Test Data
For PMP7895
1/16/2013

Test SPECIFICATIONS

Vin min	10.8
Vin max	13.2
Vout	12
Iout	1A Max
Fsw	200kHz

TYPICAL PERFORMANCE

EFFICIENCY
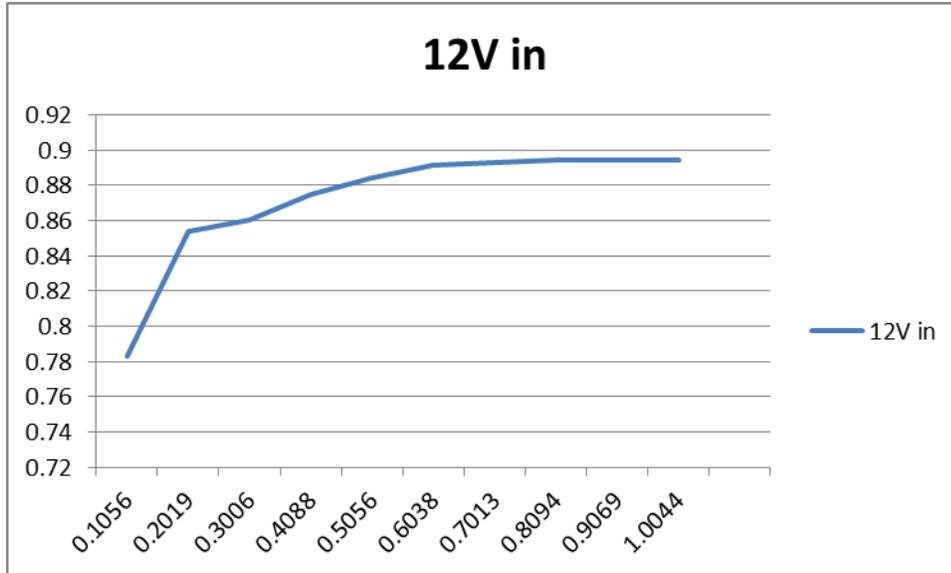
Vin	Iin	Vout	Iout	Pin	Pout	Ploss	Efficiency
12	0.134	11.924	0.1056	1.608	1.259174	0.348826	0.783069
12	0.235	11.924	0.2019	2.82	2.407456	0.412544	0.853708
12	0.347	11.921	0.3006	4.164	3.583453	0.580547	0.860579
12	0.464	11.92	0.4088	5.568	4.872896	0.695104	0.875161
12	0.568	11.92	0.5056	6.816	6.026752	0.789248	0.884207
12	0.673	11.92	0.6038	8.076	7.197296	0.878704	0.891196
12	0.78	11.919	0.7013	9.36	8.358795	1.001205	0.893034
12	0.899	11.918	0.8094	10.788	9.646429	1.141571	0.894181
12	1.007	11.918	0.9069	12.084	10.80843	1.275566	0.894442
12	1.115	11.916	1.0044	13.38	11.96843	1.41157	0.894502

Placed RC on drain of the Reset MOSFET. Tuned RC Values to maximize efficiency. Efficiency imprvovment of 1% was observed by tuning the RC.

Waveforms

Startup
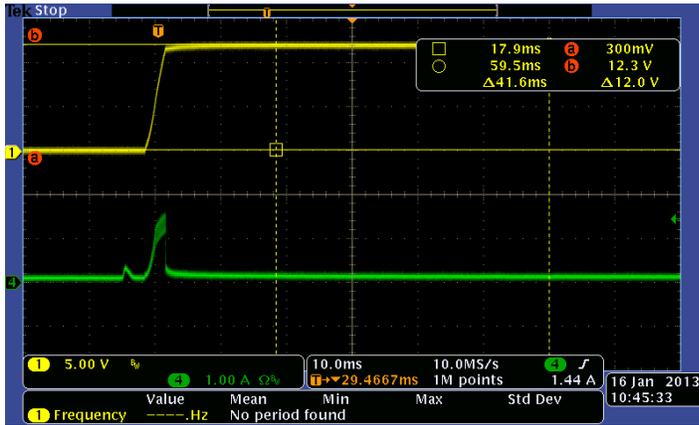
Startup into No Load (12Vin)
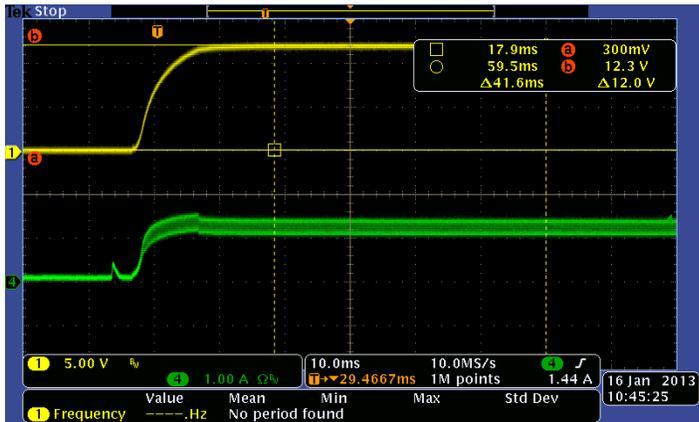
**Startup into 1A Load (12Vin)**

