

Variant: 001
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PMP22650 REV E2 Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	IPCB1	1		PMP22650	Any	Printed Circuit Board	
2	C1, C255	2	2200pF	AY2222M35Y5US63L7	Vishay-Bccomponents	CAP, CERM, 2200 pF, 300 V, +/- 20%, Y5U, AEC-Q200 Grade 1, D9.5xT5mm	D9.5xT5mm
3	C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17	16	33nF	C1210X333JBGACAUTO	Kemet	0.033µF ±5% 630V Ceramic Capacitor C0G, NP0 1210 (3225 Metric)	1210
4	C18, C20	2	300µF	ALA8DA301CF500	Kemet	300µF 500V Aluminum Electrolytic Capacitors Radial, Can - Snap-In 687.4mOhm @ 100Hz 7000 Hrs @ 105°C	RADIAL
5	C22, C24, C25, C26, C33, C34, C35, C126, C129, C133, C136, C137, C139, C140, C142, C143, C144, C145, C205, C206, C212, C236, C239, C244, C249, C251, C252, C253, C254	29	0.1uF	CGA2B3X7R1E104K050BB	TDK	CAP, CERM, 0.1 µF, 25 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0402	402
6	C23	1	0.022uF	GCM155R71E223KA55D	MuRata	CAP, CERM, 0.022 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	402
7	C27, C28, C29, C30, C37, C132, C134, C202, C203, C209	10	0.1uF	GCM155R71C104JA55D	MuRata	CAP, CERM, 0.1 µF, 16 V,+/- 5%, X7R, AEC-Q200 Grade 1, 0402	402
8	C31	1	10uF	C1206C106J3RACAUTO	Kemet	CAP, CERM, 10 µF, 25 V,+/- 5%, X7R, AEC-Q200 Grade 1, 1206	1206
9	C32	1	22uF	GRT31CC81A226KE01L	MuRata	CAP, CERM, 22 uF, 10 V, +/- 10%, X6S, AEC-Q200 Grade 2, 1206	1206
10	C36	1	1uF	CGA3E1X7R1E105K080AD	TDK	CAP, CERM, 1 µF, 25 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603	603
11	C38, C53, C60, C75, C82, C97, C104, C119, C146, C161, C168, C183	12	2.2uF	CGA4J3X7R1E225K125AB	TDK	CAP, CERM, 2.2 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	805
12	C39, C54, C61, C76, C83, C98, C105, C120, C147, C162, C169, C184	12	1uF	GRT155R6YA105KE13D	MuRata	CAP, CERM, 1 µF, 35 V,+/- 10%, X5R, AEC-Q200 Grade 3, 0402	402
13	C40, C55, C62, C77, C84, C99, C106, C121, C148, C163, C170, C185	12	0.1uF	GCM155R71H104KE02D	MuRata	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	402

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14	C41, C56, C63, C78, C85, C100, C107, C122, C149, C164, C171, C186	12	68pF	GCM1555C1H680JA16D	Murata	68pF ±5% 50V Ceramic Capacitor C0G, NP0 0402 (1005 Metric)	402
15	C42, C57, C64, C79, C86, C101, C108, C123, C150, C165, C172, C187	12	22pF	GCM1555C1H220JA16D	MuRata	CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402	402
16	C43, C58, C65, C80, C87, C102, C109, C124, C151, C166, C173, C188	12	0.22uF	GCM155R71C224KE02D	MuRata	CAP, CERM, 0.22 µF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	402
17	C44, C59, C66, C81, C88, C103, C110, C125, C152, C167, C174, C189	12	10uF	TMK316AB7106KLHT	Taiyo Yuden	CAP, CERM, 10 µF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206
18	C45, C46, C49, C50, C67, C68, C71, C72, C89, C90, C93, C94, C111, C112, C115, C116, C153, C154, C157, C158, C175, C176, C179, C180	24	0.022uF	C1206C223KDRACU	Kemet	CAP, CERM, 0.022 µF, 1000 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206
19	C47, C48, C51, C52, C69, C70, C73, C74, C91, C92, C95, C96, C113, C114, C117, C118, C155, C156, C159, C160, C177, C178, C181, C182, C226, C227, C228, C229, C230, C231	30	100nF	C1812X104KDRACAU0	Kemet	0.1µF ±10% 1000V (1kV) Ceramic Capacitor X7R 1812 (4532 Metric)	1812
