

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	IC1	1		HF81	MPS	X Capacitor Bleeder	SOIC8	6.2 x 5	
2	IC2, IC6, IC7	3		UCC27524AD	TI	Low-Side Gate Driver, 5 A	SOIC8		
3	IC3	1		UCC28070A	TI	PFC Controller	TSSOP		
4	IC4, IC5	2		UCC27714DR	TI	Half Bridge Gate Driver, 600 V, 4 A	SOIC8		
5	IC8	1		TPS2412D	TI	OR-ing Power Rail Controller, 16.5 V, 1.2 A	SOIC8		
6	IC10	1		UCC28950PWR	TI	Full Bridge Controller	TSSOP (24)	7.8 x 4.4	
7	IC11, IC82	2		<a href="#">TCR1HF50B</a>	<a href="#">TOSHIBA</a>	LDO Linear Voltage Regulator, 40 V, 580 mW	<a href="#">SOT-25 (SMV)</a>	2.9 x 2.8	
8	IC12	1		<a href="#">DCL540C01</a>	<a href="#">TOSHIBA</a>	Digital Isolator, -0.5 to 6 V	<a href="#">SOIC16-W</a>	10.3 x 10.0	
9	IC20	1		G5PZ-1A	Omron Electronics	Relay SPST, 16 A, 5 V		Through Hole	
10	IC80	1		UCC28910	TI	Flyback Switcher, 16.5 V, 1.2 A	SOIC7		
11	IC81	1		LM317MDCY	TI	Linear Voltage Regulator, 40 V, 500 mA	SOT-223		
12	Q1, Q2	2		TK125N60Z1 (Under Development)	<a href="#">TOSHIBA</a>	N-ch Power MOSFET, 600 V, 20 A (Under Development)	<a href="#">TO-247</a>	Through Hole	
13	Q3, Q4, Q5, Q6	4		<a href="#">TK095N65Z5</a>	<a href="#">TOSHIBA</a>	N-ch Power MOSFET, 650 V, 29 A	<a href="#">TO-247</a>	Through Hole	
14	Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q25, Q26, Q27, Q28	12		<a href="#">TPH2R408QM</a>	<a href="#">TOSHIBA</a>	N-ch Power MOSFET, 80 V, 120 A	<a href="#">SOP Advance</a>	5.0 x 6.0	
15	Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24	10		<a href="#">TPHR6503PL1</a>	<a href="#">TOSHIBA</a>	N-ch Power MOSFET, 30 V, 420 A	<a href="#">SOP Advance (N)</a>	4.9 x 6.1	
16	D1, D2	2		<a href="#">TRS8E65H</a>	<a href="#">TOSHIBA</a>	SiC Schottky Barrier Diode, 650 V, 8 A	<a href="#">TO-220-2L</a>	Through Hole	
17	D3	1		GSIB2580	Vishay	Bridge Rectifier, 800 V, 3.5 A		Through Hole	
18	D8, D9	2		<a href="#">CRG04A</a>	<a href="#">TOSHIBA</a>	Diode, 600 V, 1 A	<a href="#">S-FLAT</a>	1.6 x 3.5	
19	D12, D13, D14, D30, D31, D32, D33	7		<a href="#">1SS352</a>	<a href="#">TOSHIBA</a>	Switching Diode, 80 V, 0.1 A	<a href="#">USC</a>	2.5 x 1.25	
20	D16, D17, D18, D19	4		<a href="#">CMF01A</a>	<a href="#">TOSHIBA</a>	Fast Recovery Diode, 600 V, 2 V	<a href="#">M-FLAT</a>	2.4 x 4.7	
21	D20, D21, D34, D35	4		<a href="#">CMH01</a>	<a href="#">TOSHIBA</a>	High Efficiency Diode, 200 V, 3 A	<a href="#">M-FLAT</a>	2.4 x 4.7	
