Test Data
For PMP7860
8/29/2012

Power specification board was tested to

Vin 1= 6V to 8V in

Vout = 12V @ 34A for 30 seconds

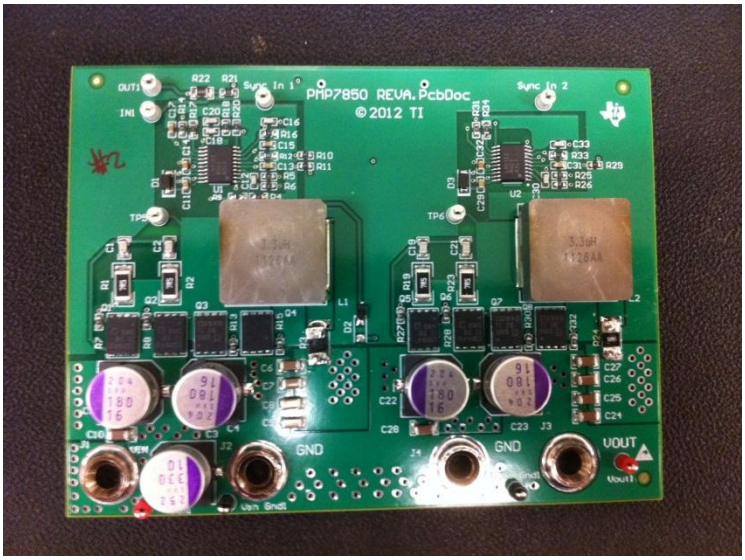
Rev 2 – Additional functional 30second test carried out at 425W.

Vout 12V out 17A continuous.

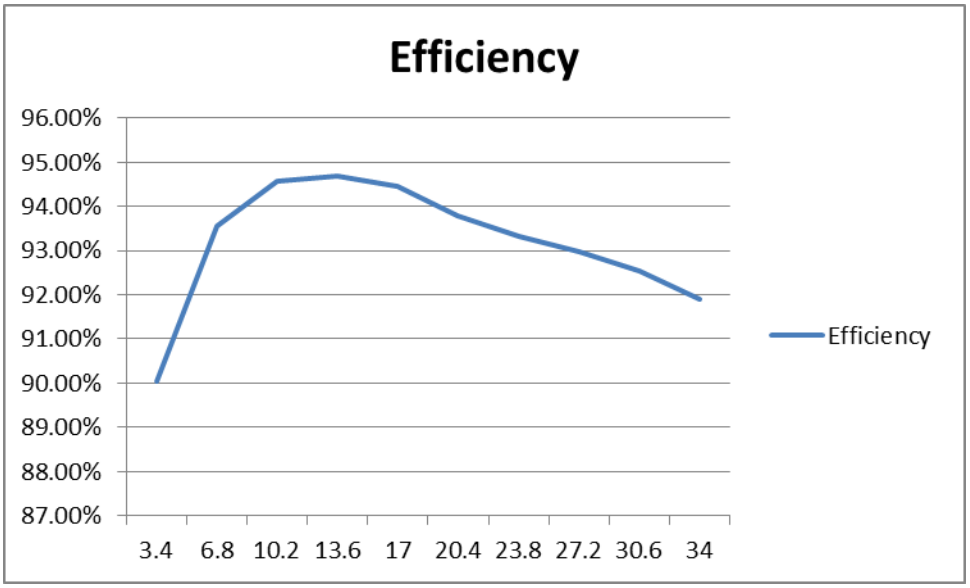
Fsw = 500kHz

Note, that test set up has 5 ft of cable at input and an additional bulk capacitor was used at the input. For the final application, it is recommended that short input leads be used from power source to the input so as not minimize the possibility of input instability due to under damping

