Variant: PMP41139 SHB version
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TID #: PMP41139

Mother Board REV A Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	PCB1	1		Mother Board	Any	Printed Circuit Board	
2	12V, BIAS, VIN, VIN, VMID, VOUT	5		5000	Keystone Electronics	Test Point, Miniature, Red, TH	Red Miniature Testpoint
3	AGND, BIAS, DGND, DGND, PGND	4		5001	Keystone Electronics	Test Point, Miniature, Black, TH	Black Miniature Testpoint
4	AGND, BIAS_HS, 12V, PGND, TP1, TP2, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, VIN	16		0312-0-15-15-34-27-10-0	Mill-Max	Pin Receptacle, .032-.046" .075" Dia, Gold, TH	Pin Receptacle
5	C1, C5	2	120uF	LGNFX121MELB45	Nichicon	CAP, AL, 120 uF, 600 V, +/- 20%, TH	D30xL47mm
6	C2, C11, C12, C14, C16, C17	6	1800uF	B41896C7188M000	TDK	CAP, AL, 1800 uF, 35 V, +/- 20%, 0.023 ohm, AEC-Q200 Grade 1, TH	D16xL31.5mm
7	C3, C4	2	0.47uF	CGA6P1X7T2J474M250KC	TDK	CAP, CERM, 0.47 µF, 630 V +/- 20%, X7T, AEC-Q200 Grade 1, 2220	2220
8	C6, C56	2	0.01uF	CGA6J4C0G2J103J125AA	TDK	CAP, CERM, 0.01 µF, 630 V,+/- 5%, C0G/NP0, AEC-Q200 Grade 1, 1210	1210
9	C15, C25, C26, C27, C28, C31, C32, C33, C34, C36, C37, C38, C57, C58, C59, C60, C61, C62, C63, C64	20	10uF	CGA6P3X7S1H106K250AE	TDK	CAP, CERM, 10 µF, 50 V,+/- 10%, X7S, AEC-Q200 Grade 1, 1210	1210
10	C19, C20, C22, C29, C42, C44, C53, C76, C78, C79, C84, C88, C89, C95, C96, C99, C125, C126	18	0.1uF	CGA2B3X7R1E104K050BB	TDK	CAP, CERM, 0.1 µF, 25 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
11	C21	1	4700pF	CGA3E2X7R2A472K080AA	TDK	CAP, CERM, 4700 pF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
12	C23	1	0.01uF	C1206C103J2GACAUTO	Kemet	CAP, CERM, 0.01 uF, 200 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 1206	1206
13	C24, C35	2	10pF	04025U100CAT2A	AVX	CAP, CERM, 10 pF, 50 V,+/- 2.5%, C0G/NP0, AEC-Q200 Grade 1, 0402	0402
14	C30, C45, C54, C55, C77, C87, C90, C91, C92, C93, C94, C98, C101, C102, C103	15	220pF	AC0402KRX7R7BB221	Yageo	CAP, CERM, 220 pF, 16 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
15	C39, C40, C43, C46, C49, C50, C52, C65, C66, C67, C68	11	0.1uF	06035C104KAZ2A	AVX	CAP, CERM, 0.1 µF, 50 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
16	C41, C75, C80, C83	4	1uF	CGA3E1X7R1E105K080AC	TDK	CAP, CERM, 1 µF, 25 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
17	C48, C47, C72	3	1µF	BS8035LP105MJSZ	TDK	1 µF ±20% 700V Ceramic Capacitor Stacked SMD, 4 J-Lead	SMD2
18	C51, C69, C70, C71, C81, C82, C85, C100, C104, C107, C108	11	2200pF	GCM155R71H222KA37D	MuRata	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
19	C73, C86, C97	3	0.01uF	CGA2B3X7R1H103K050BB	TDK	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
20	D1	1	Red	LTST-C190CKT	Lite-On	LED, Red, SMD	Red LED, 1.6x0.8x0.8mm
21	D2	1	Green	LTST-C190GKT	Lite-On	LED, Green, SMD	1.6x0.8x0.8mm
22	D3	1	24V	NUP2105LT1G	ON Semiconductor	Diode, TVS, Bi, 24 V, SOT-23	SOT-23
23	D4, D5	2	40V	FSV340AF	Fairchild Semiconductor	Diode, Schottky, 40 V, 3 A, AEC-Q101, SMAF	SMAF
24	D6, D7, D8, D9	4		MBR130T3G	onsemi	Diode Schottky 30 V 1A Surface Mount SOD-123	SOD123
25	D10	1	4.7V	EDZVFHT2R4.7B	Rohm	Diode, Zener, 4.7 V, 150 mW, AEC-Q101, SOD-523	SOD-523
26	D11, D12, D13, D14	4	30V	RB521S30T1G	ON Semiconductor	Diode, Schottky, 30 V, 0.2 A, AEC-Q101, SOD-523	SOD-523