22	D22, D23, D24, D25, D26, D27, D28, D29	8		<a href="#">TBAT54</a>	<a href="#">TOSHIBA</a>	Schottky Barrier Diode, 30 V, 0.2 A	<a href="#">SOT23</a>	2.9 x 2.4	

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23	D36, D37, D38, D39, D40, D41, D42, D43, D44, D45, D46, D47, D51, D52, D53, D54, D55, D56, D57, D58	20		<a href="#">CUHS15S30</a>	<a href="#">TOSHIBA</a>	Schottky Barrier Diode, 30 V, 1.5 A	<a href="#">US2H</a>	2.5 x 1.4	
24	D48	1		BAS316	Nexperia	Switching Diode, 100 V, 0.215 A	SOD323	2.7 x 1.35	
25	D80	1		<a href="#">CRF03A</a>	<a href="#">TOSHIBA</a>	Fast Recovery Diode, 600 V, 0.7 A	<a href="#">S-FLAT</a>	1.6 x 3.5	
26	D81, D82, D90	3		<a href="#">CRH01</a>	<a href="#">TOSHIBA</a>	High Efficiency Diode, 200 V, 1 A	<a href="#">S-FLAT</a>	1.6 x 3.5	
27	D83	1		<a href="#">CRS01</a>	<a href="#">TOSHIBA</a>	Schottky Barrier Diode, 30 V, 1 A	<a href="#">S-FLAT</a>	1.6 x 3.5	
28	R1, R89, R91, R92, R94, R95	6	1 M $\Omega$			$\pm 5\%$ , 250 mW		3.2 x 1.6 (1206)	
29	R2, R90	2	23.2 k $\Omega$			$\pm 1\%$ , 63 mW		1.0 x 0.5 (0402)	
30	R6	1	2.2 $\Omega$			$\pm 5\%$ , 100 mW		1.6 x 0.8 (0603)	
31	R7, R8	2	33 $\Omega$			$\pm 5\%$ , 500 mW		3.2 x 2.5 (1210)	
32	R9	1	2 k $\Omega$			$\pm 5\%$ , 250 mW		3.2 x 1.6 (1206)	
33	R18, R20, R23, R24	4	1 $\Omega$			$\pm 5\%$ , 250 mW		3.2 x 1.6 (1206)	
34	R19, R21, R22, R25, R28, R29, R31, R33, R71, R73	10	10 k $\Omega$			$\pm 5\%$ , 63 mW		1.0 x 0.5 (0402)	
35	R42	1	9.09 k $\Omega$			$\pm 1\%$ , 63 mW		1.0 x 0.5 (0402)	
36	R43, R44, R45	3	2.37 k $\Omega$			$\pm 1\%$ , 63 mW		1.0 x 0.5 (0402)	
37	R47	1	8.25 k $\Omega$			$\pm 1\%$ , 63 mW		1.0 x 0.5 (0402)	
38	R49	1	22.6 $\Omega$			$\pm 1\%$ , 63 mW		1.0 x 0.5 (0402)	
39	R51, R52, R807	3	18 k $\Omega$			$\pm 1\%$ , 63 mW		1.0 x 0.5 (0402)	
40	R53	1	150 k $\Omega$			$\pm 5\%$ , 63 mW		1.0 x 0.5 (0402)	
41	R54	1	15 k $\Omega$			$\pm 5\%$ , 63 mW		1.0 x 0.5 (0402)	
42	R56	1	127 k $\Omega$			$\pm 1\%$ , 63 mW		1.0 x 0.5 (0402)	
43	R57, R104	2	100 k $\Omega$			$\pm 1\%$ , 63 mW		1.0 x 0.5 (0402)	
44	R60	1	47 k $\Omega$			$\pm 5\%$ , 63 mW		1.0 x 0.5 (0402)	
45	R61	1	680 $\Omega$			$\pm 5\%$ , 63 mW		1.0 x 0.5 (0402)	

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46	R62, R69, R110, R111, R112, R113, R117, R204, R205, R206, R815	11	0 Ω			1 A		1.0 x 0.5 (0402)	
47	R63, R116, R172, R173, R814	5	100 Ω			±5 %, 63 mW		1.0 x 0.5 (0402)	
