



Target loop crossover at 30kHz

JP2 closed for most stable light load operation

JP1: OOA DISABLED ONLY
JP2: LLE DISABLED

Connect SGND and PGND with a 10mil trace

Vfb=600mV
Vramp=Vin/6
Freq=300kHz
Loop crossover targeted at 30kHz

R8 same as in final Tested PMP5032
All resistors and caps to the left of the main switches on this schematic can be size 603

R5, R6, C12 adjusted in test to reduce max Vds on Q2 from 25V to 23V at 24A loading Sept. 30, 2009

TESTED on HPA353
signal ground & power ground combined as much as feasible to reduce output ripple
See Test Report

Signal ground and power ground combined in several places on bottom layer to reduce output ripple caused by duty cycle jitter TPS40303 works much better with a single ground plane for both signal & power PMP5140 layout has yielded excellent results

each input cap:
Ceramic X5R or X7R, 16V rated, 20% tolerance size 1210

target 100mV p-p across input caps

controlled power application

Estimated 4.5 A p-p ripple in L1

24A out for 12V input with airflow 2.5Meters/sec
16A for 3.3Vin or no airflow

each output cap:
Ceramic X5R, 6.3V rated, 20% tolerance size 1210

Basic ripple 25mV p-p

On HPA353 populate C18 & C28 near C8, not in C9 & C10 positions

TEXAS INSTRUMENTS

Title 3.3 or 12Vin to 1.8V 24A TPS40303		
Size C	Number PMP5152	Rev A
Date October 6, 2009	Drawn by Josh Mandelcorn	
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