>
<td>87.4%</td>
<td>47.05</td>
<td>89.1%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Ripple and Noise

3.3V Output Ripple (C5), 20mV/div
Measured 43.1mV peak to peak:

Input Ripple (C1), 50mV/div
Measured 89mV peak to peak:

Dynamic Loading

3.3V Load Step, 450mA to 900mA load step; 9mA/usec, 100mV/div, 100usec/div
Measured 244mV peak to peak:

Turn On Response

900mA Load, 500usec/div, 1V/div:

0A Load, 1msec.div, 1V/div:
Loop Stability

The measured Bode plot of the converter shown below:

BW = 8.4KHz  PM = 52 Degrees  GM = 16dB

Photo

Top:
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