Variant: 001
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PMP41130 REV E1 Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	C1, C2, C3, C20, C21, C22, C29, C23, C53, C54, C73, C75, C76	10	10µF	C3216X5ZA106K160AC	TDK	10 µF ±10% 100V Ceramic Capacitor X8S 1206 (3216 Metric)	1206
2	C4, C5, C6	4	0.47uF	GRM155R61E474KE01D	Murata	CAP, CERM, 0.47 uF, 25 V,+/- 10%, X5R, 0402	0402
3	C7, C8	2	0.1uF	C2012X7T2E104M125AE	TDK	CAP, CERM, 0.1 uF, 250 V,+/- 20%, X7T, 0805	0805
4	C9, C10	2	470pF	VJ1206Y471KXEAT5Z	Vishay-Vitramon	CAP, CERM, 470 pF, 500 V, +/- 10%, X7R, 1206	1206
5	C11, C14, C100, C147	4	1uF	GRM155R61E105MA12D	Murata	CAP, CERM, 1 uF, 25 V,+/- 20%, X5R, 0402	0402
6	C12, C13, C132, C133, C137, C138, C157, C158	8			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 1210, X7R; 2.2µF, 100VDC	
7	C15, C16, C17, C18, C19	6	1uF	C2012X7S2A105K125AB	TDK	CAP, CERM, 1 uF, 100 V, +/- 10%, X7S, 0805	0805
8	C23, C24, C25, C26, C27, C28, C37, C38, C39, C40, C41, C42, C43, C45, C47, C48, C57, C58, C59, C60, C155, C156	22	4.7uF	C3225X7S2A475K200AE	TDK	CAP, CERM, 4.7 uF, 100 V, +/- 10%, X7S, 1210	1210
9	C30, C31	2	100pF	VJ1206A101JXGAT5Z	Vishay-Vitramon	CAP, CERM, 100 pF, 1000 V, +/- 5%, C0G/NP0, 1206	1206
10	C33, C34, C35, C36	4	470uF	ECA-2AM471	Panasonic	CAP, AL, 470 uF, 100 V, +/- 20%, TH	D16xL25mm
11	C44, C127, C131	3			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X7R, 2.2µF, 10VDC	
12	C46, C128, C135	3			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 1206, X7R, 22µF, 16VDC	
13	C49, C50, C51, C52	4			Würth Elektronik	WCAP-ASLI Aluminum Electrolytic Capacitor, V-Chip, D16 x H17mm, 150uF, 100V	
14	C55, C56, C99, C115	4	2.2uF	GRM155R61E225ME15D	Murata	CAP, CERM, 2.2 µF, 25 V,+/- 20%, X5R, 0402	0402
15	C61, C62	2	0.1uF	VJ1210Y105KBBAT4X	Vishay-Vitramon	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, 1210	1210
16	C64, C65, C66, C67, C68, C69, C70, C71, C72, C73	10	100nF	B 85012E+11	Würth Electronics	0.1 µF ±10% 100V Ceramic Capacitor X7R 0603 (1608 Metric)	0603
17	C77, C78	2			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, X7R, 100pF, 50VDC	
18	C79, C80, C81, C86, C87, C91, C97, C98, C106, C107, C108, C109	12			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, NP0, 33pF, 50VDC	
19	C82, C83, C93, C94	4	33pF	B 85012E+11	Würth Elektronik	CAP, CERM, 33 pF, 25 V, +/- 5%, C0G/NP0, 0402	0402
20	C84, C85, C95, C96	4			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, X7R, 100nF, 16VDC	
21	C88	1			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, X7R, 100nF, 10VDC	
22	C89, C111, C119	3			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, NP0, 1nF, 50VDC	
23	C90, C101, C103, C105	4			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, X7R, 10nF, 25VDC	
24	C92, C113	2			Würth Elektronik	WCAP-CSRF Multilayer Ceramic Chip Capacitor, High Frequency, size 0402, NP0 Class 1, 22pF, 50VDC	
25	C102, C104	2	4.7uF	GRM155R61E475ME15	Murata	CAP, CERM, 4.7 uF, 25 V, +/- 20%, X5R, 0402	0402
26	C110	1	0.01uF	C0603C103K2RACTU	Kemet	CAP, CERM, 0.01 uF, 200 V, +/- 10%, X7R, 0603	0603
27	C112	1	0.022uF	GRM155R72A223KA12D	Murata	CAP, CERM, 0.022 uF, 50 V, +/- 10%, X7R, 0402	0402