Top Side



System Efficiency



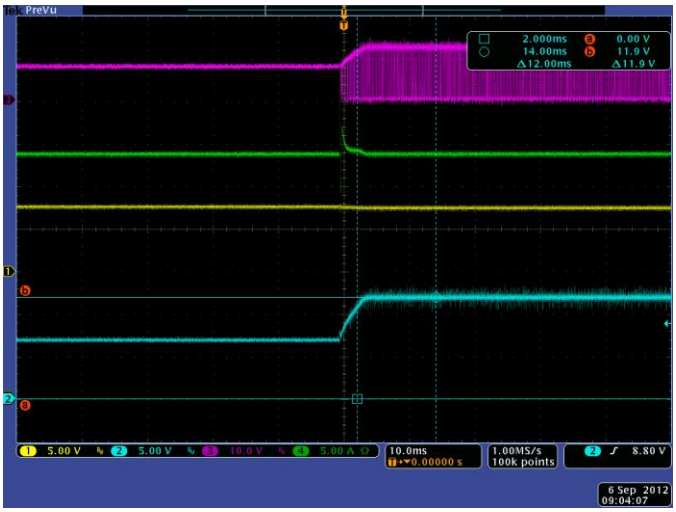
Efficiency Data

Vin	Iin	Vout	Iout	Pin	Pout	Ploss	Eff
7	6.44	11.94	3.4	45.08	40.596	4.484	0.900532
7	12.4	11.94	6.8	86.8	81.192	5.608	0.935392
7	18.4	11.94	10.2	128.8	121.788	7.012	0.945559
7	24.5	11.94	13.6	171.5	162.384	9.116	0.946845
7	30.7	11.94	17	214.9	202.98	11.92	0.944532
7	37.1	11.94	20.4	259.7	243.576	16.124	0.937913
7	43.5	11.94	23.8	304.5	284.172	20.328	0.933241
7	49.9	11.94	27.2	349.3	324.768	24.532	0.929768
7	56.4	11.94	30.6	394.8	365.364	29.436	0.925441
7	63.1	11.94	34	441.7	405.96	35.74	0.919085

Waveforms

Start up Full Load, With UVLO Used as enable.

6V in. Ch 1 Vin, Ch 2 Vout, Ch 3 Vswitch, Ch 4 Iin

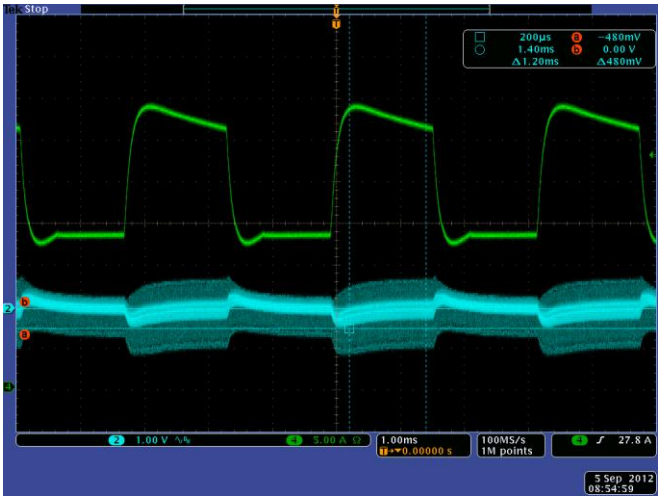


Start Up Full Load, 8V in With UVLO Used as enable**. Ch 1 Vin, Ch 2 Vout, Ch 3 Vswitch, Ch 4 Iin**

