

Filename: PMP10283RevA_Bom.xls
 Variant: 001
 Generated: 7/15/2014 11:54:17 PM
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200W Single stage AC-DC LLC-SRC

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPC81	1		Printed Circuit Board		PMP10283	Any		
C1, C6	2	560uF	CAP, AL, 560uF, 200V, +/-20%, 0.355 ohm, TH	CAPR, 22x30mm, TH	EET-HC2D561BA	Panasonic		
C2	1	2200pF	CAP, CERM, CAP CER 2200PF 300VAC 20% RADIAL	CAPRD500W60D900 H1200	VY2222M35Y5US63V7	Vishay-Bccomponents		
C3, C7	2	470pF	CAP, CERM, 470pF, 300V, +/-10%, VY2, 5x7.5 mm	5x7.5 mm	VY2471K29Y5SS63V7	Vishay-Bccomponents		
C4	1	1uF	CAP FILM 1UF 450VDC RADIAL	Radial 18.2x8.5x17.9	450MPK105J	Rubycon		
C5	1	0.33uF	CAP, Film, 0.33uF, 275V, +/-20%, TH	RCAP, 17.5x17.5x9.5mm	EQ-U2A334ML	Panasonic		
C8, C9, C18, C19	4	680uF	CAP ALUM 680UF 35V 20% RADIAL	12.5x20	EEU-FR1V681B	Panasonic		
C10, C11, C12, C13, C14, C15, C20, C21, C22, C23, C24, C25	12	3.3uF	CAP, CERM, 3.3uF, 50V, +/-20%, X7R, 1210	1210	C3225X7R1H335M	TDK		
C16, C26	2	0.1uF	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0805	0805	08055C104KAT2A	AVX		
C17, C28	2	1uF	CAP, CERM, 1uF, 25V, +/-10%, X5R, 0603	0603	GRM188R61E105KA12 D	MuRata		
C27	1	0.033uF	CAP, Film, 0.033uF, 1250V, +/-5%, TH	18x9.5x18mm	121MPE333J	Rubycon		
C29	1	1500pF	CAP, CERM, 1500pF, 100V, +/-5%, X7R, 0603	0603	06031C152JAT2A	AVX		
C30	1	10pF	CAP, CERM, 10pF, 50V, +/-5%, C0G/NP0, 0603	0603	06035A100JAT2A	AVX		
C31	1	0.01uF	CAP, CERM, 0.01uF, 50V, +/-10%, X7R, 0603	0603	C0603C103K5RACTU	Kemet		
C32	1	0.22uF	CAP, CERM, 0.22uF, 25V, +/-10%, X5R, 0603	0603	06033D224KAT2A	AVX		
C33	1	3300pF	CAP, CERM, 3300pF, 100V, +/-10%, X7R, 0603	0603	06031C332KAT2A	AVX		
C34	1	100pF	CAP, CERM, 100pF, 1000V, +/-5%, U2J, 1206	1206	GRM31A7U3A101JW31 D	MuRata		
C35	1	0.22uF	CAP, CERM, 0.22uF, 25V, +/-5%, X7R, 0805	0805	08053C224JAT2A	AVX		
C36	1	0.022uF	CAP, CERM, 0.022uF, 50V, +/-10%, X5R, 0603	0603	GRM188R61H223KA01 D	MuRata		
C37	1	1uF	CAP, CERM, 1uF, 16V, +/-10%, X5R, 0603	0603	C0603C105K4PACTU	Kemet		
C38	1	0.1uF	CAP, CERM, 0.1uF, 25V, +/-10%, X5R, 0603	0603	06033D104KAT2A	AVX		
C39	1	1000uF	CAP, AL, 1000uF, 16V, +/-20%, TH	CAPPR5-10x16	16ZLJ1000MCE10X16	Rubycon		
C40	1	1uF	CAP, CERM, 1uF, 25V, +/-10%, X5R, 0805	0805	GRM216R61E105KA12 D	MuRata		
C41	1	1000pF	CAP, CERM, 1000pF, 50V, +/-10%, C0G/NP0, 0603	0603	06035A102KAT2A	AVX		
C42	1	6800pF	CAP, CERM, 6800pF, 50V, +/-5%, X7R, 0603	0603	C0603C682J5RACTU	Kemet		
D1	1	420V	Diode, Switching-Bridge, 420V, 8A, TH	GBU	GBU8J-BP	Micro Commercial Componen		