27	J1, J2, J3	3		FLE-105-01-G-DV	SAMTEC	10 Position Receptacle Connector, Surface Mount	HDR10
28	J4, J5	2		8199	Keystone	TERMINAL SCREW PC 30AMP, TH	12.9x6.3x7.9 mm
29	J6, J17	2		FLE-107-01-G-DV	Samtec	Receptacle, 1.27mm, 7x2, Gold, SMT	Receptacle, 1.27mm, 7x2, SMT
30	J7, J11, J13	3		CLP-103-02-G-D	Samtec	Receptacle, 1.27mm, 3x2, Gold, SMT	Receptacle, 1.27mm, 3x2, SMT
31	J8	1		HSEC8-160-01-L-DV-A-BL	Samtec	C2000 controlCARD-120HSEC connector, SMT	C2000 pin numbering
32	J9	1		HSEC8-130-01-L-DV-A	Samtec	C2000 controlCARD-180HSEC (60-pin addon) connector, SMT	C2000 pin numbering
33	J12, J20	2		FLE-106-01-G-DV-A	Samtec	Receptacle, 1.27mm, 6x2, Gold, SMT	Receptacle, 1.27mm, 6x2, SMT
34	J18	1		PPPC005SBAN-M71RC	Sullins Connector Solutions	Header, 2.54mm, 5x1, Gold, R/A, TH	Header, 2.54mm, 5x1, R/A, TH
35	L1	1	600 ohm	BLM15AX601SN1D	MuRata	Ferrite Bead, 600 ohm @ 100 MHz, 0.5 A, 0402	0402
36	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 x 0.200 inch
37	R4, R5, R6, R7	4	100k	CRCW1206100KJNEA	Vishay-Dale	RES, 100 k, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
38	R8, R9, R64, R78	4	7.50k	ERA-2AEB752X	Panasonic	RES, 7.50 k, 0.1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
39	R11, R17, R22	3	0	RMCF0603ZT0R00	Stackpole Electronics Inc	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
40	R12, R13, R46, R48, R51, R53, R55, R57, R63, R64, R68, R70, R71, R72, R80, R82, R83, R86, R107	19	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
41	R14, R50, R60, R61, R65, R66, R79, R97, R99, R100, R103, R130, R134, R135, R136, R137	16	10.0k	RK73H1ETTP1002F	KOA Speer	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
42	R16, R26, R118, R129, R132, R133	6	0	RMC1JPTE	Kamaya	RES, 0, 0%, 1 W, AEC-Q200 Grade 0, 2512	2512
43	R18, R21	2	60.4k	CRCW060360K4FKEA	Vishay-Dale	RES, 60.4 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
44	R23	1	1.00Meg	CRCW06031M00FKEA	Vishay-Dale	RES, 1.00 M, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
45	R24, R32, R101, R102	4	2.00k	ERJ-2RKF2001X	Panasonic	RES, 2.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
46	R25, R31, R67, R87, R96, R114	6	1.00k	CRCW04021K00FKED	Vishay-Dale	RES, 1.00 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
47	R27, R40, R47, R52, R62, R73, R74, R76, R112, R113	10	10	RMCF0402JT10R0	Stackpole Electronics Inc	RES, 10.0, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
48	R28, R29, R39	3	15	CRCW120615R0FKEA	Vishay-Dale	RES, 15.0, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
49	R30, R37, R38	3	2.00k	CRCW06032K00FKEA	Vishay-Dale	RES, 2.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
50	R33, R77, R119	3	0	RMCF1206ZT0R00	Stackpole Electronics	0Ω ±0 0.25W 1206 Thick Film Chip Resistor AEC-Q200 compliant	1206
51	R34, R35, R36, R110, R115, R125, R131	7	100	CRCW04021R0FKED	Vishay-Dale	RES, 100, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
52	R42	1	47.5k	CRCW040247K5FKED	Vishay-Dale	RES, 47.5 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
53	R43, R44, R45, R104, R105, R106	6	845k	ERJ-8ENF845V	Panasonic	RES, 845 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
54	R56, R108	2	9.09k	CRCW120969K0FKEA	Vishay-Dale	RES, 9.09 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
