

Filename: PMP5568 - 350W PSU - Power Board RevD - BoM.xls

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PMP5568 - 350W PSU - POWER BOARD REVD BOM

COUNT	RefDes	Value	Description	Size	Part Number	Mfr
3	BB1, BB2, BB4	Std	Connector, Bus Bar, 3-pin, 15.2mm spacing	1x37.4 mm	30925-001	Schroff
4	BB3, BB6, BB7, BB8	Std	Connector, Bus Bar, 2-pin, 15.2mm spacing	1x22.5 mm	30925-001	Schroff
19	C1, C9, C32, C45, C46, C95, C99, C115, C118, C121, C123, C205, C206, C207, C208, C209, C210, C211, C212	100nF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
11	C10, C12, C56, C58, C65, C66, C69, C73, C85, C201, C202	100nF	Capacitor, Ceramic, 100V, X7R, 10%	1206	Std	Std
1	C100	47pF	Capacitor, Ceramic, 50V, COG, 5%	0603	Std	Std
6	C101, C105, C106, C111, C125, C128	1uF	Capacitor, Ceramic, 25V, X7R, 10%	1206	Std	Std
4	C103, C108, C126, C127	470uF	Capacitor, Aluminum, 16V, 840mA, 87mOhm, 105C, 20%	0.315 inch	8x15mm, SY series	TEAPO
2	C104, C112	220uF	Capacitor, Aluminum, 16V, 20%	0.217 x 0.169	EEVFK1C221XP	Panasonic
1	C109	330pF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
1	C11	15nF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
1	C110	82pF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
1	C113	470pF	Capacitor, Ceramic, 50V, COG, 5%	0603	Std	Std
1	C114	100nF	Capacitor, Ceramic, 630V, X7R, 10%	1812	Std	Std
1	C116	680pF	Capacitor, Ceramic, 50V, COG, 5%	0603	Std	Std
1	C120	220pF	Capacitor, Ceramic, 500V, X7R, 10%	1206	Std	Std
1	C122	open	Capacitor, Ceramic, 1000V, COG	1206	Std	Std
1	C124	open	Capacitor, Ceramic, 100V, X7R, 20%	0805	Std	Std
1	C13	10uF	Capacitor, Ceramic, 6.3V, X5R, 15%	1206	Std	Std
2	C132, C213	2.2nF	Capacitor, Ceramic, 50V, COG, 5%	0603	Std	Std
2	C14, C25	4.7pF	Capacitor, Ceramic, 50V, COG, 5%	0603	Std	Std
2	C15, C26	33nF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
1	C18	6.8nF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
3	C19, C27, C98	220pF	Capacitor, Ceramic, 50V, COG, 5%	0603	Std	Std
2	C2, C4	1.5nF	Capacitor, Ceramic Disc, 300V AC, Y5U, 20%	0.236 x 0.315	VY2152M31Y5US63V7	Vishay
1	C20	100n	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
1	C203	1.5uF	Capacitor, Film, 250V DC, 10%	0.728 x 0.248 inch	ECQE2155KF	Panasonic
2	C204, C215	47nF	Capacitor, Film, 630V DC, 5%	0.728 x 0.248 inch	ECWF6473JL	Panasonic

