

Filename: PMP4590 REV_C_bom.xls

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PMP4590 REV_C BOM

COUNT	RefDes	Value	Description	Size	Part Number	Mfr	Area
6	C1	4.7uF	Capacitor, Ceramic, 4.7uF, 50V, X7R, 10%, 1210	1210	GRM32ER71H475KA88L	Murata	
	C2	4.7uF	Capacitor, Ceramic, 4.7uF, 50V, X7R, 10%, 1210	1210	GRM32ER71H475KA88L	Murata	
	C3	4.7uF	Capacitor, Ceramic, 4.7uF, 50V, X7R, 10%, 1210	1210	GRM32ER71H475KA88L	Murata	
2	C4	0.1uF	Capacitor, Ceramic, 16V, X7R, 15%	0603	Std	TDK	
	C5	0.1uF	Capacitor, Ceramic, 16V, X7R, 15%	0603	Std	TDK	
2	C7	470pF	Capacitor, Ceramic, Open, 0603	0603	Std	Std	
1	C8	47nF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 10%, 0603	0603	Std	Std	
5	C10	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 10%, 0603	0603	Std	Std	
	C11	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 10%, 0603	0603	Std	Std	
4	C12	470uF	Capacitor, Aluminum, 25V, ±20%, 80mOhm, 0.85Arms	0.406 x 0.457 inch	EEVFK1E471P	Panasonic	
	C13	470uF	Capacitor, Aluminum, 25V, ±20%, 80mOhm, 0.85Arms	0.406 x 0.457 inch	EEVFK1E471P	Panasonic	
	C14	470uF	Capacitor, Aluminum, 25V, ±20%, 80mOhm, 0.85Arms	0.406 x 0.457 inch	EEVFK1E471P	Panasonic	
	C15	470uF	Capacitor, Aluminum, 25V, ±20%, 80mOhm, 0.85Arms	0.406 x 0.457 inch	EEVFK1E471P	Panasonic	
1	C16	10uF	Capacitor, Ceramic, 25V, X5R, 10%	1206	C3216X5R1E106K	TDK	
1	C17	560pF	Capacitor, Ceramic, Low Inductance, vvV, [temp], [tol]	0603	GRM39yyyyxxKvvvA	muRata	
1	C18	4.7nF	Capacitor, Ceramic, Low Inductance, vvV, [temp], [tol]	0603	GRM39yyyyxxKvvvA	muRata	
	C19	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 10%, 0603	0603	Std	Std	
	C20	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 10%, 0603	0603	Std	Std	
1	C21	4.7uF	Capacitor, Ceramic, 4.7uF, 6.3V, X5R, 10%, 0603	0603	Std	Std	
	C22	470pF	Capacitor, Ceramic, Open, 0603	0603	Std	Std	
	C23	0.1uF	Capacitor, Ceramic, 0.1uF, 16V, X7R, 10%, 0603	0603	Std	Std	
2	C24	1uF	Capacitor, Ceramic, 1uF, 16V, X7R, 10%, 0603	0603	Std	Std	
	C25	4.7uF	Capacitor, Ceramic, 4.7uF, 50V, X7R, 10%, 1210	1210	GRM32ER71H475KA88L	Murata	
	C26	4.7uF	Capacitor, Ceramic, 4.7uF, 50V, X7R, 10%, 1210	1210	GRM32ER71H475KA88L	Murata	
	C27	4.7uF	Capacitor, Ceramic, 4.7uF, 50V, X7R, 10%, 1210	1210	GRM32ER71H475KA88L	Murata	
2	C28	100uF	Capacitor, Aluminum, 35V, ±20%, 100uF, 0.160mOhm, 0.6Arn	0.328 x 0.328 inch	EEVFK1V101P	Panasonic	
	C29	100uF	Capacitor, Aluminum, 35V, ±20%, 100uF, 0.160mOhm, 0.6Arn	0.328 x 0.328 inch	EEVFK1V101P	Panasonic	
1	C30	6.8nF	Capacitor, Ceramic, 50V, [temp], [tol]	0603	Std	Std	
1	C31	22pF	Capacitor, Ceramic, Low Inductance, vvV, [temp], [tol]	0603	GRM39yyyyxxKvvvA	muRata	