20	C127, C135, C237	3	10pF	04025U100CAT2A	AVX	CAP, CERM, 10 pF, 50 V, +/- 2.5%, C0G/NP0, AEC-Q200 Grade 1, 0402	402
21	C128, C195, C238	3	2200pF	CGA2B2X7R1H222K050BA	TDK	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	402
22	C138	1	4700pF	CGA3E2X7R2A472K080AA	TDK	CAP, CERM, 4700 pF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	603
23	C141, C207, C210	3	470pF	GCM1885C1H471JA16D	MuRata	CAP, CERM, 470 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	603
24	C190, C199	2	4.7uF	CGA4J1X7R1E475K125AC	TDK	CAP, CERM, 4.7 µF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	805
25	C191, C198, C200	3	0.1uF	CGA3E2X7R1E104K080AA	TDK	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	603

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26	C192, C201	2	0.01uF	C0603C103J3GCECAUTO	Kemet	CAP, CERM, 0.01 uF, 25 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	603
27	C193, C194	2	100pF	CGA3E2NP01H101J080AA	TDK	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 0, 0603	603
28	C204, C211	2	100pF	CGA2B2C0G1H101J050BA	TDK	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402	402
29	C208, C215	2	0.1uF	C0402C104K4RACAUTO	Kemet	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	402
30	C213	1	1000pF	C0603C102J5RACAUTO	Kemet	CAP, CERM, 1000 pF, 50 V, +/- 5%, X7R, AEC-Q200 Grade 1, 0603	603
31	C214	1	10uF	CGA4J1X7S1C106K125AC	TDK	CAP, CERM, 10 uF, 16 V, +/- 10%, X7S, AEC-Q200 Grade 1, 0805	805
32	C216, C217, C221, C222, C235	5	4700pF	AY2472M49Y5US63L7	Vishay-Bccomponents	CAP, CERM, 4700 pF, 300 V, +/- 20%, Y5U, AEC-Q200 Grade 1, D13xT5mm	D13xT5mm
33	C218, C219, C220	3	2.2µF	B32923H3225M000	TDK	2.2µF Film Capacitor 305V 630V Polypropylene (PP), Metallized Radial	RADIAL
34	C223, C224, C225	3	470µF	ALA7DA471DE500	Kemet	470µF 500V Aluminum Electrolytic Capacitors Radial, Can - Snap-In	RADIAL
35	C232	1	10pF	CGA2B2C0G1H100D050BA	TDK	532.2mOhm @ 100Hz 15000 Hrs @ 85°C	402
36	C233	1	150pF	CGA2B2C0G1H151J050BA	TDK	CAP, CERM, 150 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402	402
37	C234	1	100pF	AY2101K29Y5SS63L7	Vishay	100pF ±10% 440VAC Ceramic Capacitor Y5S Radial, Disc	RADIAL
38	D1	1	24V	NUP2105LT1G	ON Semiconductor	Diode, TVS, Bi, 24 V, SOT-23	SOT-23
39	D2, D3	2		NRVBA340T3G	ON Semiconductor	Diode Schottky 40V 3A Surface Mount SMA	SMA
40	D4, D5, D6, D7	4		US1MDFQ-13	Diodes	Diode Standard 1000V 1A Surface Mount D-Flat	D-FLAT
41	D8	1	40V	BAT165E6327HTSA1	Infineon Technologies	Diode, Schottky, 40 V, 0.75 A, AEC-Q101, SOD-323	SOD-323
42	D9	1	5.1V	BZT52B5V1-G3-18	Vishay-Semiconductor	Diode, Zener, 5.1 V, 500 mW, AEC-Q101, SOD-123	SOD-123
43	D10	1		TS40P05GHD2G	Taiwan Semiconductor	Bridge Rectifier Single Phase Standard 600V Through Hole TS-6P	SIP4
44	F1, F2, F3, F4	4		0525025.MXEP_vm	Littelfuse	25A AC 450V DC Fuse Cartridge, Ceramic Through Hole 3AB, 3AG, 1/4" x 1-1/4" (Axial)	AXIAL
45	J1	1		292161-2	TE Connectivity	Connector Header Through Hole 2 position 0.079" (2.00mm)	HDR2
46	J2, J3, J4, J5, J6, J8, J9, J11	8		S1621-46R	Harwin	JUMPER TIN SMD, SMT	JUMPER TIN SMD
47	J7, J10	2		ED700/3	On Shore Technology Inc.	Receptacle, 3x1, 5mm, R/A, TH	Receptacle, 3x1, 5mm, R/A, TH
48	J12, J16, J18, J20, J22, J27, J29, J31, J36	9		SSW-103-22-F-D-VS-K	Samtec	Receptacle, 2.54mm, 3x2, Tin, SMT	Receptacle, 2.54mm, 3x2, TH