5	C21, C22, C88, C91, C92	1nF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
4	C23, C39, C117, C129	open	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
2	C28, C31	1.2nF	Capacitor, Ceramic, 50V, C0G, 5%	0603	Std	Std
4	C3, C7, C16, C17	0.68uF	Capacitor, Film, 305V AC, 20%	0.335 x 1.043 inch	B32923A2684M	Epcos
2	C30, C34	8.2nF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
2	C36, C37	220uF	Capacitor, Aluminum, 450V, 105C, 20%	1.379 in Dia.	EETHC2W221EA	Panasonic
2	C38, C44	2.2uF	Capacitor, MKP, 450VDC, 10%	1.026 x 0.335 inch	B32673Z4225	Epcos
8	C40, C41, C42, C43, C47, C48, C49, C50	22nF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
8	C5, C24, C29, C33, C35, C70, C102, C107	1uF	Capacitor, Ceramic, 16V, X7R, 10%	0603	Std	Std
4	C51, C52, C53, C54	100nF	Capacitor, Ceramic, 50V, X7R, 10%	0805	Std	Std
3	C55, C57, C97	1uF	Capacitor, Ceramic, 50V, X7R, 10%	0805	Std	Std
2	C59, C61	47nF	Capacitor, Ceramic, 100V, X7R, 10%	1210	Std	Std
3	C6, C8, C216	4.7nF	Capacitor, Ceramic Disc, 300V AC, Y5U, 20%	0.236 x 0.315	VY2472M49Y5US63V7	Vishay
2	C60, C75	open	Capacitor, Ceramic Disc, 300V AC, Y5U, 20%	0.236 x 0.315	VY2392M43Y5US63V7	Vishay
13	C62, C63, C64, C67, C71, C74, C76, C79, C80, C83, C84, C86, C87	10uF	Capacitor, Ceramic, 25V, X7R, 10%	1210	Std	Std
3	C68, C72, C78	680uF	Capacitor, Aluminum, 25V, 20%	0.315 inch	25ZL680MEFC10X20	Rubycon
2	C77, C82	1nF	Capacitor, Ceramic, 100V, X7R, 10%	1206	Std	Std
2	C81, C214	10nF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
2	C89, C119	100pF	Capacitor, Ceramic, 50V, C0G, 5%	0603	Std	Std
1	C90	4.7nF	Capacitor, Ceramic, 50V, X7R, 10%	0603	Std	Std
2	C93, C94	220nF	Capacitor, Ceramic, 25V, X7R, 10%	0603	Std	Std
1	C96	4.7uF	Capacitor, Ceramic, 16V, X7R, 10%	0805	Std	Std
2	CT1, CT2	62409-1	Connector, THT, Tab	0.033 x 0.250 inch	62409-1	TE Connectivity
4	D1, D17, D18, D203	BAT54A	Diode, Dual Schottky, 30V, 200mA	SOT23	BAT54A	Vishay
2	D11, D12	IDV05S60C	Diode, SiC Schottky, 600V, 5A	TO-220	IDV05S60C	Infineon
5	D13, D14, D15, D16, D36	BAT54S	Diode, Dual Schottky, 30V, 200mA	SOT23	BAT54S	Vishay
4	D2, D19, D20, D204	BAT54C	Diode, Dual Schottky, 30V, 200mA	SOT23	BAT54C	Vishay
2	D201, D202	1N4148	Diode, Signal, 75V, 300mA	SOD-123	1N4148W	Vishay
2	D21, D22	open	Diode, Ultrafast, 600V, 3A	SMC	MURS360T3G	On Semi
4	D23, D24, D25, D26	HRW0202	Diode, Schottky, 20V, 200mA	SOT23	HRW0202	Hitachi
2	D27, D28	MBRS360	Diode, Schottky, 60V, 3A	SMC	MBRS360	On Semi