28	C114	1	0.01uF	CGA2B3X8R1H103K050BB	TDK	CAP, CERM, 0.01 uF, 50 V,+/- 10%, X8R, AEC-Q200 Grade 0, 0402	0402
29	C115, C116, C117	3			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, NP0, 10pF, 50VDC	
30	C118, C152, C154	3			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, X7R, 100nF, 50VDC	
31	C120	1			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, X7R, 1nF, 25VDC	
32	C122	1			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, X7R, 1.5nF, 50VDC	
33	C123, C124, C160	3			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 1206, X7R, 100nF, 100VDC	
34	C125	1	0.01uF	VJ1206Y103KXGAT5Z	Vishay-Vitramon	CAP, CERM, 0.01 uF, 1000 V, +/- 10%, X7R, 1206	1206
35	C126, C129, C136	3			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X7R, 1µF, 16VDC	
36	C130, C134	2			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0603, X7R, 2.2nF, 50VDC	
37	C132	1	0.022uF	C0603C223K5RACTU	Kemet	CAP, CERM, 0.022 uF, 50 V, +/- 10%, X7R, 0603	0603
38	C133	1	0.1uF	HMK107B7104KAHT	Taiyo Yuden	CAP, CERM, 0.1 µF, 100 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
39	C139	1	1000pF	C0603C102J5GAC	Kemet	CAP, CERM, 1000 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
40	C140	1	2.2uF	GRM188C71E225KE11D	Murata	CAP, CERM, 2.2 µF, 25 V,+/- 10%, X7S, 0603	0603
41	C146	1	1uF	C1005JB1V105K050BC	TDK	CAP, CERM, 1 uF, 35 V, +/- 10%, JB, 0402	0402
42	C148	1	10uF	GRM21BR61E106MA73L	Murata	CAP, CERM, 10 uF, 25 V, +/- 20%, X5R, 0805	0805
43	C149	1	0.1uF	GRM21BR71E104KA01L	Murata	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0805	0805
44	C150, C151	2	4.7uF	GRM188R71A475KE15D	Murata	CAP, CERM, 4.7 uF, 35 V, +/- 10%, X5R, 0603	0603
45	C153	1			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0402, NP0, 47pF, 50VDC	
46	C159	1	1uF	C3216X7R2A105M160AA	TDK	CAP, CERM, 1 uF, 100 V, +/- 20%, X7R, 1206	1206
47	Cs1	1			Würth Elektronik	WCAP-CSGP Multilayer Ceramic Chip Capacitor, General Purpose, size 0805, X7R, 680nF, 10VDC	
48	D1, D2, D9, D10, D12	5		PNE20020ERX	Nexperia	Diode 200 V 2A Surface Mount SOD-123W	SOD123W
49	D3, D4, D5, D6, D8, D14	6		SDM20U40-7	Diodes Inc.	Diode Schottky 40V 0.25A 2-Pin SOD-523 T/R	SOD523
50	D7	1	100V	BAV99,215	Nexperia	Diode, Switching, 100 V, 0.215 A, SOT-23	SOT-23
51	D11	1		1SMA70AT3G	onsemi	Diode TVS Single Uni-Dir 70V 400W Automotive 2-Pin SMA T/R	SMA
52	D13	1	70V	BAV70-E3-08	Vishay-Semiconductor	Diode, Switching, 70 V, 0.25 A, AEC-Q101, SOT-23	SOT-23
53	FB1, FB2, FB3, FB4, FB5, FB6	6			Würth Elektronik	WE-CBF SMT EMI Suppression Ferrite Bead, size 0402, 470Ohm, 0.62A	
54	J1	1		TSW-102-07-G-S	Samtec	Header, 100mil, 2x1, Gold, TH	2x1 Header
55	L1	1	1uH	74439389010	Würth	1 µH Shielded Molded Inductor 48.2 A 1.61mOhm Max Nonstandard	SMD_11MM/6_10MM
56	L2	1			Würth Elektronik	WE-XHMI SMT Power Inductor, size 1510, 6.8uH, 15A, 4.1mOhm	X
57	L3	1		MSD1260H-154KED	Coilcraft	Shielded Coupled Inductor 150uH 10% 100kHz 0.465Ohm 1.1A 12.3x12.3x6.2mm SMT AECQ200	SMT_CMC_12MM3_13MM3
58	L4	1	10uH	744251120	Würth Elektronik	Inductor, Shielded Drum Core, Ferrite, 12 uH, 1.25 A, 0.06 ohm, SMD	WE-TPC-LH
