All testing performed with 12VIN, 360mA load, and 20MHz BW unless otherwise noted.

**Efficiency**

<table>
<thead>
<tr>
<th>J2/J3</th>
<th>J2</th>
<th>J1</th>
<th>J1</th>
<th>J2</th>
<th>J3</th>
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<th>J1</th>
<th>J3</th>
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<th>Vout</th>
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<th>Vin</th>
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<td>0.000</td>
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<td>47.92</td>
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<td>1.576</td>
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<td>1.620</td>
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</table>

--- TPS2384 not connected ---

--- With TPS2384 and PMP11254 Load ---

![PMP20981 RevA Efficiency, 12V Input](chart.png)
**Ripple and Noise**

Output Ripple (C31/C32)
50mV/div, 2usec.div
Measured 75mVpp:

Input Ripple (J1)
20mV/div, 2usec.div
Measured 32mVpp:

**Dynamic Loading**

Output Load Step; 180mA to 360mA load step; Slew Rate = 250mA/usec
200mV/div, 200mA/div, 500usec/div
Measured 427mVpp across J2:

Output Load Step; 0mA to 360mA load step; Slew Rate = 250mA/usec
500mV/div, 200mA/div, 500usec/div
Measured 1.27Vpp across J2:
**Turn On Response**

360mA Load, 2msec/div, 10V/div: 0A Load, 2msec/div, 10V/div:

**Loop Stability**

The measured Bode plot of the converter with a 360mA load (at J2) is shown below (with the TPS2384 connected):

Bandwidth: 4.5 KHz  
Phase Margin: 70 degrees  
Gain Margin: 14dB

The measured Bode plot of the converter with a 0mA load is shown below (with the TPS2384 connected). The TPS2384 provides approximately 636mW load:

Bandwidth: 1.2 KHz  
Phase Margin: 55 degrees  
Gain Margin: 41dB

3 of 5
The measured Bode plot of the converter with a PoE load of 360mA is shown below.

Bandwidth: 3.5 KHz  Phase Margin: 83 degrees  Gain Margin: 17dB

**Thermal Plot**

Thermal plots measured with PoE load of 360mA at J3.

Top:
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