2	D29, D30	10BQ060	Diode, Schottky, 60V, 1A	SMB	10BQ060	Vishay
1	D3	600V	Diode, Bridge Rectifier, 600V, 8A	0.880 x 0.140 inch	GBU8J	Vishay
1	D31	HMLP-ED80-K0x00	Diode, LED, 3mm		Std	Std
1	D32	short	Diode, Switching, 75V, 200mA	SOD-123	MMSD4148T1	OnSemi
2	D34, D35	ES1B	Diode, Super Fast Rectifier, 100V, 1A	0.220 x 0.115 inch	ES1B	Vishay
1	D37	13V	Diode, Zener, 13V, mA, 300mW, 5%	SOT23	BZX84C13	Vishay
1	D38	US1K	Diode, Ultrafast, 800V, 1A	SMB	US1K	Vishay
1	D39	MBRS1100	Diode, Schottky, 100V, 1A	SMB	MBRS1100T3	On Semi
4	D4, D6, D8, D10	BAS16	Diode, Switching, 75V, 150mA	SOT23	BAS16	Vishay
1	D41	SML-LX2832GC-TR	Diode, LED, SMT, 1206, green	1210	KP-3216SGC	Kingbright
1	D42	15V	Diode, Zener, 15V, 500mW, 5%	SMA	SMAZ5929B	Vishay
1	D43	5.1V	Diode, Zener, 5.1V, 500mW	SOD123AA	ZMM5231B	Diodes
2	D5, D9	BAS21	Diode, Switching, 200V, 200mA	SOT23	BAS21	Vishay
1	D7	1N5406	Diode, General Purpose, 600V, 3A	DO-201AD	1N5406	Diodes
3	E1, E2, E3					
1	F1	5A	Fuseholder, 1/4" fuses, board mount	1.54 x 0.30 inch	01220083H	Littlefuse
6	FB1, FB2, FB3, FB4, FB5, FB6	880R	Ferrite Bead, SMT, 880 Ohm, 4A	1812	74279252	Wuerth Electronic
1	HS1	513201	Heatsink, TO-220, Vertical-mount, 5°C/W	0.5x1.38in.	513201B02500G	Aavid Thermalloy
1	J1	703W-00/54	Connector, AC Board mount, 9mm	1.97 x 0.79	703W-00/54	Qualtek Electronics
1	J10	Vout	Lug, Solderless, #10 - #10-12 AWG, Copper/Tin	0.375 x1.00 inch	33457	TE Connectivity
1	J11	Return	Lug, Solderless, #10 - #10-12 AWG, Copper/Tin	0.375 x1.00 inch	33457	TE Connectivity
1	J12	PEC10DAAN	Header, Male 2x10-pin, 100mil spacing	0.100 inch x 10 x 2	1-87230-0	TE Connectivity
1	J2	PEC02SAAN	Header, Male 2-pin, 100mil spacing,	0.100 inch x 2	PEC02SAAN	Sullins
3	J3, J4, J6	PEC04SAAN	Header, Male 4-pin, 100mil spacing	0.100 inch x 4	PEC04SAAN	Sullins
2	J5, J7	STD	Header, Male 2-pin, 400mil spacing	0.400 inch	Std	Std
2	J8, J9	PEC06SAAN	Header, Male 6-pin, 100mil spacing,	0.100 inch x 6	PEC06SAAN	Sullins
1	L1	400uH	Inductor, Common Mode, XXmOhm, 2x XXA	35.00 Dia mm	tbd	Vacuumschmelze
1	L10	2.5uH	Inductor, SMT, 0.9mOhm, 55A sat, 47A rms	26x26 mm	PG1096.252NL	Pulse
3	L13, L14, L15	3.3uH	Inductor, 600mOhm, 375mA, 20%	0805	LQH2MCN3R3M02L	muRata
1	L2	2.6mH	Inductor, Common Mode, 14mOhm, 2x 10A	35.00 Dia mm	T60405-R6123-X210	Vacuumschmelze
1	L201	22uH	Inductor, SMT Power, 2.9 A Max.	0.406 x 0.409 inch	PF0560.223NL	Pulse
2	L3, L4	4.7uH	Inductor, THT, 4mOhm, 20A sat, 20A rms	0.530 Dia.	PCV-0-472-20L	Coilcraft
2	L5, L6	300uH	Inductor, THT, 100mOhm, 5A sat, 3A rms	34.00 mm Dia.	PFC-Choke 300uH @ 3A	schwa-medico
4	L7, L8, L11, L12	50nH	Inductor, SMT, 0.123mOhm, 50A sat, 40A rms	7.90 x 8.40 mm	SLC7530S-500ML	Coilcraft
1	L9	10uH	Inductor, Common Mode, 2x 30A	22.60 mm Dia.	T60006-L2020-W409-08	Vacuumschmelze
2	P3, P4	077-00067	Pin, 60 mil Dia.	0.110 Dia.	077-00070	Std
5	Q1, Q2, Q3, Q4, Q7	IPW60R041C6	MOSFET, N-ch, 600V, 49A, 41mOhm	TO-247AC	IPW60R041C6	Infineon
4	Q11, Q12, Q15, Q16	IRFB9N65A	MOSFET, N-ch, 650V, 8.5A, 0.93 Ohm	TO-220V	IRFB9N65A	Vishay
4	Q17, Q18, Q19, Q20	IPB081N06L3 G	MOSFET, N-ch, 60V, 50A, 8mOhm	SMD-220	IPB081N06L3 G	Infineon
2	Q201, Q202	MMBT2907	Transistor, PNP, -60V, -600mA, 225mW	SOT23	MMBT2907ALT	On Semi
2	Q21, Q22	BSS138	MOSFET, N-ch, 50V, 220mA	SOT23	BSS138	Fairchild
1	Q23	open	Transistor, NPN, 40V, 600mA	SOT-23	MMBT2222A	On Semi

