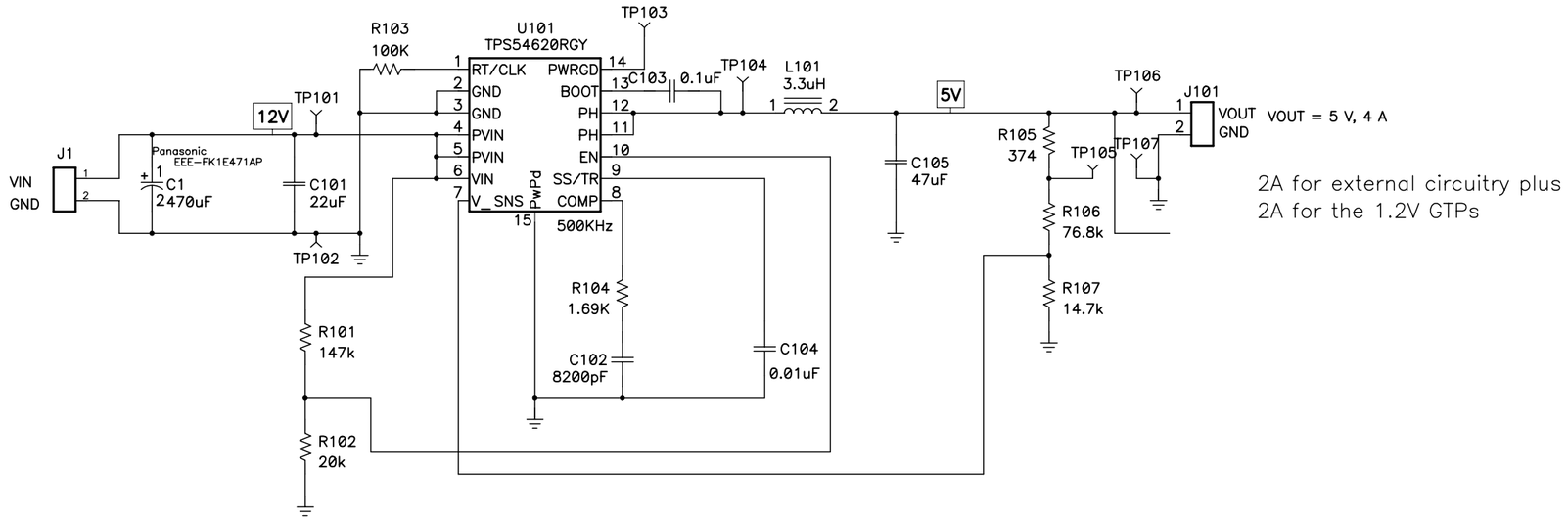
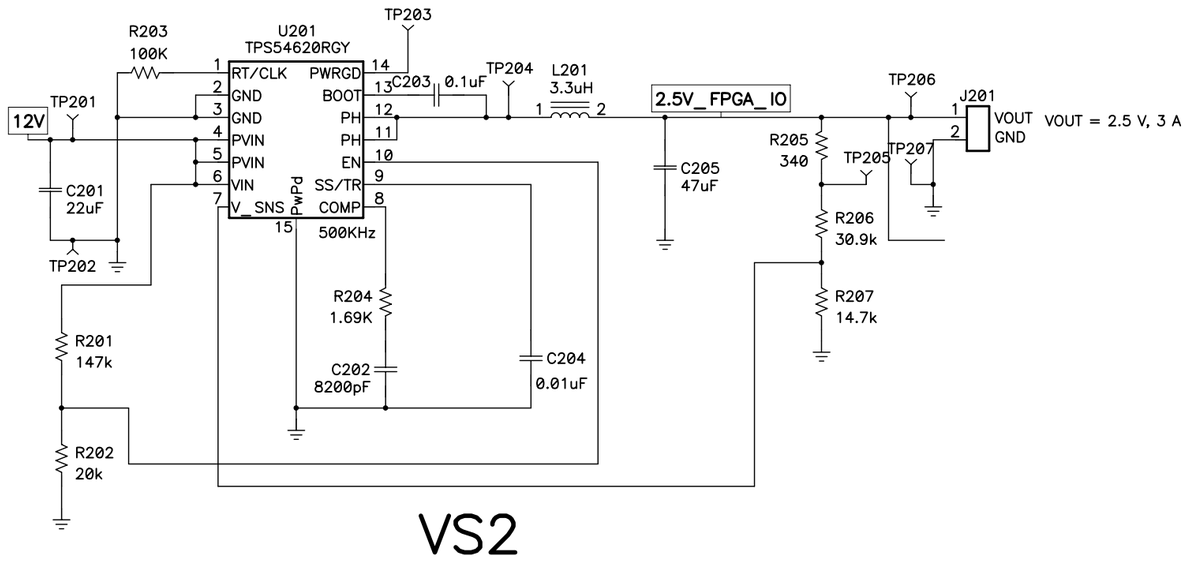