49	J13, J17, J19, J21, J23, J28, J30, J32	8		SSW-102-22-F-D-VS	Samtec	4 Position Receptacle Connector Surface Mount	RCPT4
50	J15	1		ED700/2	On Shore Technology Inc.	Therminal Block, 5 mm, 2-pole, Tin, TH	TH, 2-Leads, Body 10x10mm, Pitch 5mm
51	J24	1		TFM-106-02-S-D-A	Samtec	Header(Shrouded), 1.27mm, 6x2, Tin, SMT	Header(Shrouded), 1.27mm, 6x2, SMT
52	J25	1		HSEC8-130-01-L-DV-A	Samtec	C2000 controlCARD-180HSEC (60-pin addon) connector, SMT	C2000 pin numbering
53	J26	1		HSEC8-160-01-L-DV-A-BL	Samtec	C2000 controlCARD-120HSEC connector, SMT	C2000 pin numbering
54	J33	1		1714984	Phoenix Contact	Terminal Block, 3x1, 9.52MM, TH	Terminal Block, 3x1, 9.52mm, TH
55	J34	1		851-43-008-10-001000	Mill-Max	Female Connector, 8x1, 1.27 mm, Black, Tin, TH	Female Connector, 8x1, 1.27mm, TH
56	J35	1		SSW-104-22-F-D-VS-K	Samtec	8 Position Receptacle Connector Surface Mount	HDR8
57	J37, J38	2		1714955	Phoenix Contact	Terminal Block, 2x1, 6.35mm, Green, TH	Terminal Block, 2x1, 6.35mm, Green, TH
58	K1	1		FTR-K5AA012Y	Fujitsu	Relay Automotive SPST-NO 32A 12VDC 160 Ohm Through Hole	RELAY_PTH

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59	L2	1	2.2uH	SRN3015TA-2R2M	Bourns	Inductor, Shielded, Ferrite, 2.2 uH, 1.7 A, 0.072 ohm, AEC-Q200 Grade 1, SMD	3.0x3.0x1.5mm
60	L3, L4, L5, L6, L7, L8, L9, L10, L12, L13, L14, L15	12	4.7uH	MPIA2510V2-4R7-R	Eaton	4.7uH Shielded Molded Inductor 1.22A 262mOhm Max 1008 (2520 Metric)	1008
61	L11	1	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
62	L16, L17	2		FRM-DOC-15	Renco Electronics	Common Mode Choke	Common_Mode_Choke_1INCH90_1INCH9
63	L18	1		VI-20174A	Cyntec	Coupled PFC	RADIAL
64	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
65	MP1	1		OBC_shield	Texas Instruments	Shield	PTH
66	Q3	1	20V	BSS806NEH6327XTSA1	Infineon Technologies	MOSFET, N-CH, 20 V, 2.3 A, AEC-Q101, SOT-23	SOT-23
67	Q4	1		SQ1431EH-T1_GE3	Vishay	P-Channel 30V 3A (Tc) 3W (Tc) Surface Mount SC-70-6 (SOT-363)	SC-70
68	Q5	1	70V	ZXMN7A11GTA	Diodes Inc.	MOSFET, N-CH, 70 V, 3.8 A, AEC-Q101, SOT-223	SOT-223
69	Q6, Q7, Q8, Q9	4		NVHL025N65S3	ON Semiconductor	N-Channel 650V 75A (Tc) 595W (Tc) Through Hole TO-247-3	TO-247-3LD
70	Q10	1	60V	2V7002KT1G	ON Semiconductor	MOSFET, N-CH, 60 V, 0.32 A, AEC-Q101, SOT-23	SOT-23
71	R1, R2, R3, R4	4	0.006	WSL12066L000FEA18	Vishay-Dale	RES, 0.006, 1%, 0.5 W, 1206	1206
72	R6, R8	2	5.11k	CRCW04025K11FKED	Vishay-Dale	RES, 5.11 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
73	R7	1	10	RMCF0402JT10R0	Stackpole Electronics Inc	RES, 10.0, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
74	R9, R27, R32, R37, R42, R47, R52, R57, R62, R98, R103, R108, R113, R204	14	0	ERJ-2GE0R00X	Panasonic	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	402
75	R10, R11, R12, R13, R14, R15, R17, R18, R20, R22, R66, R71, R78, R82, R178, R183, R203	17	10.0k	ERJPA2F1002X	Panasonic	RES, 10.0 k, 1%, 0.2 W, AEC-Q200 Grade 0, 0402	402
76	R21	1	178k	CRCW0402178KFKED	Vishay-Dale	RES, 178 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
77	R23	1	100k	CRCW0402100KDHEDP	Vishay-Dale	RES, 100 k, 0.5%, 0.063 W, AEC-Q200 Grade 0, 0402	402
78	R25	1	953k	CRCW0402953KFKED	Vishay-Dale	RES, 953 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