1	Q24	IPD60R950C6	MOSFET, N-ch, 600V, 12A, 0.95 Ohm	DPAK	IPD60R950C6	Infineon
1	Q25	SPA02N80C3	MOSFET, N-ch, 800V, 2A, 2.7 Ohm	TO-220V	SPA02N80C3	Infineon
1	Q26	open	Transistor, PNP, -45V, 500mA	SOT-23	BC857C	Fairchild
2	Q5, Q6	IPA60R280C6	MOSFET, N-ch, 650V, 13.8A, 280mOhm	TO-220V	IPA60R280C6	Infineon
1	Q8	Si2309CDS	MOSFET, P-ch, -60V, -1.25A, 550mOhm	SOT23	Si2309CDS	Vishay
4	Q9, Q10, Q13, Q14	PMD3001D	MOSFET Driver, 40V, 1A	SC-74	PMD3001D	NXP
2	R1, R2	200k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R100	69.8k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R101	2.43k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R102, R103	33.2	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R105	24.3k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R106, R130	9.09k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R109	825k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R110, R115	13.0k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R111	49.9k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R112	39.2k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R121	9.1k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R124	118	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R128	196k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R129	100k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
14	R13, R14, R15, R16, R17, R18, R19, R20, R34, R35, R36, R59, R60, R61	1.00M	Resistor, Chip, 1/4W, 1%	1206	Std	Std
1	R131	2.40k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R132	560k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R133	22	Resistor, Chip, 1/2W, 1%	1812	Std	Std
1	R134	182	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R135	22.5k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
4	R138, R139, R140, R141	2.2M	Resistor, Chip, 1/10W, 5%	0805	Std	Std
1	R144	4.7k	Resistor, Chip, 1/2W, 5%	1812	Std	Std
2	R147, R148	270k	Resistor, Chip, 1/4W, 5%	1206	Std	Std
1	R150	3.01	Resistor, Chip, 1/10W, 1%	0805	Std	Std
1	R151	open	Resistor, Chip, 1/4W, 5%	1206	Std	Std
1	R152	2.21k	Resistor, Chip, 1/10W, 1%	0805	Std	Std
4	R155, R156, R157, R158	open	Resistor, Chip, 1/10W, 5%	0805	Std	Std
2	R203, R204	10.0k	Resistor, Chip, 1/4W, 1%	1206	Std	Std
2	R21, R99	2.00k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R216	200	Resistor, Chip, 1/4W, 5%	1206	Std	Std
1	R217	3.3	Resistor, Chip, 1W, 1%	2512	Std	Std

7	R22, R40, R52, R57, R96, R120, R143	10	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R24, R26	20	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R25	30.1	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R27	10m	Resistor, Metal, 3W, 1%	2512	Std	Std
2	R28, R44	4.42k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
3	R29, R46, R122	3.57k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
10	R3, R4, R8, R9, R10, R11, R45, R56, R107, R207	10.0k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
7	R30, R32, R47, R49, R92, R93, R123	1.00k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R31, R48	84.5	Resistor, Chip, 1/4W, 1%	1210	Std	Std
1	R33	499k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R37	22.1k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
3	R38, R39, R117	23.2k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
4	R41, R42, R54, R55	18	Resistor, Chip, 1/4W, 1%	1206	Std	Std
2	R43, R104	27.4k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
8	R5, R108, R118, R125, R136, R142, R146, R159	open	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R50	4.32k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R51	7.68k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R53, R58	3.92k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R6, R7	open	Resistor, Chip, 1/2W, 5%	1812	Std	Std
2	R62, R116	60.4k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R63	34.0k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	R64, R65	15	Resistor, Wire Wound, 5W, 5%	0.551 x 0.394 inch	SQM5-15RJI	Welwyn
3	R66, R67, R113	4.75k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R68	24.9k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R69	64.9k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
5	R70, R114, R119, R145, R153	0	Resistor, Chip, 1/16W, 1%	0603	Std	Std
14	R71, R72, R77, R78, R126, R149, R208, R209, R210, R211, R212, R213, R214, R215	100	Resistor, Chip, 1/16W, 1%	0603	Std	Std
8	R73, R75, R79, R80, R201, R202, R205, R206	10	Resistor, Chip, 1/4W, 1%	1206	Std	Std
4	R74, R76, R81, R82	open	Resistor, Chip, 1/4W, 1%	1206	Std	Std

