Table of Contents: 1.8V output

For operation at lower loads and short circuit behavior see PMP5032 Test report

Modifications in Test:

R10 at 13.3k from COMP pin to ground gives most stable behavior at light loads.

Power and signal grounds on the HPA353 board that it was tested on were combined to a single ground plane to give best results in reducing duty cycle jitter and output ripple.

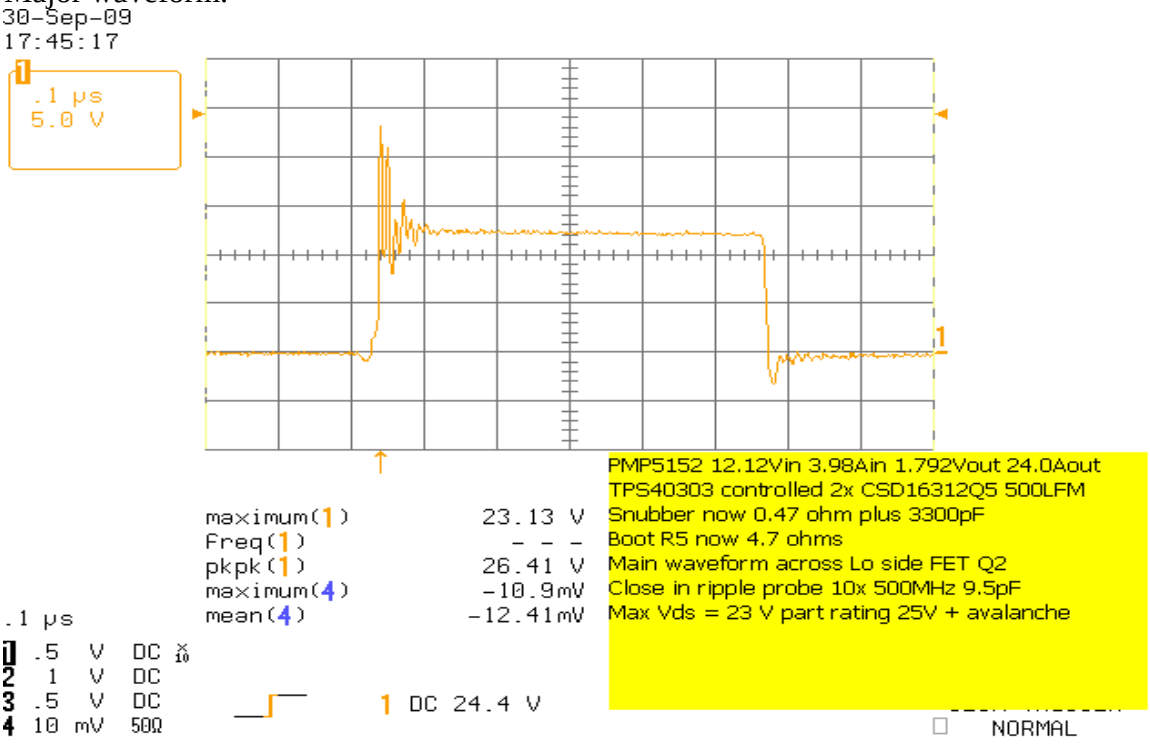
Snubber R6 + C12 changed from 0.68 ohms plus 2200pF to 0.47 ohms plus 3300pF; and R5 increased from 3.3 ohms to 4.7 ohms to reduce Vds overshoot on low side FET Q2 when Q1 turns on.