55	R58, R59, R69, R75, R109, R116	6	15.0k	CRCW040215K0FKED	Vishay-Dale	RES, 15.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
56	R81	1	49.9	CRCW040249R9FKED	Vishay-Dale	RES, 49.9, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
57	R91, R95	2	3.30k	RK73H1ETTP3301F	KOA Speer	RES, 3.30 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
58	R92, R111	2	3.65k	CRCW040236F5FKED	Vishay-Dale	RES, 3.65 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
59	R93	1	30.0k	CRCW040230K0FKED	Vishay-Dale	RES, 30.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
60	R94	1	100k	CRCW040210K0FKED	Vishay-Dale	RES, 100 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
61	T1	1	8.5mH	PC-SCT2010-100T	FANGCHENG	Current Sense Transformer, 8.5 mH, 254 Vpk, 40 A, AEC-Q200 Grade 1, SMT	FANGCHENG Current Sense Transformer
62	U2	1		TMUX1309QDYYRQ1	Texas Instruments	S-V, Bidirectional 8:1, 1-Channel and 4:1, 2-Channel Multiplexers with Current Injection Control, DYY0016A (SOT-23-THN-16)	DYY0016A
63	U3	1		TCAN1043ADYYRQ1	Texas Instruments	Low-Power Fault Protected CAN FD Transceiver with INH and WAKE	SOT23-14-THN
64	U4	1		SN74AHC1G08QDBVRQ1	Texas Instruments	Automotive Catalog Single 2-Input Positive-AND Gate, DBV0005A (SOT-23-5)	DBV0005A
65	U5	1		TLV365QDBVRQ1	Texas Instruments	Automotive 50-MHz single-supply operational amplifier with rail-to-rail input and output 5-SOT-23 -40 to 125	SOT23-5
66	U6	1		TMCS1133B2QDVGR	Texas Instruments	TMCS1133B2QDVGR	SOIC10
67	U7	1		INA296A4QDDFRQ1	Texas Instruments	AEC-Q100, -5-V to 110-V, bidirectional, 1.1-MHz B-V/µs ultraprecise current sense amplifier	SOT-23-8
68	U9	1		AMC3311QDWERQ1	Texas Instruments	Automotive, 0 to 2-V input, precision reinforced isolated amplifier with integrated DC/DC converter 16-SOIC -40 to 125	SOICW16
69	U10	1		INA225AQDGKRQ1	Texas Instruments	Automotive, 36-V Prog. Gain, Bi-Directional, Zero-Drift, High-Speed Voltage Out Current Sense Amp, DGK0008A (VSSOP-8)	DGK0008A
70	U11, U13	2		TLV9001QDBVRQ1	Texas Instruments	Automotive, single-channel, 5.5-V 1-MHz rail-to-rail input and output operational amplifier 5-SOT-23 -40 to 125	SOT23-5
71	U12	1		AMC1311BQDWVRQ1	Texas Instruments	Automotive 2-V input, reinforced isolated amplifier with high CMTI for voltage sensing 8-SOIC -40 to 125	SOIC8
72	U14	1		SN74AHC08QPWRQ4Q1	Texas Instruments	Automotive Catalog Quadruple 2-Input Positive-AND Gate, PW0014A, LARGE T&R	PW0014A
73	C7, C8, C9, C10, C13, C18	0	2.2uF	CGA5L3X7R1H225K160AB	TDK	CAP, CERM, 2.2 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206
74	J10	0		182-009-213R171	NorComp	CONN DB9 FEMALE R/A SOLDER TH	D-SUB 9 PIN
75	L2	0	100uH	ACT45B-101-2P-TL003	TDK	Inductor, Ferrite, 100 uH, 0.15 A, 2 ohm, SMD	SMD, 4-Leads, Body 4.7 x 3.7 mm
76	R1, R15, R19, R117, R120, R121, R122, R123, R124, R126, R127, R128	0	0	RMC1JPTE	Kamaya	RES, 0, 0%, 1 W, AEC-Q200 Grade 0, 2512	2512
77	R2, R3	0	10k	CRCW120610K0JNEA	Vishay-Dale	RES, 10 k, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
78	R10, R41, R49	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
79	R20	0	0	RMCF1206ZT0R00	Stackpole Electronics	0Ω ±0 0.25W 1206 Thick Film Chip Resistor AEC-Q200 compliant	1206
80	U1	0		TMUX1309QDYYRQ1	Texas Instruments	S-V, Bidirectional 8:1, 1-Channel and 4:1, 2-Channel Multiplexers with Current Injection Control, DYY0016A (SOT-23-THN-16)	DYY0016A