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PMP9490 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
!PCB1	1		PMP9490	Any	Printed Circuit Board	
C1, C2, C3, C4, C5	5	10uF	C3225X7R1E106M	TDK	CAP, CERM, 10 µF, 25 V, +/- 20%, X7R, 1210	1210
C6, C7, C8, C9	4	470uF	EEU-FM1E471LBJ	Panasonic	CAP, AL, 470 µF, 25 V, +/- 20%, 0.03 ohm, TH	8.0x20mm
C10, C11	2	330uF	EEE-FP1V331AP	Panasonic	CAP, AL, 330 µF, 35 V, +/- 20%, 0.06 ohm, SMD	10 x 10
C12	1	1uF	GRM21BR71H105KA12L	MuRata	CAP, CERM, 1uF, 50V, +/-10%, X7R, 0805	0805
C13, C14, C15, C16, C17, C21	6	1uF	GRM188R71C105KA12D	MuRata	CAP, CERM, 1uF, 16V, +/-10%, X7R, 0603	0603
C18	1	0.1uF	06033C104JAT2A	AVX	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	0603
C19	1	100pF	06035A101FAT2A	AVX	CAP, CERM, 100 pF, 50 V, +/- 1%, COG/NP0, 0603	0603
C20	1	1000pF	GRM188R71H102KA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603	0603
C22	1	0.1uF	06035C104KAT2A	AVX	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	0603
C23	1	4700pF	06031C472KAT2A	AVX	CAP, CERM, 4700 pF, 100 V, +/- 10%, X7R, 0603	0603
C24, C26, C28, C29	4	2.2uF	C0603C225K9PACTU	Kemet	CAP, CERM, 2.2uF, 6.3V, +/-10%, X5R, 0603	0603
C25	1	100pF	GRM1885C1H101JA01D	MuRata	CAP, CERM, 100pF, 50V, +/-5%, COG/NP0, 0603	0603
C27	1	0.01uF	06031C103KAT2A	AVX	CAP, CERM, 0.01 µF, 100 V, +/- 10%, X7R, 0603	0603
Cin1, Cin2, Cin3, Cin4	4	2.2uF	GRM31CR61H225KA88L	MuRata	CAP, CERM, 2.2uF, 50V, +/-10%, X5R, 1206	1206
COMP1, SS1, SW1, SW2	4	White	5007	Keystone	Test Point, Compact, White, TH	White Compact Testpoint
Cx1	1	1500pF	06031C152KAT2A	AVX	CAP, CERM, 1500 pF, 100 V, +/- 10%, X7R, 0603	0603
D1, D2, D3	3	100V	MBR1H100SFT3G	ON Semiconductor	Diode, Schottky, 100V, 1A, SOD-123FL	SOD-123FL
D101, D102, D103, D104	4	30V	MBR130T1G	ON Semiconductor	Diode, Schottky, 30 V, 1 A, SOD-123	SOD-123
FID1, FID2, FID3, FID4, FID5, FID6	6		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
Gnd1, Gnd2, ICGnd1	3	Black	5006	Keystone	Test Point, Compact, Black, TH	Black Compact Testpoint
H1, H2, H3, H4	4		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
H13, H14, H15, H16	4		634-10ABP	Wakefield Solutions	Heat Sink, TO-220, TH	16.26x25.4x16.26 mm
J1, J2, J3, J4	4	50A	CB35-36-CY	Panduit	Terminal 50A Lug	CB35-36-CY
J5	1	1x3	PBC03SAAN	Sullins Connector Solutions	Header, 100mil, 3x1, Gold, TH	PBC03SAAN
L1	1	1.3uH	7443556130	Würth Elektronik eiSos	Inductor, Shielded Drum Core, WE-Superflux200, 1.3 µH, 34.5 A, 0.0009 ohm, SMD	18.3x8.9x18.2mm