**Primary-Side Switch Voltage**
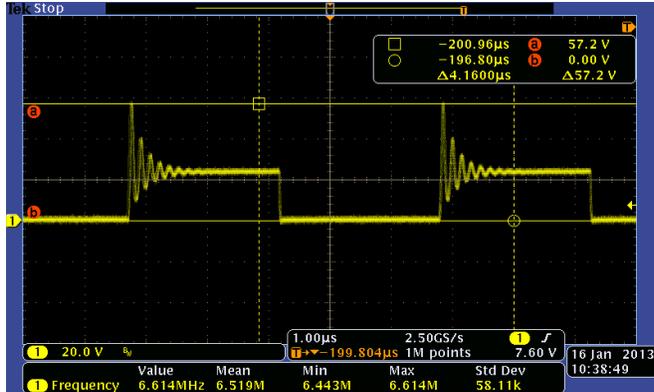
Primary-Side Switch Voltage at 12Vin and 1Aout (Energy spike does exceed the max VDS rating of MOSFET (40V)) – Recommend Infineon, BSZ042N06 as a direct higher voltage replacement. Another alternative for possible improvement in efficiency in the Infineon, BSZ067N06.

**Output Voltage Ripple and Secondary-Side Switch Node**
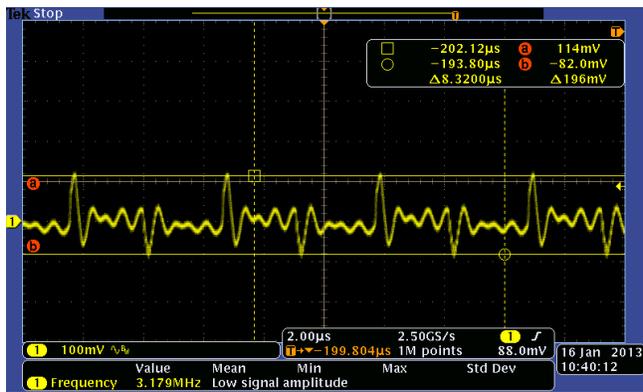
Output Voltage Ripple 12V in 1A out.
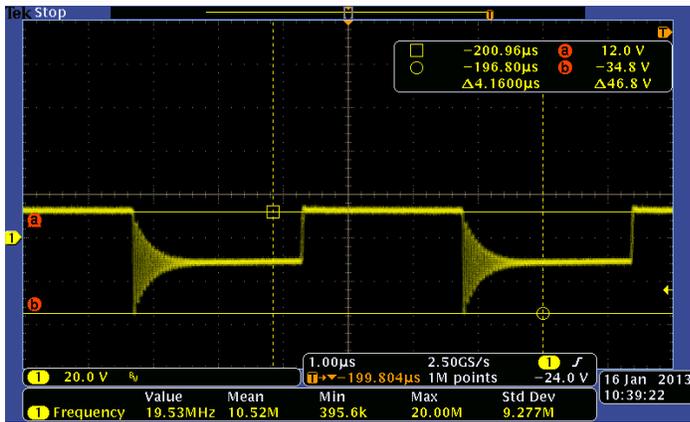
Secondary-Side Switch Node at 12Vin 1A load (ringing is exceeding max VRRM of diode (40V))
Recommend On Semi, MBRD350 as a suitable replacement.

Load Transient Response
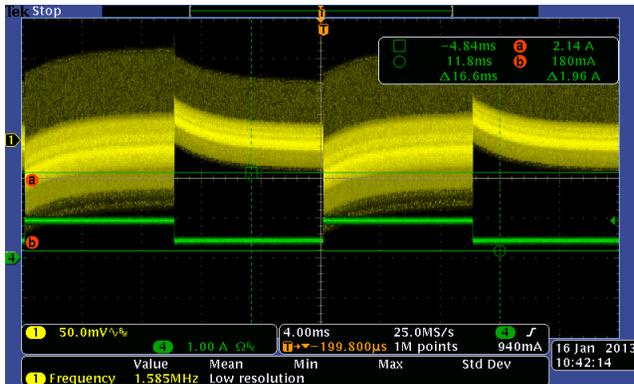
Undershoot at 12Vin 50%-to-100% Load Step (0.5A to 1A)

Short Circuit Test
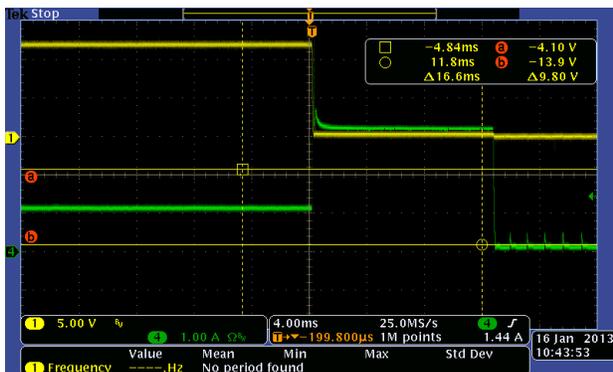
12Vin Shorted output.