	C32	1uF	Capacitor, Ceramic, 1uF, 16V, X7R, 10%, 0603	0603	Std	Std	
1	C33	47p	Capacitor, Ceramic, 1uF, 16V, X7R, 10%, 0603	0603	Std	Std	
1	C34	1.0uF	Capacitor, Ceramic, 16V, X7R, 15%	0603	Std	TDK	
1	C35	4.7uF	Capacitor, Ceramic, 6.3V, X7R, 15%	0603	Std	TDK	
4	C36	150uF	Capacitor, POSCap, 10V, 20%, 3.6A, 15mOhm	D3L	10TPD150ML	Sanyo	
1	C37	NTP	Capacitor, Ceramic, Low Inductance, vvV, [temp], [tol]	0603	Std	Std	
1	C38	390pF	Capacitor, Ceramic, 50V, [temp], [tol]	0603	Std	Std	
	C39	150uF	Capacitor, POSCap, 10V, 20%, 3.6A, 15mOhm	D3L	10TPD150ML	Sanyo	
1	C40	22uF	Capacitor, Ceramic, 16V, X7R, 20%	1210	C3225X7R1C226M	TDK	
	C41	150uF	Capacitor, POSCap, 10V, 20%, 3.6A, 15mOhm	D3L	10TPD150ML	Sanyo	
	C42	150uF	Capacitor, POSCap, 10V, 20%, 3.6A, 15mOhm	D3L	10TPD150ML	Sanyo	
2	C43	NTP	Capacitor, Ceramic, 1uF, 16V, X7R, 10%, 0603	0603	Std	Std	

	C44	NTP	Capacitor, Ceramic, 1uF, 16V, X7R, 10%, 0603	0603	Std	Std
1	C45	220pF	Capacitor, Ceramic, 16V, X7R, 15%	0603	Std	TDK
1	C46	47pF	Capacitor, Ceramic, 16V, X7R, 15%	0603	Std	TDK
2	D1	MBRX02560	Diode, Schottky, 60V, 0.25A, SOD-323	SOD323	MBRX02560	MCC
	D2	MBRX02560	Diode, Schottky, 60V, 0.25A, SOD-323	SOD323	MBRX02560	MCC
1	D3	13V	Diode, Zener, 13-V, 350-mW	SOT-23	BZX84C13-T	Diodes
2	D4	BAS16	Diode, Switching, 150-mA, 75-V, 350mW	SOT23	BAS16	Vishay-Liteon
	D5	BAS16	Diode, Switching, 150-mA, 75-V, 350mW	SOT23	BAS16	Vishay-Liteon
5	J3	L35	Lug, Copper, 25A, #8AWG - #14AWG	0.375 x 0.812 inch	L35	Thomas & Betts
	J4	L35	Lug, Copper, 25A, #8AWG - #14AWG	0.375 x 0.812 inch	L35	Thomas & Betts
	J5	L35	Lug, Copper, 25A, #8AWG - #14AWG	0.375 x 0.812 inch	L35	Thomas & Betts
1	J6	33457	Lug, Copper, 25A, #8AWG - #14AWG	0.375 x 0.812 inch	L35	Thomas & Betts
1	J7	ED1514	Terminal Block, 2-pin, 6-A, 3.5mm	0.27 x 0.25 inch	ED1514	OST
	J8	L35	Lug, Copper, 25A, #8AWG - #14AWG	0.375 x 0.812 inch	L35	Thomas & Betts
	J9	L35	Lug, Copper, 25A, #8AWG - #14AWG	0.375 x 0.812 inch	L35	Thomas & Betts
1	L1	5.6uH	Inductor, SMT, 13.5A, 9.3milliohm	0.51 x 0.51 inch	IHLP5050FDER5R6M01	Vishay
1	L2	10uH	Inductor, SMT, 13.5A, 9.3milliohm	0.51 x 0.51 inch	IHLP5050FDER5R6M01	Vishay
6	Q1	HAT2266H	MOSFET, N-Ch, 60V, 30A, 0.009 Ohms, LFPAK	LFPAK	HAT2266H	Renesas
	Q2	HAT2266H	MOSFET, N-Ch, 60V, 30A, 0.009 Ohms, LFPAK	LFPAK	HAT2266H	Renesas
2	Q3	NTP	MOSFET, N-Ch, 60V, 30A, 0.009 Ohms, LFPAK	LFPAK	HAT2266H	Renesas
	Q4	HAT2266H	MOSFET, N-Ch, 60V, 30A, 0.009 Ohms, LFPAK	LFPAK	HAT2266H	Renesas
	Q5	HAT2266H	MOSFET, N-Ch, 60V, 30A, 0.009 Ohms, LFPAK	LFPAK	HAT2266H	Renesas
	Q6	HAT2266H	MOSFET, N-Ch, 60V, 30A, 0.009 Ohms, LFPAK	LFPAK	HAT2266H	Renesas
1	Q7	FZT491	Transistor, NPN Planar Midium Power, VCE 60V, VCB80V, VE	SOT223	FZT491	Zetex
