



STBY 1.2V  
 STBY 1.8V  
 STBY VREF5  
 N/A  
 STBY LDO  
 PGOUT  
 STBY 3.3V  
 GND

**NOTES**  
 $dT = C_{ss} \times (0.85) / (2.3 \mu A)$   
 where dT = soft start time  
 $C_{ss}$  = soft start capacitance  
 Startup sequence: 3.3V, 1.2V, 1.8V  
 INV\_LDO, LDO\_IN, and STBY\_LDO must be grounded

Texas Instruments

Title			DM648 5Vin power supply		
Size	Number	Rev		A	
C		PMP3044			
Date	12/8/07	Drawn by	S. Zargar		
Filename	PMP3044_DM648_5Vin_RevA.SCH	Sheet	1 of 1		

### PMP3044\_DM648\_5VIN\_REVA\_FINAL BOM

COUNT	RefDes	Value	Description	Size	Part Number	MFR
4	C1, C8, C20, C25	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R	0603	Std	Std
2	C10, C28	3300pF	Capacitor, Ceramic, 3300pF, 25V, X7R	0603	Std	Std
1	C11	1000pF	Capacitor, Ceramic, 1000pF, 25V, X7R	0603	Std	Std
2	C12, C29	22pF	Capacitor, Ceramic, 22pF, 50V, NPO	0603	Std	Std
1	C13	100pF	Capacitor, Ceramic, 100pF, 50V, NPO	0603	Std	Std
2	C15, C30	22uF	Capacitor, Ceramic, 22uF, 6.3V, X5R, 20%	1206	C3216X5R0J226MT	TDK
2	C16, C23	1uF	Capacitor, Ceramic, 1uF, 16V, X7R	0603	Std	Std
1	C17	0.068uF	Capacitor, Ceramic, 0.068uF, 16V, X7R	0603	Std	Std
1	C19	0.047uF	Capacitor, Ceramic, 0.047uF, 16V, X7R	0603	Std	Std
2	C2, C32	1000pF	Capacitor, Ceramic, 1000pF, 50V, NPO	0603	Std	Std
1	C21	39pF	Capacitor, Ceramic, 39pF, 50V, COG, 5%	0603	Std	Std
1	C24	2700pF	Capacitor, Ceramic, 2700pF, 16V, X7R	0603	Std	Std
1	C3	470pF	Capacitor, Ceramic, 470pF, 50V, NPO	0603	Std	Std
1	C31	6800pF	Capacitor, Ceramic, 6800pF, 25V, X7R	0603	Std	Std
4	C4, C5, C18, C26	10uF	Capacitor, Ceramic, 10uF, 16V, X7R, 15%	1206	C3216X7R1C106MT	TDK
			Capacitor, POSCAP, 220uF, 2.5V, 18 milliohm, 20%	7343(D)	2R5TPE220MI	Sanyo
1	C6	220uF				
1	C7	1uF	Capacitor, Ceramic, 1uF, 16V, X7R, 15%	1206	C3216X7R0J105MT	TDK
4	C9, C14, C22, C27	0.01uF	Capacitor, Ceramic, 0.01uF, 16V, X7R	0603	Std	Std
6	D1, D2, D3, D4, D5, D6	MA2J729	Diode, Schotky Barrier, 300mA, 30 V	SC-90A	MA2J729	Panasonic
4	J1, J2, J3, J5	ED1514	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25	ED1514	OST
1	J4		Header, 8-pin, 100mil spacing, (36-pin strip)	0.100 x 8"	PTC36SAAN	Sullins
1	L1	4.7uH	Inductor, SMT, 7.18A, 0.0105 milliohm	0.492 sq"	DR127-4R7-R	Coiltronics
1	L2	150uH	Inductor, SMT, 0.58A, 0.851milliohm	0.300 sq"	DR73-151-R	Coiltronics
1	L3	82uH	Inductor, SMT, 0.86A, 384milliohm	0.300 sq"	DR73-820-R	Coiltronics
3	Q1, Q2, Q6	Si9926BDY	MOSFET, Dual Nch, 20V, 8.2A, 20 milliohm	SO8	Si9926BDY	Vishay
3	Q3, Q4, Q5	DTC144EK	Transistor, Digital NPN, 50 V, 100 mA	SOT-323	DTC144EK	ROHM
3	R1, R2, R26	49.9	Resistor, Chip, 49.9 Ohms, 1/16-W, 1%	0603	Std	Std
1	R10	88.7K	Resistor, Chip, 88.7K Ohms, 1/16-W, 1%	0603	Std	Std
1	R12	243K	Resistor, Chip, 243K Ohms, 1/16-W, 1%	0603	Std	Std
1	R13	15K	Resistor, Chip, 15K Ohms, 1/16-W, 1%	0603	Std	Std
1	R14	49.9K	Resistor, Chip, 49.9K Ohms, 1/16-W, 1%	0603	Std	Std
1	R15	10	Resistor, Chip, 10 Ohms, 1/16-W, 1%	0603	Std	Std
1	R23	1K	Resistor, Chip, 1K Ohms, 1/16-W, 1%	0603	Std	Std
1	R28	34.8K	Resistor, Chip, 34.8K Ohms, 1/16-W, 1%	0603	Std	Std
3	R3, R4, R25	100K	Resistor, Chip, 100K Ohms, 1/16-W, 1%	0603	Std	Std
4	R5, R17, R18, R21	0	Resistor, Chip, 0 Ohms	0603	Std	Std
2	R6, R27	100	Resistor, Chip, 100 Ohms, 1/16-W, 1%	0603	Std	Std
1	R7	1K	Resistor, Chip, 1K hms, 1/16-W, 1%	0603	Std	Std
3	R8, R16, R22	3.3	Resistor, Chip, 3.3 Ohms, 1/16-W, 1%	0603	Std	Std
5	R9, R11, R19, R20, R24	10K	Resistor, Chip, 10K Ohms, 1/16-W, 1%	0603	Std	Std
15	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15		Test Point, Black, 1mm	0.038	240-333	Farnell
1	U1	TPS5130PT	IC, Triple Sync Buck Controller w/LDO	PT-48	TPS5130PT	Texas Instruments

- 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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