79	R28, R33, R38, R43, R48, R53, R58, R63, R99, R104, R109, R114, R131, R137, R138, R146, R153, R155	18	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
80	R29, R34, R39, R44, R49, R54, R59, R64, R100, R105, R110, R115	12	300	CRCW0402300RJNED	Vishay-Dale	RES, 300, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	402

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81	R30, R35, R40, R45, R50, R55, R60, R65, R101, R106, R111, R116	12	49.9	CRCW040249R9FKED	Vishay-Dale	RES, 49.9, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
82	R67, R176, R179, R205, R207	5	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	402
83	R68, R81, R180	3	56.2	CRCW040256R2FKED	Vishay-Dale	RES, 56.2, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
84	R69, R70	2	1.00k	CRCW04021K00FKED	Vishay-Dale	RES, 1.00 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
85	R72	1	3.65k	CRCW04023K65FKED	Vishay-Dale	RES, 3.65 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
86	R73, R91, R141, R147	4	7.15k	CRCW06037K15FKEA	Vishay-Dale	RES, 7.15 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
87	R74, R80, R130, R133, R148	5	19.6	CRCW040219R6FKED	Vishay-Dale	RES, 19.6, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
88	R75, R76, R77, R94, R95, R96, R127, R128, R129, R134, R135, R136, R142, R143, R144, R150, R151, R152	18	365k	CRCW1206365KFKEA	Vishay-Dale	RES, 365 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
89	R79, R83	2	150k	CRCW0402150KFKEA	Vishay-Dale	RES, 150 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
90	R85, R88	2	0	RMCF0603ZT0R00	Stackpole Electronics Inc	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
91	R86, R87	2	60.4k	CRCW060360K4FKEA	Vishay-Dale	RES, 60.4 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
92	R90, R92, R93	3	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	603
93	R117, R121	2	1	CRCW12061R00FKEA	Vishay-Dale	RES, 1.00, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
94	R119, R124	2	5.11	CRCW12065R11FKEA	Vishay-Dale	RES, 5.11, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
95	R120, R123	2	0	RK73Z1ETTP	KOA Speer	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	402
96	R125, R139	2	3.48k	CRCW06033K48FKEA	Vishay-Dale	RES, 3.48 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
97	R126, R140, R145, R154	4	16.5k	CRCW040216K5FKED	Vishay-Dale	RES, 16.5 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
98	R132, R149	2	3.48k	CRCW04023K48FKED	Vishay-Dale	RES, 3.48 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
99	R156	1	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
100	R157, R158	2	5.1	CRCW12065R10JNEA	Vishay-Dale	RES, 5.1, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
101	R159, R164, R166, R171, R172	5		CRF1206-FZ-R010ELF	Bourns	10 mOhms ±1% 1W Chip Resistor 1206 (3216 Metric) Automotive AEC-Q200, Current Sense, Moisture Resistant Metal Element	1206
102	R160, R165	2	13Ω	B59101P1080A062	TDK	PTC Thermistors 30Vdc 185mA 13ohms PTC Overcurrent	SMD2
103	R161, R162, R163, R167, R168, R169, R173, R174, R175	9	330k	CRCW1206330KJNEA	Vishay-Dale	RES, 330 k, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
104	R170	1		V20H510AUTO	Littelfuse	820V 10kA Varistor 1 Circuit Through Hole Disc 20mm	RADIAL