48	R64, R65, R66, R98, R99	5	6.8 kΩ			±5 %, 63 mW		1.0 x 0.5 (0402)	
49	R67, R81, R85, R169, R170, R819, R823, R827, R831	9	1 kΩ			±5 %, 63 mW		1.0 x 0.5 (0402)	
50	R72, R74, R108, R109	4	5.11 Ω			±1 %, 500 mW		3.2 x 1.6 (1206)	
51	R75	1	49.9 Ω			±1 %, 63 mW		1.0 x 0.5 (0402)	
52	R76, R105	2	100 kΩ			±1 %, 250 mW		3.2 x 1.6 (1206)	
53	R77, R106	2	4.7 kΩ			±5 %, 3 W		Through Hole	
54	R79, R80	2	75 kΩ			±1 %, 500 mW		3.2 x 2.5 (1210)	
55	R82, R86	2	1.78 kΩ			±1 %, 63 mW		1.0 x 0.5 (0402)	
56	R83, R87	2	3.57 kΩ			±1 %, 63 mW		1.0 x 0.5 (0402)	
57	R93, R103	2	115 kΩ			±1 %, 63 mW		1.0 x 0.5 (0402)	
58	R96	1	3.9 kΩ			±5 %, 63 mW		1.0 x 0.5 (0402)	
59	R97	1	3.65 kΩ			±1 %, 63 mW		1.0 x 0.5 (0402)	
60	R100	1	124 kΩ			±1 %, 63 mW		1.0 x 0.5 (0402)	
61	R101	1	187 kΩ			±1 %, 63 mW		1.0 x 0.5 (0402)	
62	R102	1	30 kΩ			±1 %, 63 mW		1.0 x 0.5 (0402)	
63	R114, R115	2	2.2 Ω			±5 %, 500 mW		3.2 x 2.5 (1210)	
64	R120, R121, R122, R123, R124, R125	6	1 Ω			±5 %, 63 mW		1.0 x 0.5 (0402)	
65	R126, R132, R134, R136	4	10 Ω			±5 %, 250 mW		3.2 x 1.6 (1206)	
66	R127, R133, R135, R137	4	0 Ω			2 A		3.2 x 1.6 (1206)	
67	R138	1	10 Ω	A5MC-100JK(L3.5)		Thermal Cut-off Resistor, ±5 %, 1.6 W		Through Hole	
68	R178, R179	2	300 kΩ			±5 %, 1 W		6.4 x 3.2 (2512)	

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69	R185	1	20 Ω			±5 %, 250 mW		3.2 x 1.6 (1206)	
70	R199	1	680 Ω			±1 %, 1 W		6.4 x 3.2 (2512)	
71	R212, R213, R214, R215	4	1 Ω			±5 %, 250 mW		3.2 x 1.6 (1206)	
72	R227, R228	2	680 Ω			±1 %, 63 mW		1.0 x 0.5 (0402)	
73	R800, R801	2	82 kΩ			±5 %, 250 mW		3.2 x 1.6 (1206)	
74	R802	1	10 Ω			±5 %, 63 mW		1.0 x 0.5 (0402)	
75	R804	1	2.7 kΩ			±1 %, 63 mW		1.0 x 0.5 (0402)	
76	R805	1	0 Ω			1 A		1.6 x 0.8 (0603)	
77	R806	1	330 kΩ			±5 %, 63 mW		1.0 x 0.5 (0402)	
78	R808	1	47 kΩ			±1 %, 63 mW		1.0 x 0.5 (0402)	
79	R809	1	22 Ω			±5 %, 63 mW		1.0 x 0.5 (0402)	
80	R810	1	270 Ω			±1 %, 63 mW		1.0 x 0.5 (0402)	
81	R811	1	110 kΩ			±1 %, 63 mW		1.0 x 0.5 (0402)	
82	R812	1	150 Ω			±5 %, 250 mW		3.2 x 1.6 (1206)	
83	R813, R832	2	1 Ω			±5 %, 63 mW		1.0 x 0.5 (0402)	
84	R816, R820, R824, R828	4	4.7 kΩ			±5 %, 63 mW		1.0 x 0.5 (0402)	
85	R817, R821, R825, R829	4	2.2 kΩ			±5 %, 63 mW		1.0 x 0.5 (0402)	
86	C1, C7	2	330 μF	EKHE451VSN33 1MQ35Z	Chemi-Con	Electrolytic , 450 V, ±20 %		Through Hole	