Start Up No Load 6.5V in

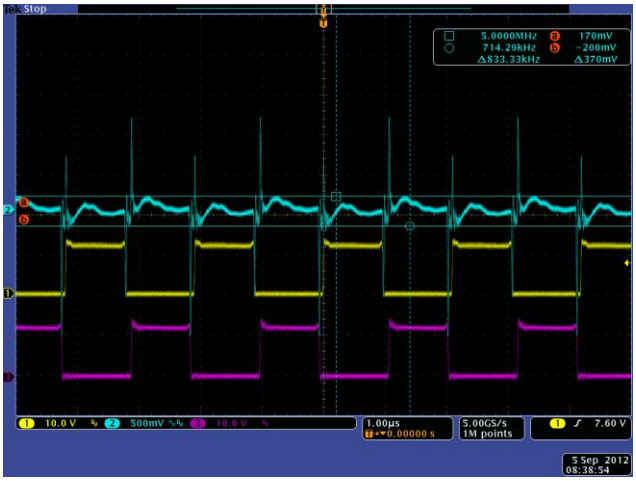
Ch2 Vout; Ch3 Vsw; Ch4- Iin

Transient Response

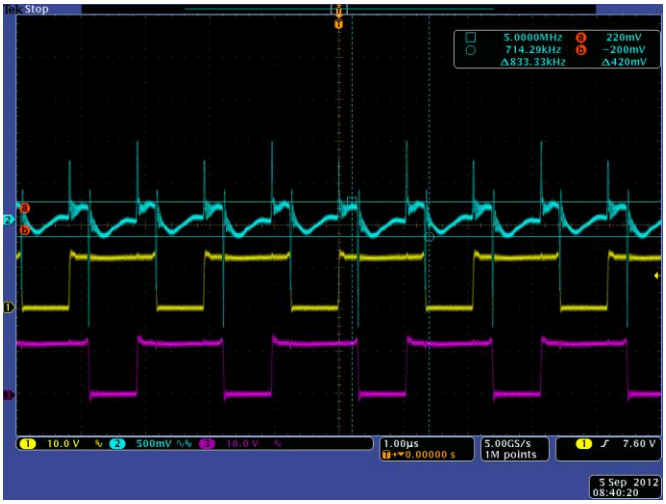


7V in Transient Response 17A to 34A

Vout ripple and Vswitch

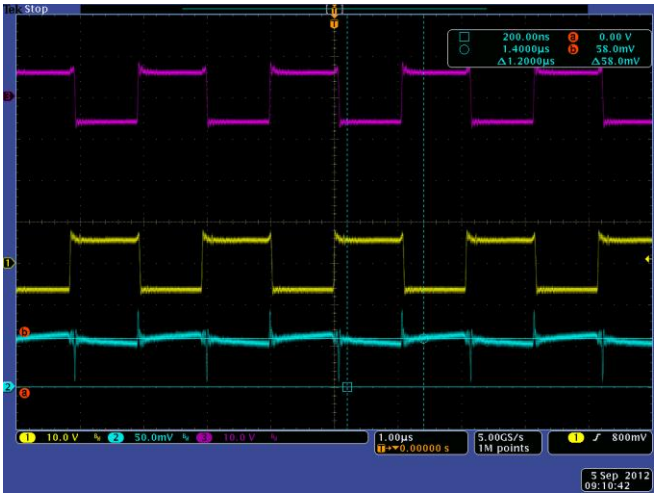


Vout Ripple and Vswitch 6V in 12V out @ 34A

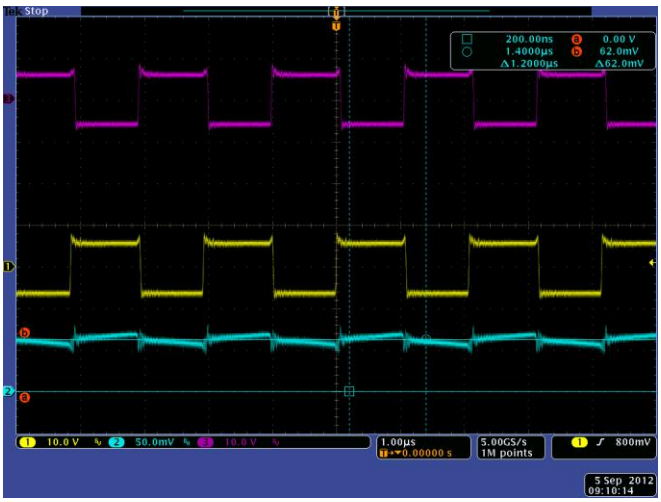


Vout Ripple and Vswitch 8V in 12V out @ 34A

Current Sharing Waveforms



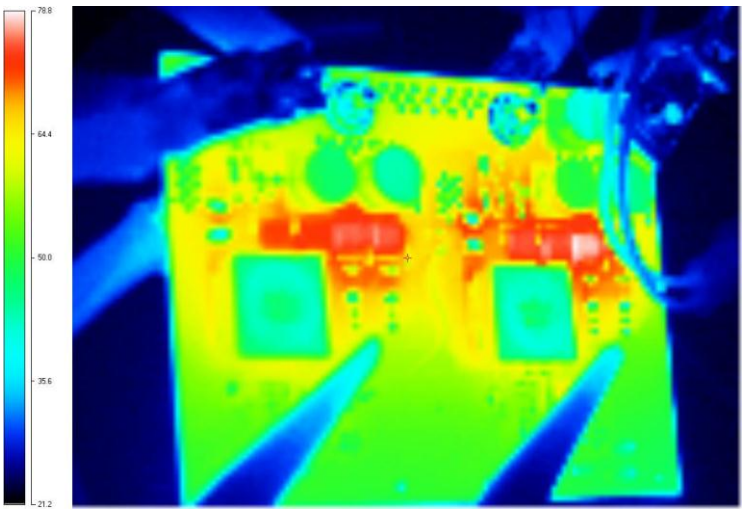
Ch2 2, Master Inductor Current – 34A out (Measured across 1.5mR current sense Resistor)



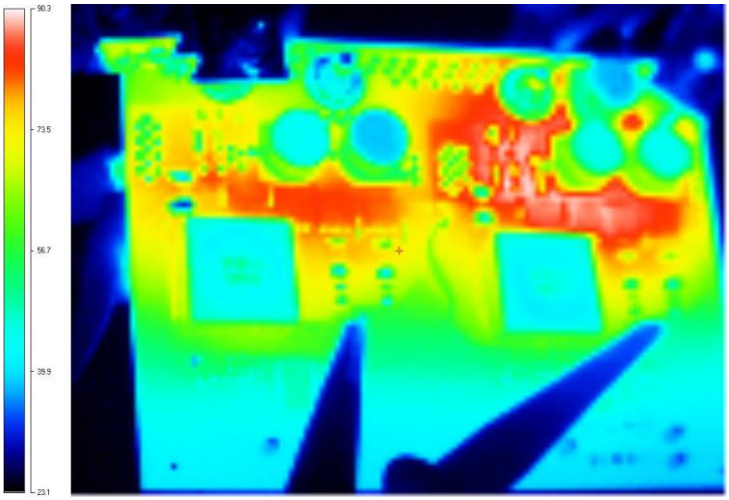
Ch 2, Slave Inductor Current – 34A out (Measured across 1.5mR current sense Resistor)

Thermal Data

Steady State temp, 12V out @ 17A



Temp after 30 seconds, 12V out @ 34A



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