105	R177	1	1.50k	CRCW04021K50FKED	Vishay-Dale	RES, 1.50 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
106	R181, R182	2	549	CRCW0402549RFKED	Vishay-Dale	RES, 549, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
107	R184	1	1.37k	CRCW04021K37FKED	Vishay-Dale	RES, 1.37 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
108	R185, R191	2	8.45k	CRCW06038K45FKEA	Vishay-Dale	RES, 8.45 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
109	R186, R187, R189, R190	4	2.55k	CRCW04022K55FKED	Vishay-Dale	RES, 2.55 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
110	R188, R198	2	11	CRCW040211R0FKED	Vishay-Dale	RES, 11.0, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
111	R192	1	12.4k	ERJ-8ENF1242V	Panasonic	RES, 12.4 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206

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112	R193, R197, R201	3	2.00Meg	CRCW12062M00FKEA	Vishay-Dale	RES, 2.00 M, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
113	R194, R202	2	7.15k	CRCW04027K15FKED	Vishay-Dale	RES, 7.15 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
114	R195, R196, R199, R200	4	4.7k	CRCW04024K70JNED	Vishay-Dale	RES, 4.7 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	402
115	R209, R210, R211, R212, R213, R214, R215, R216, R217, R218, R219, R220	12	10	CRCW040210R0JNED	Vishay-Dale	RES, 10, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	402
116	T1	1		VT-20163	Cyntec	TRANSFORMER	PTH_TRANSFORMER_73MM0_51MM0
117	T2	1		RLTI-1371	Renco Electronics	PRIMARY SIDE ROGOWSKI (PMP22495)	PTH_XFRMR_OIN828_OIN300
118	T3	1		RLTI-1379	Renco Electronics	Secondary Side Rogowski (PMP22495)	PTH_XFRMR_OIN828_OIN300
119	TP1, TP2, TP5, TP6	4		5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
120	TP3, TP7, TP8	3		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
121	U1, U30	2		SN74HC21QPWRG4Q1	Texas Instruments	Automotive Catalog Dual 4-Input Positive-AND Gates, PW0014A, LARGE T&R	PW0014A
122	U2	1		TLV314QDBVRQ1	Texas Instruments	3-MHz, Low-Power, Internal EMI Filter, RRIO, Operational Amplifier, DBV0005A (SOT-23-5)	DBV0005A
123	U3	1		REF4132B33DBVRQ1	Texas Instruments	Voltage References Automotive 12-ppm/ C low-noise low-power precision voltage reference	SOT23-5
124	U4	1		TPS3850G12QDRCRQ1	Texas Instruments	Automotive Precision Voltage Supervisor With Programmable Window Watchdog Timer, DRC0010R (VSON-10)	DRC0010R
125	U5	1		TPS3703A4330DSERQ1	Texas Instruments	Overvoltage and Undervoltage Reset IC With Time Delay and Manual Reset, DSE0006A (WSON-6)	DSE0006A
126	U6	1		TPS74533PQWDRVRQ1	Texas Instruments	Linear Voltage Regulator IC 1 Output 500mA 6-WSON (2x2)	WSON6
127	U7	1		TPS62170QDSGRQ1	Texas Instruments	3-17V 0.5A Automotive Step-Down Converter in 2x2 QFN package, DSG0008A (WSON-8)	DSG0008A
128	U8, U10, U12, U14, U16, U18, U20, U22, U34, U36, U38, U40	12		ISO7741FQDBQRQ1	Texas Instruments		SSOP16
129	U9, U11, U13, U15, U17, U19, U21, U23, U35, U37, U39, U41	12		LMG3525R030Q	Texas Instruments	650-V 30-mΩ GaN FET with Integrated Driver and Protection	VQFN52
130	U24, U48	2		OPA365AQDBVRQ1	Texas Instruments	Automotive Catalog, 50 MHz, Low-Noise, Single-Supply Rail-to-Rail Operational Amplifier, 2.2 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV5), Green (RoHS & no Sb/Br)	DBV0005A