	Q8	HAT2266H	MOSFET, N-Ch, 60V, 30A, 0.009 Ohms, LFPAK	LFPAK	HAT2266H	Renesas
	Q9	NTP	MOSFET, N-Ch, 60V, 30A, 0.009 Ohms, LFPAK	LFPAK	HAT2266H	Renesas
2	Q10	MMBT3906LT1	Bipolar, PNP, 40-V, 200-mA, 225-mW	SOT23	MMBT3906LT1	On Semi
2	Q11	MMBT3904LT1	Bipolar, NPN, 40-V, 200-mA, 350-mW	SOT23	MMBT3904LT1	On Semi
	Q12	MMBT3906LT1	Bipolar, PNP, 40-V, 200-mA, 225-mW	SOT23	MMBT3906LT1	On Semi
	Q13	MMBT3904LT1	Bipolar, NPN, 40-V, 200-mA, 350-mW	SOT23	MMBT3904LT1	On Semi
2	R1	40.2K	Resistor, Chip, 22K Ohms, 0.1%, 0603	0603	Std	Std
2	R3	2.2	Resistor, Metal Film, 1/4 watt, ± 5%	1206	Std	Std
1	R4	29.4k	Resistor, Chip, 51.1 Ohms, 1%, 0603	0603	Std	Std
4	R9	0	Resistor, Chip, 51.1 Ohms, 1%, 0603	0603	Std	Std
2	R10	13.3K	Resistor, Chip, 6.8K Ohms, 0.1%, 0603	0603	Std	Std
	R11	13.3K	Resistor, Chip, 6.8K Ohms, 0.1%, 0603	0603	Std	Std
2	R12	2	Resistor, Chip, 4.7 Ohms, 5%, 0603	0603	Std	Std
1	R13	0	Resistor, Chip, 6.8K Ohms, 0.1%, 0603	0603	Std	Std
	R18	2	Resistor, Chip, 4.7 Ohms, 5%, 0603	0603	Std	Std
	R20	2.2	Resistor, Metal Film, 1/4 watt, ± 5%	1206	Std	Std
2	R21	10K	Resistor, Chip, 10K Ohms, 1%, 0603	0603	Std	Std
1	R22	7.5k	Resistor, Chip, 51.1 Ohms, 1%, 0603	0603	Std	Std
1	R23	23.2k	Resistor, Chip, 22K Ohms, 0.1%, 0603	0603	Std	Std
2	R24	1.47K	Resistor, Chip, 1.47K Ohms, 1%, 0603	0603	Std	Std
1	R25	4.75K	Resistor, Chip, Open, 0805	0805	Std	Std
	R26	40.2K	Resistor, Chip, 22K Ohms, 0.1%, 0603	0603	Std	Std
1	R27	0	Resistor, Chip, 22K Ohms, 0.1%, 0603	0603	Std	Std

2	R28	NTP	Resistor, Chip, 6.8K Ohms, 0.1%, 0603	0603	Std	Std
	R29	NTP	Resistor, Chip, 6.8K Ohms, 0.1%, 0603	0603	Std	Std
2	R30	100K	Resistor, Chip, 1%, 0603	0603	Std	Std
1	R31	15.4K	Resistor, Chip, 1%, 0603	0603	Std	Std
2	R32	1K	Resistor, Chip, 1%, 0603	0603	Std	Std
1	R33	39.2K	Resistor, Chip, 1%, 0603	0603	Std	Std
4	R34	47.5K	Resistor, Chip, 1%, 0603	0603	Std	Std
	R35	47.5K	Resistor, Chip, 1%, 0603	0603	Std	Std
	R36	0	Resistor, Chip, 51.1 Ohms, 1%, 0603	0603	Std	Std
2	R37	1M	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R38	38.3K	Resistor, Chip, 1/16W, x%	0603	Std	Std
	R39	0	Resistor, Chip, 51.1 Ohms, 1%, 0603	0603	Std	Std
	R40	0	Resistor, Chip, 51.1 Ohms, 1%, 0603	0603	Std	Std
2	R41	49.9	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R42	43.2K	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R43	24.3K	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R44	100k	Resistor, Chip, 1/16W, x%	0603	Std	Std
	R45	49.9	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R46	23.2K	Resistor, Chip, 1/16W, x%	0603	Std	Std