Thermal Data
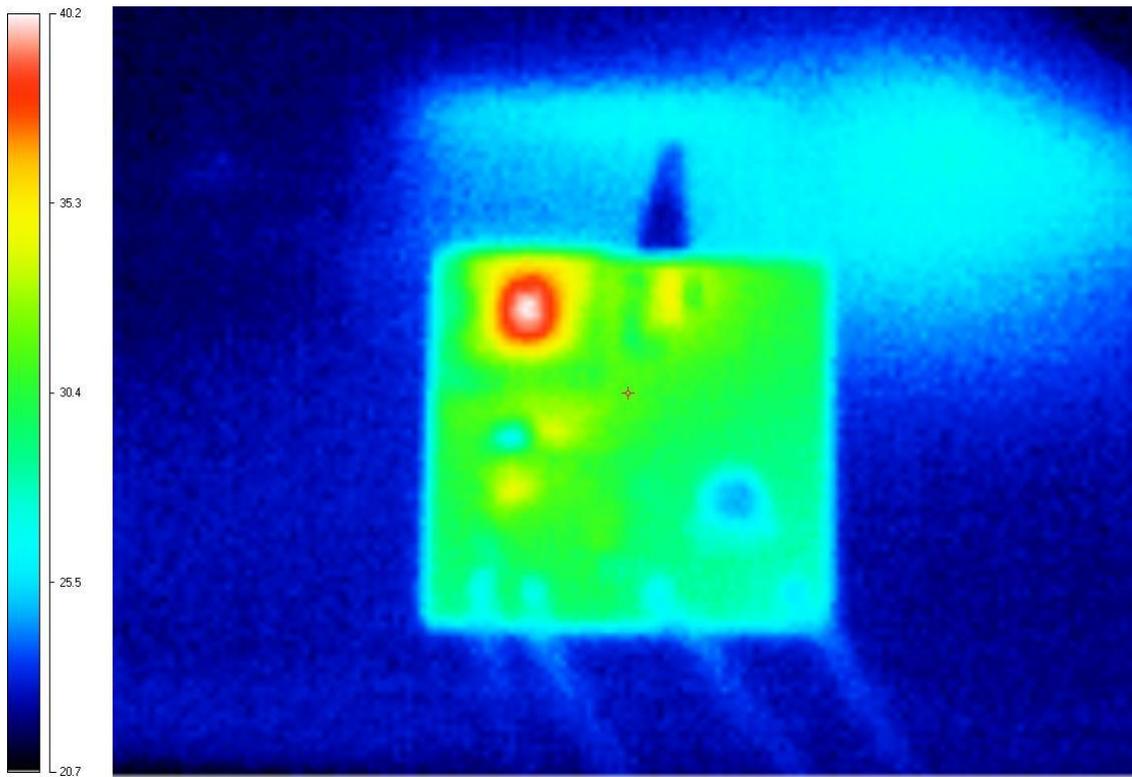
IR Thermal Image taken after running at 12V in, 1A load running for 15 Minutes; Room Temp = 24.5C

Board Photo
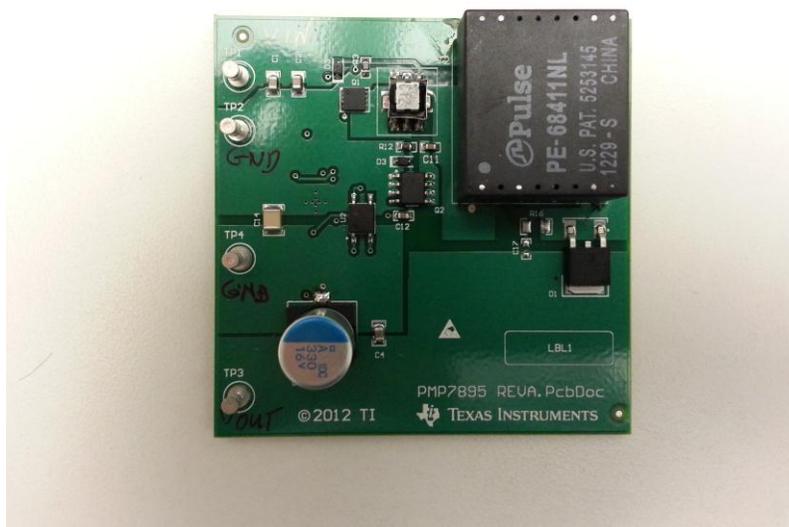
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