87	C2, C3, C4, C5, C6	5	1500 μF	ELXZ160ELL152 MJ30S	Chemi-Con	Electrolytic , 16 V, ±20 %		Through Hole	
88	C18, C19, C23, C42, C47, C92, C93, C94, C100, C102, C103, C104	12	0.1 μF			Ceramic, 25 V, ±10 %		1.0 x 0.5 (0402)	
89	C21	1	0.018 μF			Ceramic, 25 V, ±10 %		1.0 x 0.5 (0402)	
90	C22	1	1800 pF			Ceramic, 50 V, ±10 %		1.0 x 0.5 (0402)	
91	C24, C41, C55, C58, C60, C61, C62, C67, C70, C99, C818	11	1 μF			Ceramic, 25 V, ±20 %		1.0 x 0.5 (0402)	
92	C25	1	2.2 μF			Ceramic, 10 V, ±10 %		1.0 x 0.5 (0402)	
93	C26, C59, C75, C76	4	2200 pF			Ceramic, 50 V, ±10 %		1.0 x 0.5 (0402)	

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94	C27, C51	2	0.22 $\mu$ F			Ceramic, 100 V, $\pm$ 10 %		2.0 x 1.25 (0805)	
95	C30, C52	2	0.22 $\mu$ F			Film, 275 V, $\pm$ 10 %		Through Hole	
96	C31, C32, C63, C64	4	2200 pF			Ceramic, 250 V, $\pm$ 20 %		Through Hole	
97	C33	1	2.2 $\mu$ F			Film, 275 V, $\pm$ 10 %		Through Hole	
98	C34, C36	2	4.7 pF			Ceramic, 50 V, $\pm$ 0.1 pF		1.0 x 0.5 (0402)	
99	C35, C37	2	0.047 $\mu$ F			Ceramic, 25 V, $\pm$ 10 %		1.0 x 0.5 (0402)	
100	C38, C39	2	1200 pF			Ceramic, 50 V, $\pm$ 10 %		1.0 x 0.5 (0402)	
101	C40	1	0.12 $\mu$ F			Ceramic, 25 V, $\pm$ 10 %		1.6 x 0.8 (0603)	
102	C43, C45, C80, C81, C805, C815	6	1000 pF			Ceramic, 50 V, $\pm$ 10 %		1.0 x 0.5 (0402)	
103	C44, C46	2	3300 pF			Ceramic, 25 V, $\pm$ 10 %		1.0 x 0.5 (0402)	
104	C48	1	22 $\mu$ F			Ceramic, 25 V, $\pm$ 10 %		3.2 x 1.6 (1206)	
105	C49	1	0.47 $\mu$ F			Ceramic, 25 V, $\pm$ 10 %		1.0 x 0.5 (0402)	
106	C50	1	2700 pF			Ceramic, 50 V, $\pm$ 10 %		1.0 x 0.5 (0402)	
107	C53, C54, C56, C57	4	220 pF			Ceramic, 100 V, $\pm$ 10 %		1.0 x 0.5 (0402)	
108	C66, C817	2	10 $\mu$ F			Ceramic, 25 V, $\pm$ 20 %		1.6 x 0.8 (0603)	
109	C78, C79	2	100 pF			Ceramic, 250 V, $\pm$ 10 %		Through Hole	
110	C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C806	11	10 $\mu$ F			Ceramic, 25 V, $\pm$ 10 %		3.2 x 1.6 (1206)	
111	C101	1	220 pF			Ceramic, 250 V, $\pm$ 10 %		Through Hole	
112	C800	1	0.1 $\mu$ F			Film, 630 V, $\pm$ 10 %		Through Hole	
113	C801	1	0.01 $\mu$ F			Ceramic, 630 V, $\pm$ 10 %		3.2 x 1.6 (1206)	
114	C802	1	0.1 $\mu$ F			Ceramic, 50 V, $\pm$ 10 %		1.6 x 0.8 (0603)	
115	C803	1	22 $\mu$ F	EMLA350ARA22 0MF61G	Chemi-Con	Electrolytic , 35 V, $\pm$ 20 %		7.2 x 6.6	
116	C804	1	330 $\mu$ F	EMLA350ARA33 1MJA0G	Chemi-Con	Electrolytic , 35 V, $\pm$ 20 %		11.0 x 10.3	