VS1



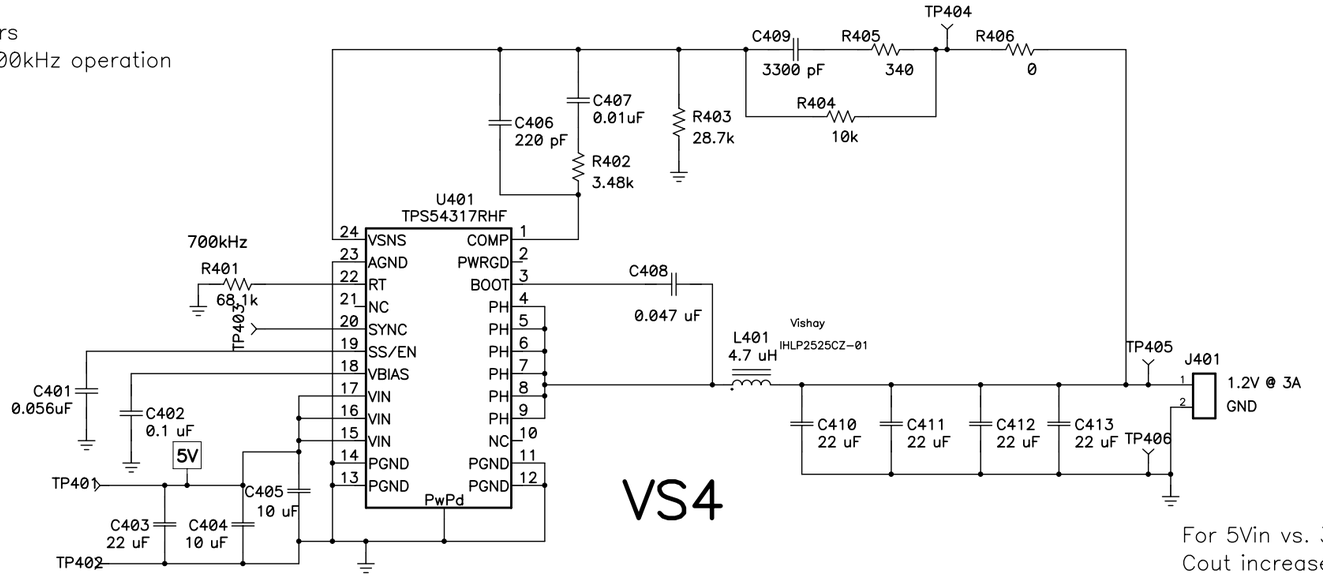
VS2

5V & 2.5V_I/O

Texas Instruments

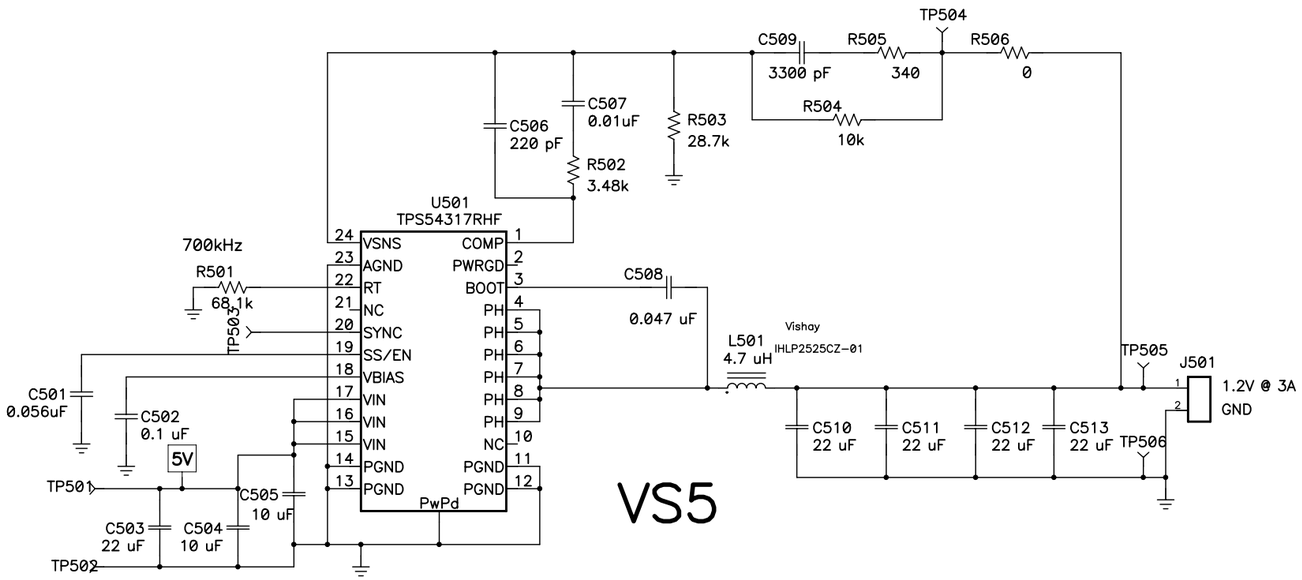
Title: 12Vin: 8 switchers			
Size: C	Number: PMP4964		Rev: C
Date: August 25, 2010		Drawn by: Josh Mandelcorn	
Filename: PMP4964 REVC.SCH		Sheet: 1 of 4	

For channels on this page
all external component values
follow those in SLVA284
except for timing resistors
which are here set for 700kHz operation