131	U25, U43, U44, U46, U49, U50	6		OPA320AQDBVRQ1	Texas Instruments	Automotive Qualified Precision, Zero-Crossover, 20MHz, 0.9pA Ib, RRIO, CMOS Operational Amplifier, DBV0005A (SOT-23-5)	DBV0005A
132	U26	1		LMV796QMF/NOPB	Texas Instruments	17 MHz, Low Noise, CMOS Input, 1.8V Operational Amplifiers, DBV0005A (SOT-23-5)	DBV0005A
133	U27	1		TMP235AEDBZTQ1	Texas Instruments	Temperature Sensor Analog, Local -40°C ~ 150°C 10mV/°C SOT-23-3	SOT23-3
134	U28	1		GRPB041VWVN-RC	Sullins Connector Solutions	Header, 50mil, 4x1, Gold, TH	TH, Header, 1.27 mm, 4x1, Straight
135	U29	1		ISO1042BQDWVRQ1	Texas Instruments	Isolated CAN Transceiver with 70V Bus Fault Protection and Flexible Data Rate 8-Pin SOIC T/R	SOIC8

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
136	U31	1		SN74AHCT08QPWRG4Q1	Texas Instruments	Automotive Catalog Quadruple 2-Input Positive-AND Gates, PW0014A, LARGE T&R	PW0014A
137	U32, U33	2		TMUX1208QRSVRQ1	Texas Instruments	Automotive, 5-V bidirectional 8:1 multiplexer with 1.8-V logic	UQFN16
138	U42	1		UCC21222QDRQ1	Texas Instruments	Half-Bridge Gate Driver IC CMOS/TTL 16-SOIC	SOIC16
139	U45, U47	2		ACS733KLATR-40AB-T	Allegro Microsystems	Current Sensor 40A 1 Channel Hall Effect, Differential Bidirectional 16-SOIC (0.295", 7.50mm Width)	SOIC16
140	U51	1		ISO7761DBQR	Texas Instruments	High Speed, Robust EMC, Reinforced Six-Channel Digital Isolator, DBQ0016A (SSOP-16)	DBQ0016A
141	U52	1		ISO7730DBQR	Texas Instruments	High Speed, Robust EMC Reinforced Triple-Channel Digital Isolator, DBQ0016A (SSOP-16)	DBQ0016A
142	C19, C21	0	1uF	B58031I5105M062	TDK	CAP, CERM, 1 uF, 500 V, +/- 20%, B58031, AEC-Q200 Grade 0, 6.84x7.85mm	6.84x7.85mm
143	C130, C240	0	10pF	04025U100CAT2A	AVX	CAP, CERM, 10 pF, 50 V, +/- 2.5%, C0G/NP0, AEC-Q200 Grade 1, 0402	402
144	C131	0	470pF	GCM155R71H471KA37D	MuRata	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	402
145	C196, C197	0	1000pF	CGA2B2X7R1H102K050BA	TDK	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	402
146	C241, C246	0	0.022uF	CGA2B3X7R1H223K050BB	TDK	CAP, CERM, 0.022 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	402
147	C242, C243, C245, C247, C248, C250	0	0.01uF	CGA2B3X7R1H103K050BB	TDK	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	402
148	C256, C257	0	0.022uF	C1206C223KDRACU	Kemet	CAP, CERM, 0.022 uF, 1000 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206
149	L19	0	50uH	VI-20173B	Cyntec	OBC Resonant Inductor	PTH_INDUCTOR_34 MM00_19MM00
150	Q1, Q2	0		IPB80R290C3AATMA2	Infineon Technologies	N-Channel 800V 17A (Tc) 227W (Tc) Surface Mount PG-TO263-3-2	D2PAK
151	R5	0	0.006	WSL12066L000FEA18	Vishay-Dale	RES, 0.006, 1%, 0.5 W, 1206	1206
152	R16	0	1.00k	CRCW04021K00FKED	Vishay-Dale	RES, 1.00 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
153	R19, R24	0	0	ERJ-2GE0R00X	Panasonic	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	402
154	R26, R31, R36, R41, R46, R51, R56, R61, R97, R102, R107, R112	0	69.8k	CRCW040269K8FKED	Vishay-Dale	RES, 69.8 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	402
155	R84, R89	0	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	603
156	R118, R122	0	10k	CRCW060310K0JNEA	Vishay-Dale	RES, 10 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	603
157	R206, R208	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	402