LBL1	1		THT-14-423-10	Brady	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650"H x 0.200"W
Q3, Q4, Q9, Q10	4	40V	CSD18502KCS	Texas Instruments	MOSFET, N-CH, 40 V, 100 A, KCS0003A	KCS0003A
R1, R2	2	0.005	KRL7638-C-R005-F-T1	Susumu Co Ltd	RES, 0.005, 1%, 4 W, 3015 WIDE	3015 WIDE
R3, R10	2	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, 0603	0603
R4, R15, R18	3	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100, 1%, 0.1 W, 0603	0603
R5	1	249k	CRCW0805249KFKEA	Vishay-Dale	RES, 249k ohm, 1%, 0.125W, 0805	0805
R6	1	39.0k	RC0603FR-0739KL	Yageo America	RES, 39.0 k, 1%, 0.1 W, 0603	0603
R7	1	10.0	CRCW080510R0FKEA	Vishay-Dale	RES, 10.0 ohm, 1%, 0.125W, 0805	0805
R8	1	0	CRCW08050000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.125W, 0805	0805

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R9	1	DNP	CRCW06030000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.1W, 0603	0603
R11, R16, R17	3	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.1W, 0603	0603
R12	1	189k	RT0805BRD07189KL	Yageo America	RES, 189k ohm, 0.1%, 0.125W, 0805	0805
R13	1	24.3k	CRCW080524K3FKEA	Vishay-Dale	RES, 24.3 k, 1%, 0.125 W, 0805	0805
R14	1	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0k ohm, 1%, 0.1W, 0603	0603
R19, R20	2	0.006	KRL7638-C-R006-F-T1	Susumu Co Ltd	RES, 0.006, 1%, 4 W, 3015 WIDE	3015 WIDE
R22	1	20.0k	CRCW080520K0FKEA	Vishay-Dale	RES, 20.0k ohm, 1%, 0.125W, 0805	0805
R25	1	1.15k	CRCW08051K15FKEA	Vishay-Dale	RES, 1.15k ohm, 1%, 0.125W, 0805	0805
R101, R102, R103, R104	4	10.0k	CRCW080510K0FKEA	Vishay-Dale	RES, 10.0k ohm, 1%, 0.125W, 0805	0805
Rh1, Rh2	2	10.0	RC0603FR-0710RL	Yageo America	RES, 10.0, 1%, 0.1 W, 0603	0603
RI1, RI2	2	4.70	RT0603DRE074R7L	Yageo America	RES, 4.70, 0.5%, 0.1 W, 0603	0603
Rx1, Rx2	2	1.78	CRCW12061R78FKEA	Vishay-Dale	RES, 1.78, 1%, 0.25 W, 1206	1206
U1	1		LM5175	Texas Instruments Inc	60V, Wide VIN, 4 switch Sync Buck-Boost Controller TSSOP28	TSSOP-28
Vin1, Vout1	2	Red	5005	Keystone	Test Point, Compact, Red, TH	Red Compact Testpoint
C30, C34, C36	0(DNP)	1uF	08053D105KAT2A	AVX	CAP, CERM, 1 μ F, 25 V, +/- 10%, X5R, 0805	0805
C31, C32, C33, C37, C38, C39, C40, C43, C44, C45	0(DNP)	0.1uF	06033C104JAT2A	AVX	CAP, CERM, 0.1 μ F, 25 V, +/- 5%, X7R, 0603	0603
C35	0(DNP)	0.01uF	08051C103JAT2A	AVX	CAP, CERM, 0.01 μ F, 100 V, +/- 5%, X7R, 0805	0805
C41, C42	0(DNP)	0.047uF	06033C473JAT2A	AVX	CAP, CERM, 0.047 μ F, 25 V, +/- 5%, X7R, 0603	0603
D4	0(DNP)	30V	BAT54A-7-F	Diodes Inc.	Diode, Schottky, 30V, 0.2A, SOT-23	SOT-23
Q1, Q2, Q7, Q8	0(DNP)	0.2V	MMBT3904T-7-F	Diodes Inc.	Transistor, NPN, 20V, 0.2A, SOT-523	SOT-523