VS4

For 5Vin vs. 3.3Vin
Cout increased from 76 to 88uF
to keep same output ripple
Loop gain adjusted to keep
same crossover as in 3.3V
Cx06, Cx07, Rx02 adjusted

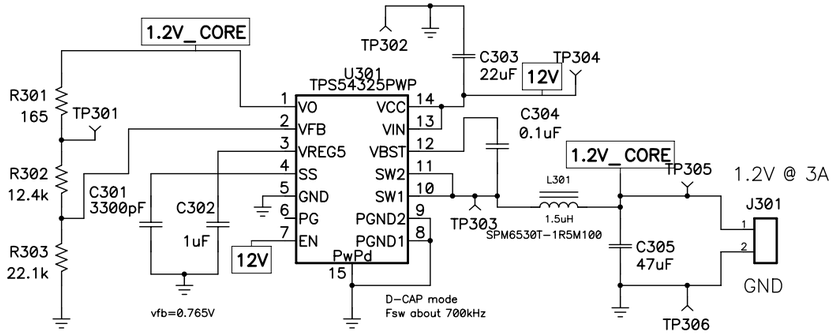


VS5

GTP Core (x2)

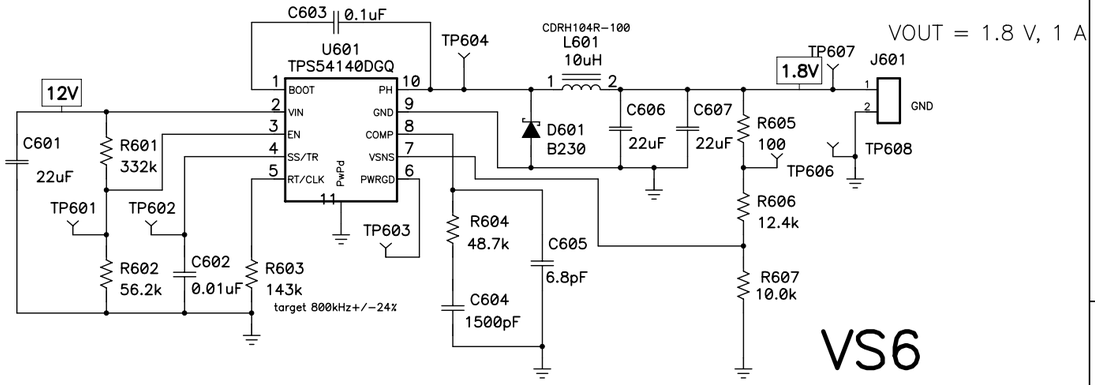
Texas Instruments

Title	12Vin: 8 switchers		
Size C	Number PMP4964		Rev C
Date	August 25, 2010	Drawn by	Josh Mandelcorn
Filename	PMP4964 REVC.SCH	Sheet	2 of 4