59	PMBUS	1		61301011121	Würth Elektronik	Header, 2.54 mm, 5x2, Gold, TH	Header, 2.54mm, 5x2 TH
60	Q1	1	150 V	MMBT5401LT1G	ON Semiconductor	Transistor, PNP, 150 V, 0.5 A, SOT-23	SOT-23
61	Q2	1	50V	EMX1DXV6T5	On Semiconductor	TRANS ARR 2NPN 50V 100MA SOT563	SOT563
62	Q4	1	60V	BSS138	Rainchild Semiconductor	MOSFET, N-CH, 50 V, 0.22 A, SOT-23	SOT-23
63	Q5	1		BSC074N15NS5ATMA1	Infineon	N-Channel 150 V 14A (Tc) 214W (Tc) Surface Mount, Wettable Flank PG-TSON-8-3	PG-TSON-8-3
64	R1, R2, R3, R4, R5, R6	6	24.9	RC1206FR-0724R9L	Yageo America	RES, 24.9, 1%, 0.25 W, 1206	1206
65	R7, R8, R10	3	4.7k	CRCW25124K70JNEG	Vishay-Dale	RES, 4.7 k, 5%, 1 W, AEC-Q200 Grade 0, 2512	2512
66	R9, R11, R14, R16, R17, R18, R19, R25, R28, R34, R35, R36, R37, R38, R85, R108	16	0	RC0402JR-070RL	Yageo America	RES, 0, 5%, 0.063 W, 0402	0402
67	R12, R13, R26, R27	4	3.3	CRCW0402F30JNED	Vishay-Dale	RES, 3.3, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
68	R20, R39	2	4.70k	ERJ-2RKF4701X	Panasonic	RES, 4.70 k, 1%, 0.1 W, 0402	0402
69	R21, R22, R23, R24	4	46.4	RC1206FR-0746R4L	Yageo America	RES, 46.4, 1%, 0.25 W, 1206	1206
70	R29, R30, R40, R41, R44, R45, R62, R63, R65, R66, R71	11	10	RK73H1ETTP10R0F	KOA Speer	RES, 10.0, 1%, 0.063 W, 0402	0402
71	R31, R32	2	249	CRCW0402249RFKED	Vishay-Dale	RES, 249, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
72	R42, R43, R56, R61, R64	5	100	RMCF0402JT100R	Stackpole Electronics Inc	RES, 100, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
73	R46, R47, R57, R59	4	15.0k	RC0402FR-0715KL	Yageo America	RES, 15.0 k, 1%, 0.063 W, 0402	0402
74	R48	1	470k	RC0402FR-0747KL	Yageo America	RES, 470 k, 1%, 0.0625 W, 0402	0402
75	R49, R51, R54	3	10	MCR01MZPF1009	Rohm	RES, 10.0, 1%, 0.063 W, 0402	0402
76	R50, R52, R53, R60, R67	5	1.00k	ERJ-2RKF1001X	Panasonic	RES, 1.00 k, 1%, 0.1 W, 0402	0402
77	R58, R68, R69, R70	4	10.0k	ERJ-2RKF1002X	Panasonic	RES, 10.0 k, 1%, 0.1 W, 0402	0402
78	R87, R70	2	1	CRCW04021R00FKED	Vishay-Dale	RES, 1.00, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
79	R72, R95	2	2.20k	ERJ-2RKF2201X	Panasonic	RES, 2.20 k, 1%, 0.1 W, 0402	0402
80	R73, R74, R75	3	33.2k	CRCW04023K32FKED	Vishay-Dale	RES, 33.2 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
81	R76, R91	2	20.0k	RT0402BRD0720KL	Yageo America	RES, 20.0 k, 1%, .0625 W, 0402	0402
82	R77, R78, R94	3	1.50k	ERJ-2RKF1501X	Panasonic	RES, 1.50 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
83	R80	1	120k	ERJ-2RKF1203X	Panasonic	RES, 120 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
84	R81, R82, R84, R86, R87, R88, R97, R108	8	22k	CRCW04022K00JNED	Vishay-Dale	RES, 22 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
85	R83	1	100	RC0402FR-07100RL	Yageo America	RES, 100, 1%, 0.063 W, 0402	0402
86	R88	1	51	RC0402JR-0751RL	Yageo America	RES, 51, 5%, 0.0625 W, 0402	0402
87	R89	1	100k	NCU15WF104E05RC	Murata	NTC Thermistor for Temperature Sensor, Automotive, 0402, 100kΩ, 3%, B-0/25mA, 5V	0402
88	R101	1	2.00k	RG 1005P-202-B-T5	Susumu Co Ltd	RES, 2.00 k, 0.1%, 0.063 W, 0402	0402
89	R103	1	39.0k	ERJ2RKF3902X	Panasonic	RES, 39.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