Q5, Q6, Q11, Q12	0(DNP)	0.25V	MMBT3906T-7-F	Fairchild Semiconductor	TRANS PNP 40V 200MA SOT523	SOT-523
Q13	0(DNP)	40 V	2N2222A	STMicroelectronics	Transistor, NPN, 40 V, 0.6 A, TO-18	TO-18
R21, R26, R27, R28, R29, R33, R36, R39, R49, R51	0(DNP)	10.0k	CRCW080510K0FKEA	Vishay-Dale	RES, 10.0k ohm, 1%, 0.125W, 0805	0805
R23	0(DNP)	78.7k	CRCW080578K7FKEA	Vishay-Dale	RES, 78.7k ohm, 1%, 0.125W, 0805	0805
R24	0(DNP)	20.0k	CRCW080520K0FKEA	Vishay-Dale	RES, 20.0k ohm, 1%, 0.125W, 0805	0805
R30	0(DNP)	51.1	RT0805BRD0751R1L	Yageo America	RES, 51.1 ohm, 0.1%, 0.125W, 0805	0805
R31, R34, R37, R42	0(DNP)	1.0k	CRCW06031K00JNEA	Vishay-Dale	RES, 1.0k ohm, 5%, 0.1W, 0603	0603
R32, R40	0(DNP)	100k	CRCW0805100KFKEA	Vishay-Dale	RES, 100k ohm, 1%, 0.125W, 0805	0805
R35, R41	0(DNP)	1.00Meg	CRCW08051M00FKEA	Vishay-Dale	RES, 1.00Meg ohm, 1%, 0.125W, 0805	0805
R38	0(DNP)	4.32k	CRCW08054K32FKEA	Vishay-Dale	RES, 4.32k ohm, 1%, 0.125W, 0805	0805
R43, R44	0(DNP)	{Value}	3314J-x-yyyz	Bourns	Potentiometer, 4mm Sq, 0.25W, \pm 20%	0.197 x 0.197 inch
R46, R47, R48, R50	0(DNP)	2.21k	CRCW08052K21FKEA	Vishay-Dale	RES, 2.21k ohm, 1%, 0.125W, 0805	0805
R52, R53	0(DNP)	470k	RG2012P-474-B-T5	Susumu Co Ltd	RES, 470k ohm, 0.1%, 0.125W, 0805	0805
R54, R55	0(DNP)	150k	CRCW0805150KFKEA	Vishay-Dale	RES, 150k ohm, 1%, 0.125W, 0805	0805
R56, R57, R58, R59, R60, R61	0(DNP)	47.5k	ERJ-6ENF4752V	Panasonic	RES, 47.5k ohm, 1%, 0.125W, 0805	0805
R62	0(DNP)	1.00k	CRCW08051K00FKEA	Vishay-Dale	RES, 1.00k ohm, 1%, 0.125W, 0805	0805
R63	0(DNP)	1.50k	CRCW08051K50FKEA	Vishay-Dale	RES, 1.50k ohm, 1%, 0.125W, 0805	0805
R64	0(DNP)	4.70k	RT0805BRD074K7L	Yageo America	RES, 4.70k ohm, 0.1%, 0.125W, 0805	0805
TP1, TP2, TP3	0(DNP)	Red	5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint

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U2	0(DNP)	INA194AID BV	INA194AIDBV	TI	IC, Current Shunt Monitor, -16V to 80V Common-Mode Range	SOT23-5
U3	0(DNP)		TLV274CDA	Texas Instruments	550 uA/Ch, 3 MHz, Rail-to-Rail Output Operational Amplifier, 2.7 to 16 V, 0 to 70 degC, 14-pin SOIC (D0014A), Green (RoHS & no Sb/Br)	D0014A
U4, U5	0(DNP)		TLC274ACD	Texas Instruments	LinCMOS(TM) Precision Quad Operational Amplifier, 3 to 16 V, 0 to 70 degC, 14-pin SOIC (D0014A), Green (RoHS & no Sb/Br)	D0014A
U6	0(DNP)		TL431AIDBZR	Texas Instruments	Adjustable Precision Shunt Regulator, 34 ppm / degC, 100 mA, -40 to 85 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A

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