Thermal summary:

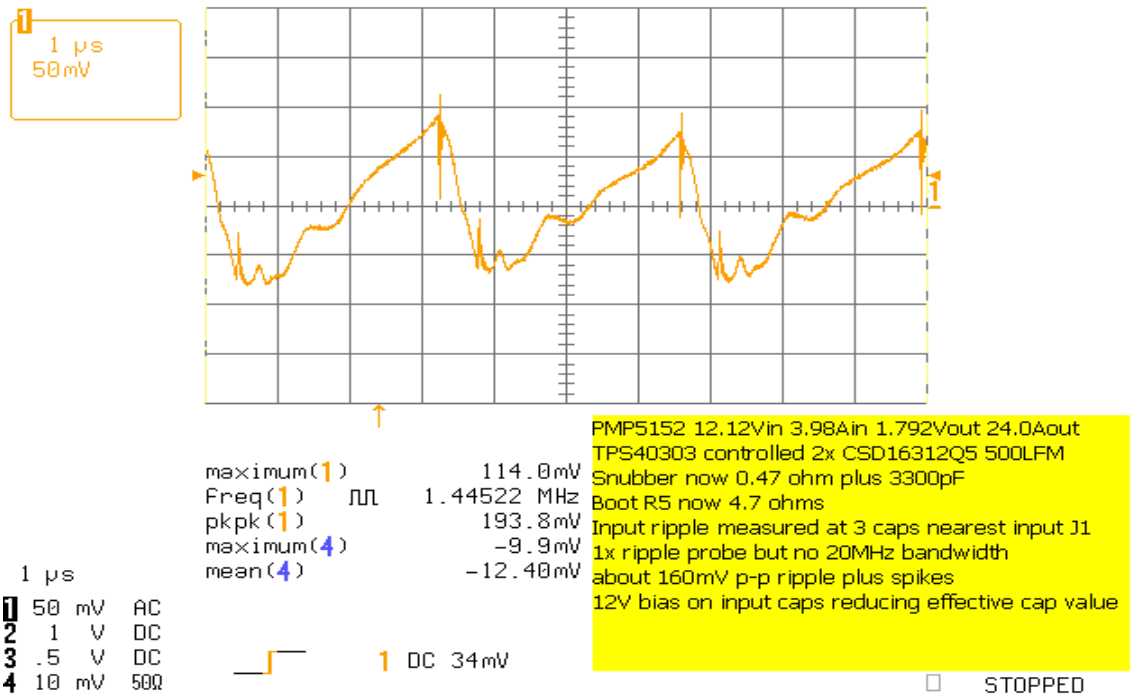
PMP5152: with snubber & gate drive updates to reduce max Vds on Q2 to 23V:
12.12Vin 3.98Ain 1.792Vout 24A 5.23W on board
Hot spot R6 snubber 79.4 degrees; ambient 23-25 ; low side FET 73; hi side Q1 67.2; choke to 62.8, controller 47.6

Qq

Major waveform:

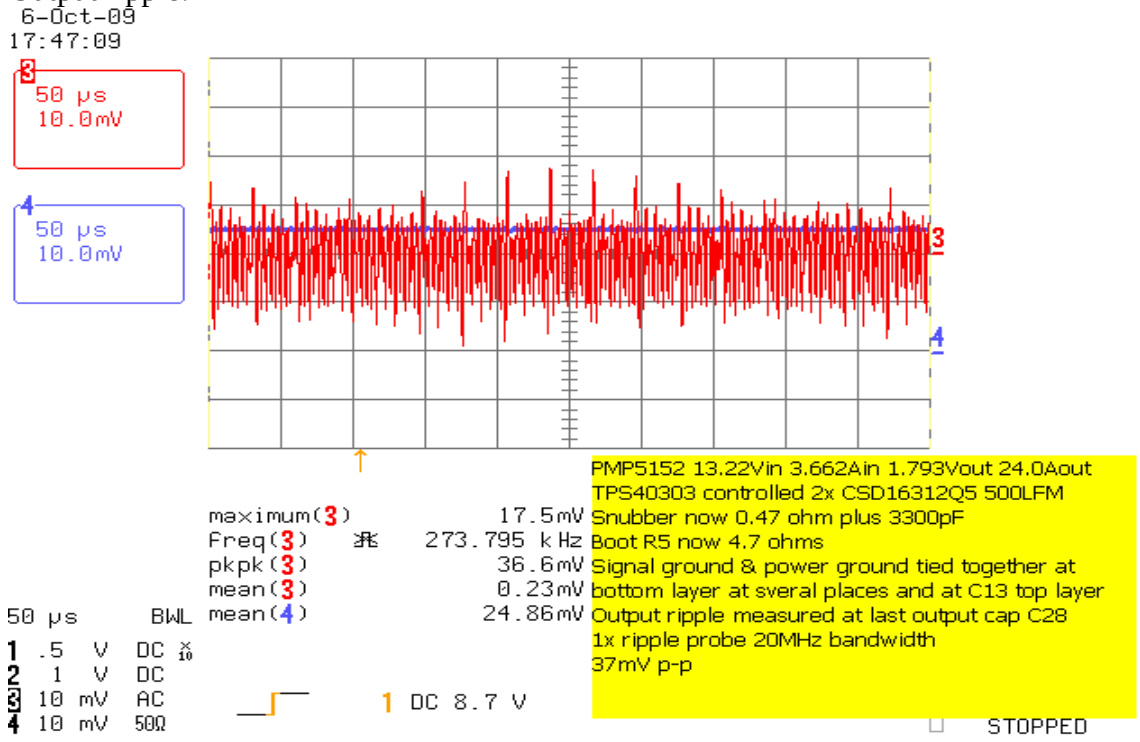


Input Ripple:

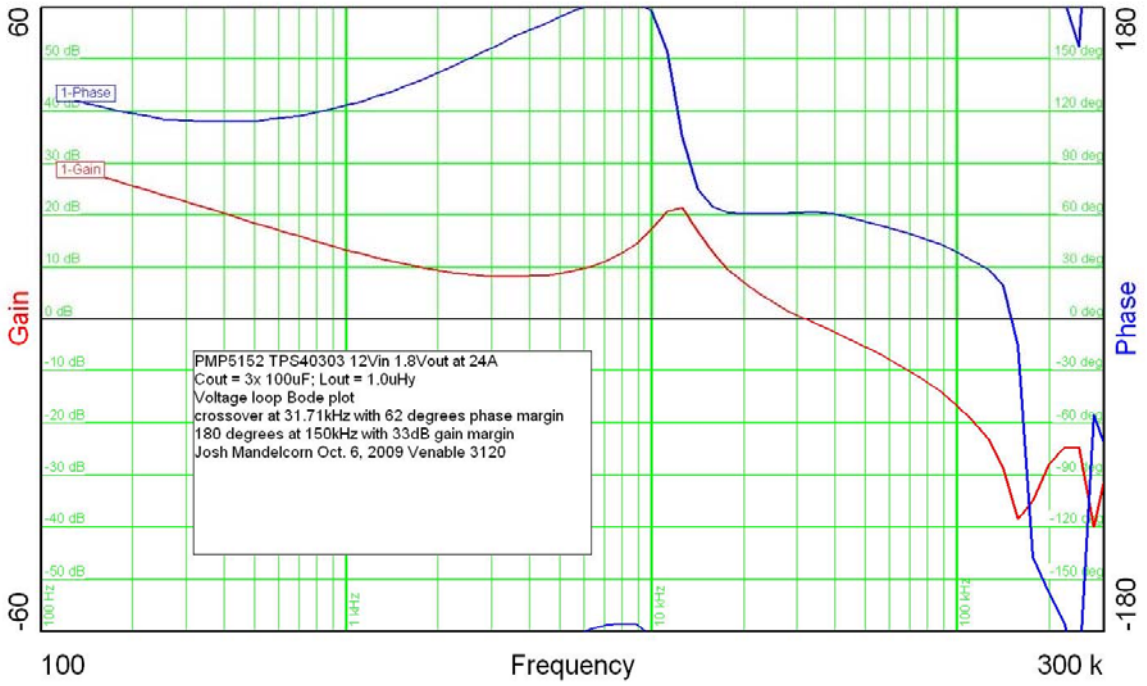


Qq

Output ripple:



Bode Plot:



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