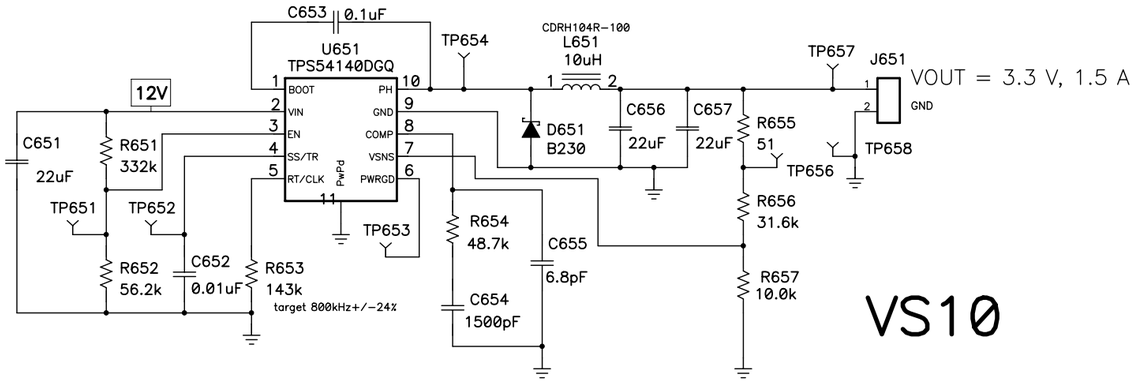


VS3

Taken from TPS54325EVM or HPA473



VS6

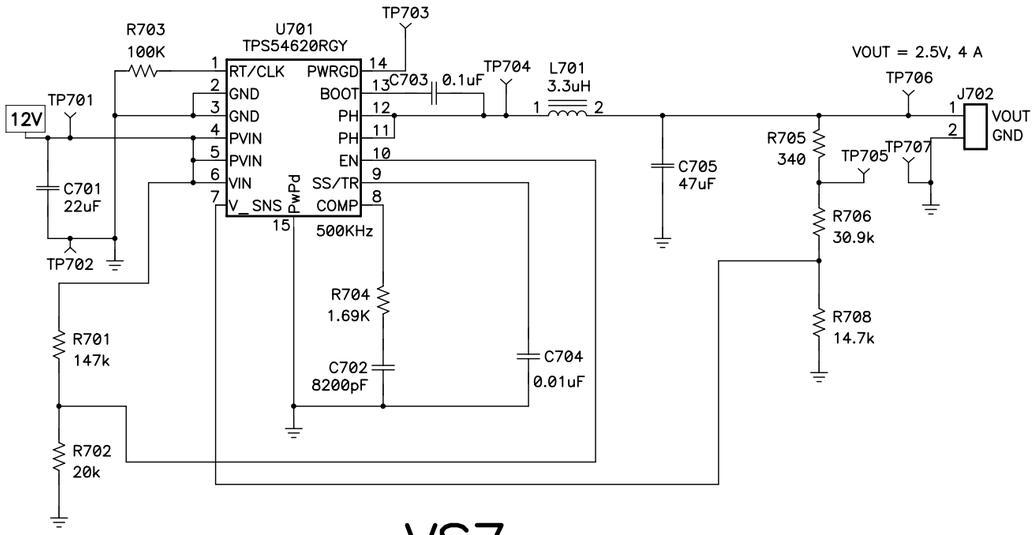


VS10

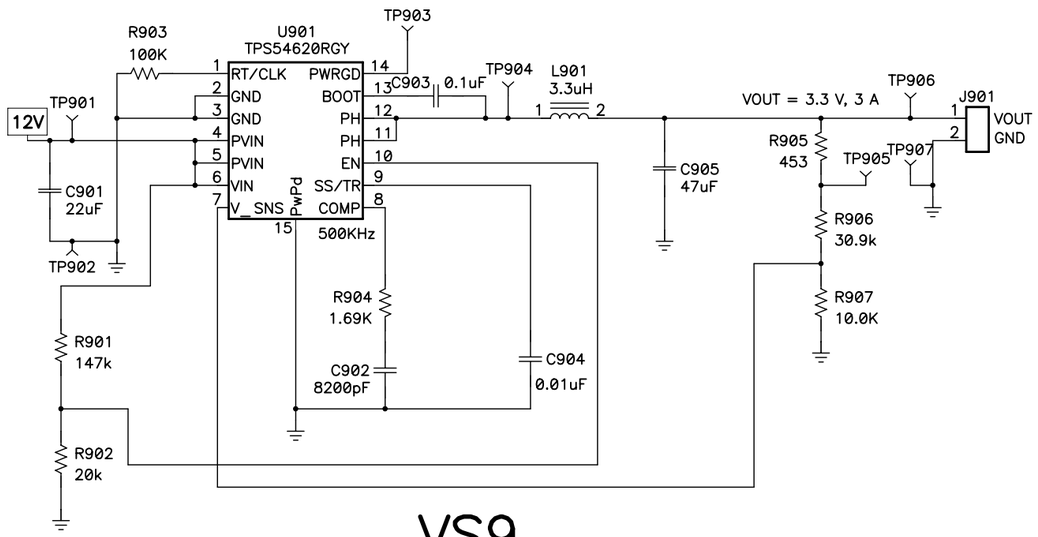
Core, 1.8V&3.3V_ALI

Texas Instruments

Title: 12Vin: 8 switchers			
Size: C	Number: PMP4964		Rev: C
Date: August 25, 2010		Drawn by: Josh Mandelcorn	
Filename: PMP4964 REVC.SCH		Sheet: 3 of 4	



VS7



VS9

Circuits on this page modified from HPA374 E3

FMC channels

Texas Instruments

Title: 12Vin: 8 switchers		
Size: C	Number: PMP4964	Rev: C
Date: August 25, 2010	Drawn by: Josh Mandelcorn	
Filename: PMP4964 REVC.SCH	Sheet: 4 of 4	

PMP4964_REVC BOM

COUNT	RefDes	Value	Description	Size	Part Number	Mfr
1	C1	470uF	Capacitor, Aluminum, 25V, ±20% , 850mA	0.406 x 0.457"	EEE-FK1E471AP	Panasonic
7	C101, C201, C303, C601, C651, C701, C901	22uF	Capacitor, Ceramic, 16V, X7R, 20%	1210	Std	Std
4	C102, C202, C702, C902	8200pF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
4	C103, C203, C703, C903	0.1uF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
4	C104, C204, C704, C904	0.01uF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