4	R83, R84, R85, R86	0	Resistor, Chip, 1/4W, 1%	1206	Std	Std
2	R87, R90	2.21k	Resistor, Chip, 1W, 1%	2512	Std	Std
2	R88, R89	open	Resistor, Chip, 1W, 1%	2512	Std	Std
2	R91, R154	4.32k	Resistor, Chip, 1/4W, 1%	1206	Std	Std
1	R94	0.2m	Resistor, Metal Strip, 5W, 1%	3637	BVR-Z-R0002	Isabellenhuetten
2	R95, R137	49.9	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R97	165k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
1	R98	11.0k	Resistor, Chip, 1/16W, 1%	0603	Std	Std
2	RT1, RT2	275V	Varistor, Disk, 350V DC, 275V rms, 1W	D Size	B72220S0271K101	Epcos
3	SC1, SC2, SC3	0	Resistor, Chip, 1/4W, 1%	1206	Std	Std
2	T1, T2	1-100	Transformer, Current sense, 2mH sec, 1:100	0.284 x 0.330 inch	PA1005.100NL	Pulse
1	T201	1-100	Transformer, Current Sense, 20mH sec, 1:100	0.570 x 0.770 inch	CS4100V-01L	Coilcraft
4	T3, T4, T6, T7	450uH	Transformer, Gate Drive, 3000 Vrms isolation	0.810 x 0.580 inch	P0584	Pulse
1	T8	10mH	Transformer, Fullbridge, 46:2:2, 12mH, 350W	43.x48 mm	SP-RM 14	Kaschke
1	T9	3.5mH	Transformer, Flyback, multiple outputs	0.638 x 0.693 inch	750817036	Wuerth Electronic
2	TP1, TP2	5015	Test Point, SMT	0.105 x 0.040 inch	5015	Keystone
9	TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18		Pad, TH	0.038 inch		Emulation Tech
2	TP3, TP4	Std	Test Point, 0.020 Hole	0.125 x 0.125	Std	Std
1	U1	TPS3809K33	IC, Supply Voltage Supervisor, 3.3V	SOT23	TPS3809K33	Texas Instruments
4	U10, U11, U12, U19	UCC27324D	IC, High Speed Low Side Power MOSFET driver	SO8	UCC27324D	Texas Instruments
1	U14	UCC28950PW	IC, Advanced Phase-Shifted PWM Controller	TSSOP-24	UCC28950PW	Texas Instruments
1	U15	SN74LVC1G17DCK	IC, Single Schmitt-Trigger Buffer	SOP-5	SN74LVC1G17DCK	Texas Instruments
1	U16	TPS71501DCKR	IC, Regulator, LDO, Micropower	SOP-5 (DCK)	TPS71501DCKR	Texas Instruments
1	U17	UCC2813D-1	IC, Low Power Economy BiCMOS Current Mode PWM	SO8	UCC2813D-1	Texas Instruments
1	U18	ISO7520CDW	IC, Low-Power 5 KV(rms) Dual Digital Isolators	SO-16	ISO7520CDW	Texas Instruments
1	U2	MSP430F2012IPW	IC, Mixed Signal Microcontroller	TSSOP-14	MSP430F2012IPW	Texas Instruments
1	U3	UCC27323D	IC, Dual 4A Peak High Speed Low-Side MOSFET Driver	SO8	UCC27324D	Texas Instruments
2	U4, U13	OPA333AID	IC, CMOS Op Amp, 1.8V micro-Power, Zero-Drift	SO-8	OPA333AID	Texas Instruments
2	U5, U6	UCC37324D	IC, Dual 4-A High Speed Low-Side Power MOSFET Drivers	SO-8	UCC37324D	Texas Instruments
1	U7	UCC28070PW	IC, Two- Phases Interleaved CCM PFC Controller	TSSOP-20	UCC28070PW	Texas Instruments
1	U8	TL431AIDBZ	IC, Precision Adjustable Shunt Regulator	SOT23-3	TL431AIDBZ	Texas Instruments

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