D2, D5, D11	3	0.63V	Diode, P-N, 70V, 0.2A, SOT-323	SOT-323	BAV99WT1G	Fairchild Semiconductor		
D3, D6	2	100V	Diode, Schottky, 100V, 10A, TH	TO-220AC	MBR10100G	ON Semiconductor		
D4, D7, D15	3	30V	Diode, Schottky, 30V, 0.2A, SOD-323	SOD-323	BAT54HT1G	ON Semiconductor		
D8	1	0.45V	Diode, Schottky, 60V, 3A, SOD-123	SOD-123	MBR0560-TP	Micro Commercial Componen		
D9	1	0.35V	Diode, Schottky, 30V, 0.2A, SOD-323	SOD-323	BAT54HT1G	ON Semiconductor		
D10	1	1.4V	Diode, Ultrafast, 100V, 0.25A, SOD-323	SOD-323	BAS316.115	NXP Semiconductor		
D12	1	100V	Diode, Schottky, 100V, 2A, SMB	SMB	B2100-13-F	Diodes Inc.		
D13	1	12V	Diode, Zener, 12V, 200mW, SOD-323	SOD-323	MMSZ5242BS-7-F	Diodes Inc.		
D14	1	13V	Diode, Zener, 13V, 200mW, SOD-323	SOD-323	MMSZ5243BS-7-F	Diodes Inc.		
F1	1		FUSE FAST 250VAC 5A RADIAL	TR5 fuse 8.5mm DIA	37015000410	Littelfuse		
HS1, HS2, HS3, HS4, HS5	5		Heat Sink, TO-220, TH	TO-220 Heat Sink	530614B00000G	Aavid		
J1	1		Header, TH, 100mil, 2x1, Gold plated, 230 mil above insulator	TSW-102-07-G-S	TSW-102-07-G-S	Samtec, Inc.		
J2	1		HEADER, .312 VERT 3POS	19.7x10.7 x8.5 mm	1-1318301-3	TE Connectivity		
J3, J4	2	2x1	Conn Term Block, 2POS, 5.08mm, TH	PhoenixContact_1715 721	1715721	Phoenix Contact		
L1	1	1mH	CHOKE TOROID 1.0MH 6A VERTICAL	13x22x17.5mm	744823601	Würth Elektronik eiSos		
L2, L4	2	1uH	Inductor, Shielded Drum Core, Ferrite, 1uH, 13A, 0.00386 ohm, SMD	WE-PD-XXL	7447709001	Würth Elektronik eiSos		
L3	1	72uH	Inductor, Shielded E Core, 72uH, 10A, 0.038 ohm, TH	Inductor, 23.5x29.5x26.0 mm	750314573	Würth Elektronik eiSos		
Q1, Q4	2		MOSFET N-CH 500V 12A TO-220	TO-220AB	STP14NM50N	ST		None
Q2, Q5	2	0.3V	Transistor, NPN, 40V, 0.15A, SOT-23	SOT-23	MMBT2222A	Fairchild Semiconductor		
Q3, Q6	2	1.6V	Transistor, PNP, 60V, 0.8A, SOT-23	SOT-23	MMBT2907A	Fairchild Semiconductor		
Q7	1		TRANSISTOR NPN 600V 2A DPAK	DPAK	KSC5502DTM			
Q8	1		TRANS NPN 50V 3A SOT223	SOT-223	PBSS4350Z.135			
R1, R2, R4, R5	4	100k	RES, 100k ohm, 5%, 0.25W, 1206	1206	CRCW1206100KJNEA	Vishay-Dale		
R3, R6	2	750k	RES, 750k ohm, 1%, 0.25W, 1206	1206	CRCW1206750KFKEA	Vishay-Dale		
R7, R14	2	2.2	RES, 2.2 ohm, 5%, 1W, 2512	2512	CRCW25122R20JNEG	Vishay-Dale		
R8, R11	2	10	RES, 10 ohm, 5%, 0.1W, 0603	0603	CRCW060310R0JNEA	Vishay-Dale		
R9, R13	2	20.0k	RES, 20.0k ohm, 1%, 0.125W, 0805	0805	CRCW080520K0FKEA	Vishay-Dale		
R10, R12	2	10.0k	RES, 10.0k ohm, 1%, 0.25W, 1206	1206	CRCW120610K0FKEA	Vishay-Dale		
R15	1	4.99k	RES, 4.99k ohm, 1%, 0.25W, 1206	1206	CRCW12064K99FKEA	Vishay-Dale		
R16, R24	2	0	RES, 0 ohm, 5%, 0.1W, 0603	0603	CRCW0603000Z0EA	Vishay-Dale		