4	C105, C205, C705, C905	47uF	Capacitor, Ceramic, 6.3V, X5R, 20%	1210	Std	Std
1	C301	3300pF	Capacitor, Ceramic, Low Inductance, 50V, X7R, 10%	0603	std	std
1	C302	1uF	Capacitor, Ceramic, Low Inductance, 16V, X7R, 20%	0603	std	std
1	C304	0.1uF	Capacitor, Ceramic, Low Inductance, 25V, X7R, 20%	0603	std	std
1	C305	47uF	Capacitor, Ceramic, 6.3V, X5R, 20%	1210	Std	std
2	C401, C501	0.056uF	Capacitor, SMD, 0603, X7R, 50V, 15%	0603	std	std
2	C402, C502	0.1 uF	Capacitor, Ceramic, 25V, X7R, 10%	0603	GRM39X7R104K25	muRata
10	C403, C410, C411, C412, C413, C503, C510, C511, C512, C513	22 uF	Capacitor, Ceramic, 6.3V, X5R, 20 %	1210	std	TDK
2	C404, C504	10 uF	Capacitor, Ceramic, 6.3V, X5R, 20 %	1210	std	TDK
2	C405, C505	10 uF	Capacitor, Ceramic, 6.3V, X5R, 20 %	1210	std	TDK
2	C406, C506	220 pF	Capacitor, Ceramic, 50V, C0G, 10%	0603	std	TDK
2	C407, C507	0.01uF	Capacitor, Ceramic, 50-V, X7R, 10%	0603	std	std
2	C408, C508	0.047 uF	Capacitor, Ceramic, 50-V, X7R, 10%	0603	std	TDK
2	C409, C509	3300 pF	Capacitor, Ceramic, 50V, X7R, 10%	0603	std	TDK

