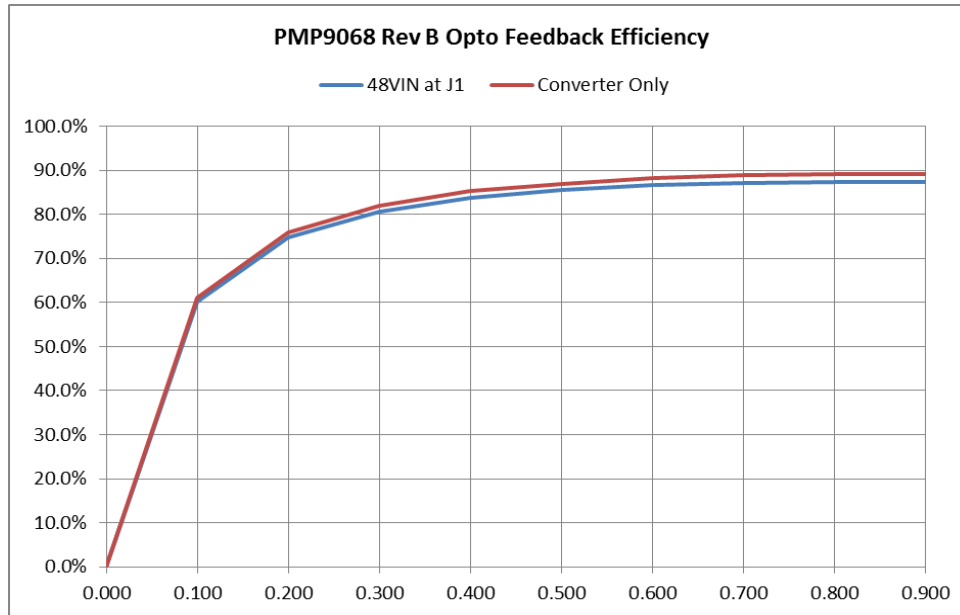


Efficiency

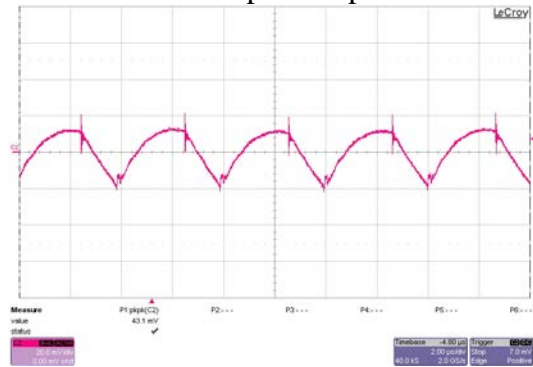
All testing done with a 48V input, 900mA load, and 20MHz BW unless otherwise noted.
 The efficiency is shown below:

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

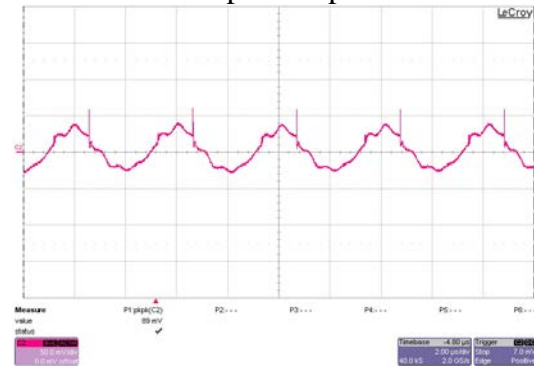


Ripple and Noise

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

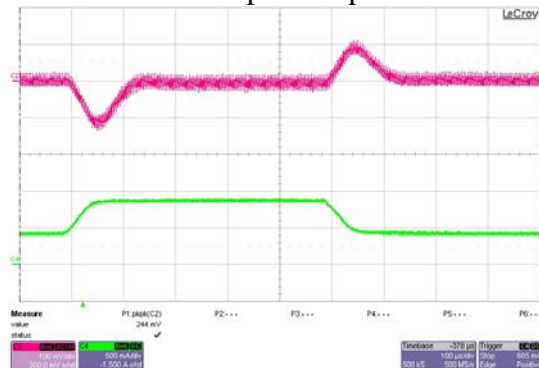


Input Ripple (C1), 50mV/div
 Measured 89mVpeak to peak:



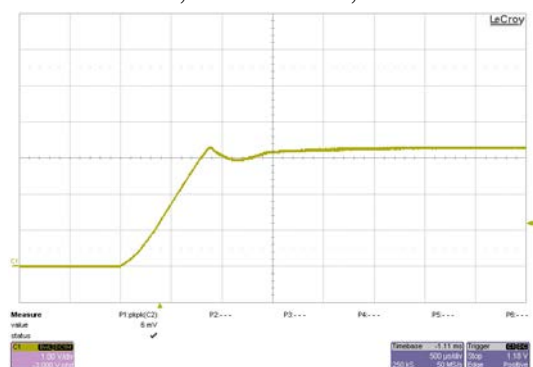
Dynamic Loading

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

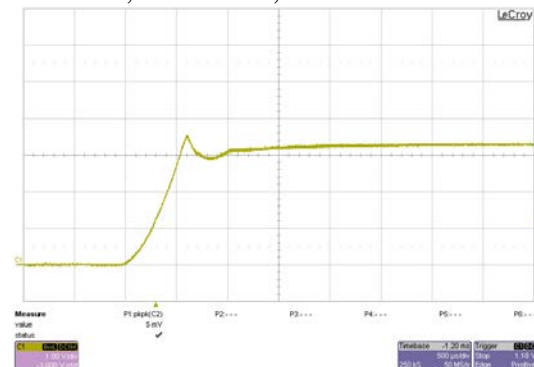


Turn On Response

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

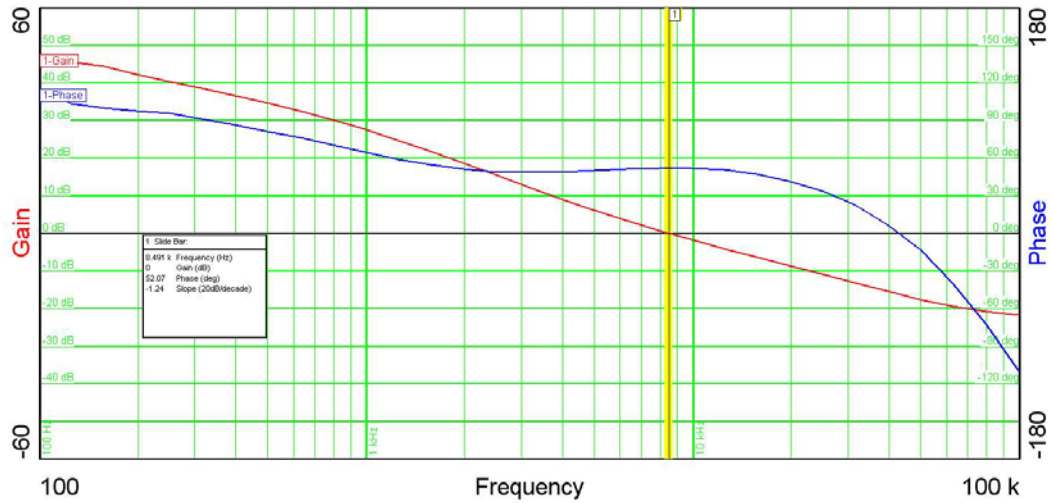


0A Load, 1msec.div, 1V/div:



Loop Stability

The measured Bode plot of the converter shown below:



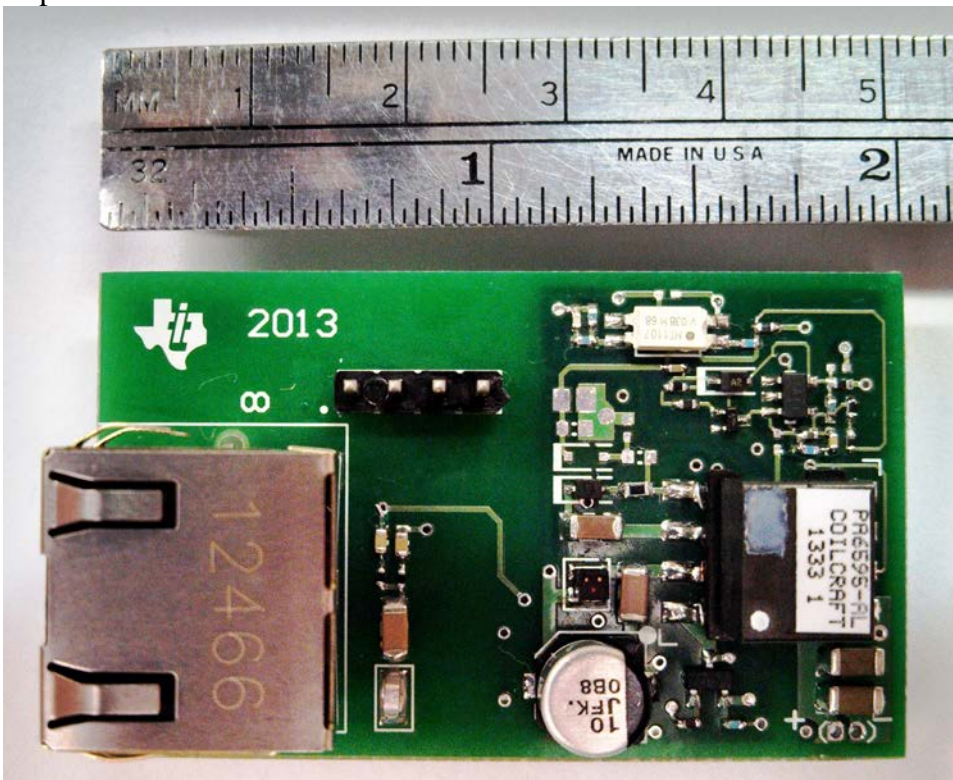
BW = 8.4KHz

PM = 52 Degrees

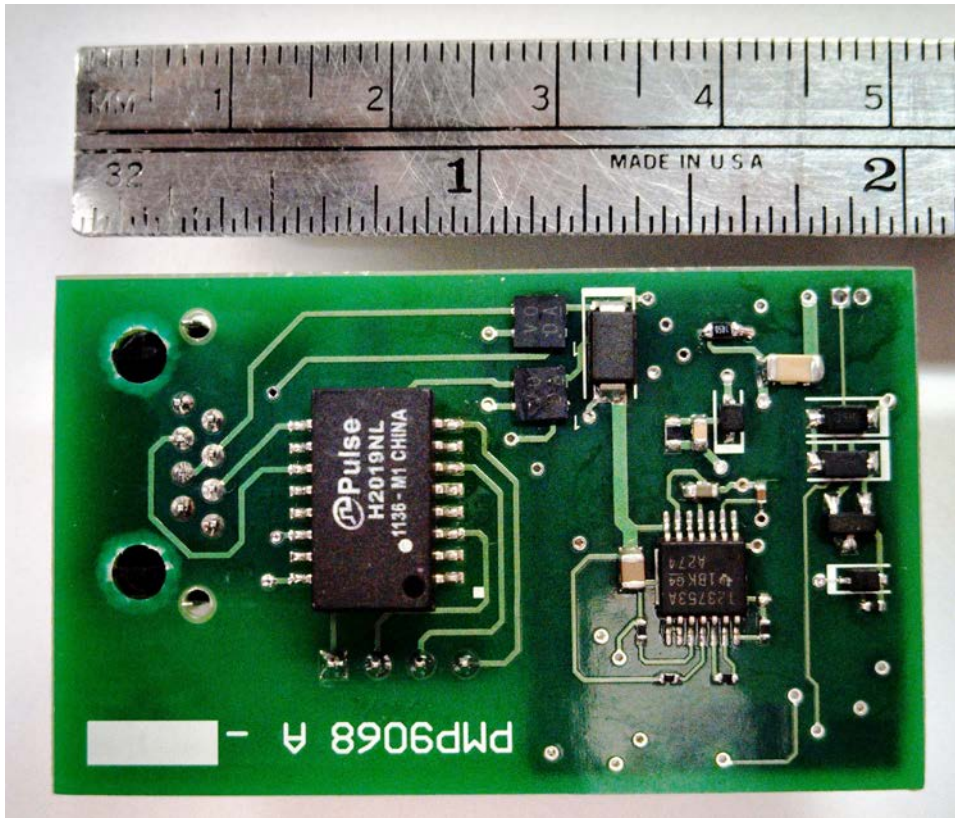
GM = 16dB

Photo

Top:



Bottom:



IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to TI's Terms of Sale (<https://www.ti.com/legal/termsofsale.html>) or other applicable terms available either on [ti.com](https://www.ti.com) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2021, Texas Instruments Incorporated