All testing performed with 48VIN, max loads, and 20MHz BW unless otherwise noted.

### Efficiency and Regulation

#### PoE Input:

<table>
<thead>
<tr>
<th>3.3V</th>
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<th>5V</th>
<th>5V</th>
<th>J1</th>
<th>J1</th>
<th>J1</th>
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<tbody>
<tr>
<td>Iout</td>
<td>Vout</td>
<td>Iout</td>
<td>Vout</td>
<td>Iin</td>
<td>Vin</td>
<td>Eff</td>
</tr>
<tr>
<td>0.000</td>
<td>3.334</td>
<td>0.000</td>
<td>5.016</td>
<td>0.013</td>
<td>48.00</td>
<td>0.0%</td>
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<tr>
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<td>3.333</td>
<td>0.000</td>
<td>5.057</td>
<td>0.085</td>
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<tr>
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<td>0.125</td>
<td>5.018</td>
<td>0.035</td>
<td>48.00</td>
<td>62.1%</td>
</tr>
<tr>
<td>0.250</td>
<td>3.334</td>
<td>0.250</td>
<td>5.019</td>
<td>0.057</td>
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<td>76.3%</td>
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<tr>
<td>0.500</td>
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<td>0.103</td>
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<td>5.025</td>
<td>0.198</td>
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#### AUX Input and Converter Only:

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<th>5V</th>
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<td>Iout</td>
<td>Vout</td>
<td>Iin</td>
<td>Vin</td>
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<td>Eff</td>
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<td>62.2%</td>
<td>47.37</td>
<td>63.0%</td>
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<td>0.057</td>
<td>48.00</td>
<td>76.4%</td>
<td>47.34</td>
<td>77.4%</td>
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<tr>
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<td>85.3%</td>
<td>47.33</td>
<td>86.6%</td>
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<tr>
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<td>47.29</td>
<td>91.1%</td>
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Ripple and Noise

3.3V Ripple (C22)
20mV/div, 2usec/div
Measured 50mVpp:

5V Ripple (C12)
20mV/div, 2usec/div
Measured 42mVpp:

Input Ripple (C4)
20mV/div, 2usec/div
Measured 57.3mVpp:
**Dynamic Loading**

3.3V load step, 3.3V response  
0.5A to 1.0A load step  
100mV/div, 0.5A/div, 500usec/div; Slew Rate = 100mA/usec  
Measured 140mVpp across C22:

3.3V load step, 5V response  
Measured 163mVpp across C12:
5V load step, 5V response
0.5A to 1.0A load step
100mV/div, 1A/div, 500usec/div; Slew Rate = 100mA/usec
Measured 257mVpp across C12:

5V load step, 3.3V response
Measured 187mVpp across C22:
Turn On Response

Max Loads, 1msec/div, 1V/div:

![Graph 1](image1)

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

![Graph 2](image2)
Loop Stability

Loop gain and phase measured with a 48V input and 1A load on each output.

\[ \text{BW} = 5.8\text{KHz} \quad \text{PM} = 58\,\text{degrees} \quad \text{GM} = 18\text{dB} \]

Misc Waveforms

Q2 drain to source with 57V input, 1A load, and 200MHz BWL
Measured 25.3Vpeak:

Q5 drain to source with 57V input, 1A load, and 200MHz BWL
Measured 18.3Vpeak:
Photo

Top:

Bottom:
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