2	C602, C652	0.01uF	Capacitor, Ceramic, 50V, X7R, 15%	0603	Std	Std
2	C603, C653	0.1uF	Capacitor, Ceramic, 25V, X7R, 15%	0603	std	std
2	C604, C654	1500pF	Capacitor, Ceramic, 50V, X7R, 15%	0603	Std	Std
2	C605, C655	6.8pF	Capacitor, Ceramic, 50V, NPO, 10%	0603	Std	Std
4	C606, C607, C656, C657	22uF	Capacitor, Ceramic, 6.3V, X5R, 20%	1210	Std	Std
2	D601, D651	B230	Diode, Schottky, 30V, 2A	SMB	B230-13-F	Diodes, Inc
2	J1, J301		Terminal Block, 2-pin, 15-A, 5.1mm	0.40 x 0.35"	ED1609	OST
4	J101, J201, J702, J901	ED555/2DS	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25""	ED555/2DS	OST
2	J401, J501		Terminal Block, 2 pin, 6A, 3.5mm	0.27 x 0.25	ED1514	OST
2	J601, J651	ED1514	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25""	ED1514	OST
4	L101, L201, L701, L901	3.3uH	Inductor, SMT, 7.8A, 10.4milliohm	0.402 sq inch	CDRH105RNP-3R3NC	Sumida
1	L301	1.5uH	Inductor, SMT, 11A, 10.67 milliohm	0.256 x 0.280"	SPM6530T-1R5M100	TDK
2	L401, L501	4.7 uH	Inductor, SMT, 5.5A, 40milliohm	0.255 x 0.270"	IHLP2525CZ-01	Vishay
2	L601, L651	10uH	Inductor, SMT, 3A, 35milliohm	0.405 sq inch	CDRH104R-100	Sumida
4	R101, R201, R701, R901	147k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
4	R102, R202, R702, R902	20k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
4	R103, R203, R703, R903	100K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
4	R104, R204, R704, R904	1.69K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R105	374	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R106	76.8k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
3	R107, R207, R708	14.7k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
4	R205, R405, R505, R705	340	Resistor, Chip, 1/16W, 1%	0603	Std	Std
3	R206, R706, R906	30.9k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R301	165	Resistor, Chip, 1/16W, 1%	0603	std	std
2	R302, R606	12.4k	Resistor, Chip, 1/16W, 1%	0603	std	std
1	R303	22.1k	Resistor, Chip, 1/16W, 1%	0603	std	std
2	R401, R501	68.1k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R402, R502	3.48k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R403, R503	28.7k	Resistor, Chip, 1/16W, 1%	0603	Std	Std

2	R404, R504	10k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R406, R506	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R601, R651	332k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R602, R652	56.2k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R603, R653	143k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R604, R654	48.7k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R605	100	Resistor, Chip, 1/16W, 5%	0603	Std	Std
2	R607, R657	10.0k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R655	51	Resistor, Chip, 1/16W, 5%	0603	Std	Std
1	R656	31.6k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R905	453	Resistor, Chip, 1/16W, 1%	0603	Std	Std
	R907	10.0K	Resistor, Chip, 1/16W, 1%	0603	Std	Std
37	TP101, TP104, TP105, TP106, TP201, TP204, TP205, TP206, TP301, TP304, TP305, TP401, TP403, TP404, TP405, TP501, TP503, TP504, TP505, TP601, TP602, TP603, TP606, TP607, TP651, TP652, TP653, TP656, TP657, TP701, TP704, TP705, TP706, TP901, TP904, TP905, TP906	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100"	5000	Keystone

20	TP102, TP103, TP107, TP202, TP203, TP207, TP302, TP306, TP402, TP406, TP502, TP506, TP608, TP658, TP702, TP703, TP707, TP902, TP903, TP907	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100"	5001	Keystone
3	TP303, TP604, TP654	5015	Test Point, SMT	0.105 x 0.040"	5015	Keystone
2	U101, U201	TPS54620RGY	IC, 1.6V-17V, QFN14	3.5mm x 3.3mm	TPS54620RGY	TI
1	U301	TPS54325PWP	IC, 3-A	HTSSOP-14	TPS54325PWP	TI
2	U401, U501	TPS54317RHF	IC, IFET Power Controller, AdjV, 3A	QFN-24	TPS54317RHF	TI
2	U601, U651	TPS54140DGQ	IC, DC-DC Converter, 3.3V, 1.5A	MSOP-10	TPS54160DGQ	TI
2	U701, U901	TPS54620RGY	1.6V-17V Synchronous Buck PWM Converter with Integrated MOSFET, QFN14	3.5mm x 3.3mm	TPS54620RGY	TI

Notes:
1. These assemblies are ESD sensitive, ESD precautions shall be observed.
2. These assemblies must be clean and free from flux and all contaminants.
   Use of no clean flux is not acceptable.
3. These assemblies must comply with workmanship standards IPC-A-610 Class 2.
4. Ref designators marked with an asterisk ('**') cannot be substituted.
   All other components can be substituted with equivalent MFG's components.

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