90	R104	1	100k	RC0402FR-07100KL	Yageo America	RES, 100 k, 1%, 0.0625 W, 0402	0402
91	R106, R129	2	5.62	CRCW0402562RFKED	Vishay-Dale	RES, 5.62 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
92	R110, R120	2	100k	CRCW0603100KJNEAC	Vishay-Dale	RES, 100 k, 5%, 0.1 W, 0603	0603
93	R113	1	120k	RT0603BRD07120KL	Yageo America	RES, 120 k, 0.1%, 0.1 W, 0603	0603
94	R114, R116	2	33.0k	RC0603FR-0733KL	Yageo	RES, 33.0 k, 1%, 0.1 W, 0603	0603
95	R115	1	10	CRT0603-BY-10R0ELF	Bourns	RES, 10.0, 0.1%, 0.1 W, 0603	0603
96	R117	1	12.0k	RT0603BRD0712KL	Yageo America	RES, 12.0 k, 0.5%, 0.1 W, 0603	0603
97	R118	1	43.0k	RC0603FR-0743KL	Yageo	RES, 43.0 k, 1%, 0.1 W, 0603	0603
98	R119	1	22.0k	RC0603FR-0722KL	Yageo	RES, 22.0 k, 1%, 0.1 W, 0603	0603
99	R121	1	9.10k	RC0603FR-079K1L	Yageo	RES, 9.10 k, 1%, 0.1 W, 0603	0603
100	R122, R128	2	4.70k	RT0603BRD074K7L	Yageo America	RES, 4.70 k, 0.1%, 0.1 W, 0603	0603
101	R123	1	470	RT0603BRD07470RL	Yageo America	RES, 470, 0.1%, 0.1 W, 0603	0603
102	R124, R125	2	1.10k	RC0603FR-071100L	Yageo	RES, 1.10 k, 1%, 0.1 W, 0603	0603
103	R126	1	1.00k	RT0603BRD071K00L	Yageo America	RES, 1.00 k, 0.1%, 0.1 W, 0603	0603
104	R127	1	6.80k	RG1608P-682-B-T5	Susumu Co Ltd	RES, 6.80 k, 0.1%, 0.1 W, 0603	0603
105	R130	1	0	CRCW0805000Z0EAHP	Vishay-Dale	RES, 0, 5%, 0.333 W, AEC-Q200 Grade 0, 0805	0805
106	R131	1	9.65k	RT0805BRD079K65L	Yageo America	RES, 9.65 k, 0.1%, 0.125 W, 0805	0805
107	R132	1	2.2	RC3225J22R0FKEG	Vishay-Dale	RES, 2.20, 1%, 0.2 W, 0402	0402
108	R135, R136	2	3.3k	CRCW0402K30JNED	Vishay-Dale	RES, 3.3 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
109	Rtrim1	1	18.2k	RT0805BRD0718K2L	Yageo America	RES, 18.2 k, 0.1%, 0.125 W, 0805	0805
110	RS1	1	0	RC1206JR-0700L	Yageo America	RES, 0, 5%, 0.25 W, 1206	1206
111	RSENSE1	1		WSL2512L1000FEB	Vishay	1 mOhms ±1% 5W Chip Resistor 2512 (6432 Metric) Automotive AEC-Q200, Current Sense, Moisture Resistant, Pulse Withstanding Metal Element	2512
112	T1	1		P-24015	Cytiec	Transformer	SMT_XFRMR_29MM_31MM1
113	T2	1	350uH	PS0316769	Würth Elektronik	Transformer, 350 uH, SMT	7.14x5.73mm
114	U3, U4	2		LMG1205RSX	Texas Instruments	100-V, 33-A GaN Half-Bridge Power Stage	42QFN-FCRLF16
115	U2, U3, U5, U6	4		LMG3100R017	Texas Instruments	100-V, 54-A GaN with Integrated Driver	40QFN-FCRLF15
116	U7, U9	2		ISO6720FBDR	Texas Instruments	CAN, RS232, RS485, SPI Digital Isolator 3000Vrms 2 Channel 50Mbps 8dkV/µs CMTI 8-SOIC (8.15x7, 3.90mm Width)	SOIC8
117	U8	1		TLV365DBVR	Texas Instruments	CMOS Amplifier 1 Circuit Rail-to-Rail SOT-23-5	SOT-23-5
118	U10	1				DIGITAL CONTROLLER	
119	U11, U14	2		TLV761500CYR	Texas Instruments	1-A 16-V high-PSRR linear voltage regulator	SOT223-4
120	U12	1		TLV761330CYR	Texas Instruments	1-A 16-V high-PSRR linear voltage regulator 4-SOT-223 -40 to 125	SOT-223-4
121	U13	1		LM5165PQDDAR	Texas Instruments	IC	HSOIC-8
122	U15	1		UCC5350BDR	Texas Instruments	3kVrms, 5A/5A single-channel isolated gate driver with miller clamp or split out & 8V or 12V UVLO	SOIC8
123	U16	1		SN6507DQQ	Texas Instruments	Low-Noise 36V Push-Pull Transformer Driver with Duty Cycle Control for Isolated Power Supplies	PowerPAD10