R17	1	511	RES, 511 ohm, 1%, 0.1W, 0603	0603	CRCW0603511RFKEA	Vishay-Dale		
R18, R23, R37	3	10.0k	RES, 10.0k ohm, 1%, 0.1W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale		
R19	1	27.0k	RES, 27.0k ohm, 1%, 0.1W, 0603	0603	RC0603FR-0727KL	Yageo America		
R20	1	1.0Meg	RES, 1.0Meg ohm, 5%, 0.1W, 0603	0603	CRCW06031M00JNEA	Vishay-Dale		
R21	1	15	RES, 15 ohm, 5%, 0.1W, 0603	0603	CRCW060315R0JNEA	Vishay-Dale		
R22	1	2.0k	RES, 2.0k ohm, 5%, 0.1W, 0603	0603	CRCW06032K00JNEA	Vishay-Dale		
R25, R32	2	499k	RES, 499k ohm, 1%, 0.25W, 1206	1206	CRCW1206499KFKEA	Vishay-Dale		
R26	1	49.9	RES, 49.9 ohm, 1%, 0.1W, 0603	0603	CRCW060349R9FKEA	Vishay-Dale		
R27	1	20.0k	RES, 20.0k ohm, 1%, 0.1W, 0603	0603	CRCW060320K0FKEA	Vishay-Dale		
R28	1	3.32k	RES, 3.32k ohm, 1%, 0.1W, 0603	0603	CRCW06033K32FKEA	Vishay-Dale		
R29, R33	2	22k	RES 22K OHM 2W 1% 2512	2512	RHC2512FT22K0			
R30	1	2.43k	RES, 2.43k ohm, 1%, 0.1W, 0603	0603	CRCW06032K43FKEA	Vishay-Dale		
R31	1	51.1k	RES, 51.1k ohm, 1%, 0.1W, 0603	0603	CRCW060351K1FKEA	Vishay-Dale		
R34, R35	2	332k	RES, 332k ohm, 1%, 0.25W, 1206	1206	CRCW1206332KFKEA	Vishay-Dale		
R36	1	698	RES, 698 ohm, 1%, 0.25W, 1206	1206	CRCW1206698RFKEA	Vishay-Dale		
R38	1	2.49k	RES, 2.49k ohm, 1%, 0.1W, 0603	0603	CRCW06032K49FKEA	Vishay-Dale		
R39	1	8.66k	RES, 8.66k ohm, 1%, 0.1W, 0603	0603	CRCW06038K66FKEA	Vishay-Dale		
R40	1	63.4k	RES, 63.4k ohm, 1%, 0.1W, 0603	0603	CRCW060363K4FKEA	Vishay-Dale		
RT1	1	5 ohm	NTC THERMISTOR S 237/5 /M 51	15x7mm	B57237S09M51	EPCOS Inc		
T1	1	150uH	Transformer, 150uH, TH	41.9x31.75x49.0mm	750314889	Würth Elektronik eiSos		
T2	1	900 uH	Drive Gate Transformer, 900uH	11.5x12x12.5mm	56PR3362	Vitec Corporation		
TP1, TP3	2	Red	Test Point, TH, Miniature, Red	Keystone5000	5000	Keystone		
TP2, TP4, TP5, TP6	4	Black	Test Point, TH, Miniature, Black	Keystone5001	5001	Keystone		

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
TP7	1	White	Test Point, Miniature, White, TH	White Miniature Testpoint	5002	Keystone		
U1	1		High-Performance Resonant Mode Controller with Voltage Control, 50 % Duty Cycle, -40 to +125 degC, 8-pin SOIC (D), Green (RoHS & no Sb/Br)	D0008A	UCC25600D	Texas Instruments	Equivalent	None
U2	1		Opto-Isolator, 1 Channel, TH	DIP-4	PC817X4NSZ0F			
U3	1		Adjustable Precision Zener Shunt Regulator, 3-pin SOT-23	MF03A	LM431ACM3	National Semiconductor		
U4	1		SINGLE DIFFERENTIAL COMPARATOR, DBV0005A	DBV0005A	TL331DBV	Texas Instruments		None

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.

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