2	R47	NTP	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R48	56.2K	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R49	10	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R50	3.74K	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R51	1.1K	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R52	39.2K	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R53	200K	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R54	10K	Resistor, Chip, 1/16W, 0.1%	0603	Std	Std
2	R55	10K	Resistor, Chip, 1/16W, x%	0603	Std	Std
	R56	1.47K	Resistor, Chip, 1.47K Ohms, 1%, 0603	0603	Std	Std
	R57	10K	Resistor, Chip, 10K Ohms, 1%, 0603	0603	Std	Std
	R58	1M	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R59	21.5K	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	R60	110K	Resistor, Chip, 1%, 0603	0603	Std	Std
	R61	1K	Resistor, Chip, 1%, 0603	0603	Std	Std
	R62	47.5K	Resistor, Chip, 1%, 0603	0603	Std	Std
	R63	47.5K	Resistor, Chip, 1%, 0603	0603	Std	Std
	R64	100K	Resistor, Chip, 1%, 0603	0603	Std	Std
1	R65	59K	Resistor, Chip, 1%, 0603	0603	Std	Std
	R66	NTP	Resistor, Chip, 1/16W, x%	0603	Std	Std
	R67	10k	Resistor, Chip, 1/16W, x%	0603	Std	Std
1	SH1		Short jumper			
7	TP1	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
6	TP2	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
4	TP3	5002	Test Point, White, Thru Hole Color Keyed	0.100 x 0.100 inch	5002	Keystone
	TP4	5002	Test Point, White, Thru Hole Color Keyed	0.100 x 0.100 inch	5002	Keystone
	TP6	5002	Test Point, White, Thru Hole Color Keyed	0.100 x 0.100 inch	5002	Keystone
	TP8	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone

	TP9	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP10	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
	TP11	5002	Test Point, White, Thru Hole Color Keyed	0.100 x 0.100 inch	5002	Keystone
	TP12	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP13	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
	TP14	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP15	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
	TP16	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
	TP17	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
	TP18	5001	Test Point, Black, Thru Hole Color Keyed	0.100 x 0.100 inch	5001	Keystone
	TP19	5000	Test Point, Red, Thru Hole Color Keyed	0.100 x 0.100 inch	5000	Keystone
1	U1	TPS40140RHH	IC, 2-Phase or Dual Output PWM Controller, QFN	QFN-36	TPS40140RHH	Texas Instruments
2	U2	TL431AIDBZ	IC, Precision Adjustable Shunt Regulator	SOT23-3	TL431AIDBZ	TI
	U3	TL431AIDBZ	IC, Precision Adjustable Shunt Regulator	SOT23-3	TL431AIDBZ	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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