117	C816	1	220 $\mu$ F	EMLA250ARA22 1MHA0G	Chemi-Con	Electrolytic , 25 V, $\pm$ 20 %		9.0 x 8.3	
118	L1, L2	2		TAM-HG-5I5A241	Tamura	Inductor, 5.5 A, 245 $\mu$ H (Min.)		Through Hole	
119	L5, L6	2		TAM-CTW67A3R3	Tamura	Inductor, 67 A, 4.7 $\mu$ H		Through Hole	

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120	L11, L12	2		FAR2515-12-18T×2	Furukawa Denshi	Inductor, 13 mH		Through Hole	
121	F1	1		0215015.MXEP	Littelfuse	Fuse, 250 V, 15 A		Through Hole	
122	FB1, FB2	2		FBMJ3216HS800-T	Taiyo Yuden	Ferrite Bead , 80 Ω		3.2 x 1.6 (1206)	
123	RV1	1		TND14SV561KTLBPAA0	Chemi-Con	Varistor, 560 V		Through Hole	
124	CN1	1		AC-P05CP24	Echo	AC Power Connector, 250 V, 15 A		Through Hole	
125	CN6, CN7	2		OP-1100	Osada	Terminal, 1000 V, 135 A		Through Hole	
126	CN8, CN9	2		5045-02A	Molex	Connector, 2 Pin		Through Hole	
127	CN10	1		A2-2PA-2.54DSA	Hirose	Connector, 2 Pin		Through Hole	
128	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP17, TP18, TP19, TP20, TP21, TP22, TP23, TP24, TP27, TP28, TP29, TP30, TP31, TP32, TP33, TP34, TP35, TP36, TP37, TP38, TP39, TP44, TP46, TP82, TP83	40		HK-2-S	MAC8	Test Point		3.2 x 1.6 (1206)	
129	TP41, TP42	2		LC-22-S-BLACK	MAC8	Test Point		Through Hole	
130	TP43, TP45	2		LC-22-S-WHITE	MAC8	Test Point		Through Hole	
131	T2, T3	2		P009-203	Pony Electric	Transformer, 1:200, 48 mH, 8.5 Ω		Through Hole	
132	T4	1		PE-63587	Pulse Electronics	Transformer, 1:100, 2000 μH, 100 Ω		Through Hole	
133	T5, T6	2		TR-AN0536	Tokyo Seiden	Transformer, 20:01:01, 67 A		Through Hole	
134	T8	1		TAM-EE16-140-15	Tamura	Transformer, 140:15:17, 4 mH		Through Hole	
135	D49	1		<a href="#">CRZ15</a>	<a href="#">TOSHIBA</a>	Zener Diode, 15 V, 0.7 W	<a href="#">S-FLAT</a>	1.6 x 3.5	Not Mount
136	D84	1		<a href="#">TBAT54</a>	<a href="#">TOSHIBA</a>	Schottky Barrier Diode, 30 V, 0.2 A	<a href="#">SOT23</a>	2.9 x 2.4	Not Mount
137	R46, R48, R55, R58, R59, R70, R171, R174, R175, R176, R177, R180,	26	0 Ω			1 A, 63 mW		1.0 x 0.5 (0402)	Not Mount

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	R181, R182, R184, R198, R207, R208, R209, R220, R221, R222, R223, R224, R225, R803								
138	R50	1	825 Ω			±1 %, 63 mW		1.0 x 0.5 (0402)	Not Mount
139	R200, R201, R202, R203	4	680 Ω			±1 %, 1 W		6.4 x 3.2 (2512)	Not Mount
140	R210, R211	2	6.8 kΩ			±5 %, 63 mW		1.0 x 0.5 (0402)	Not Mount
141	C20	1						1.6 x 0.8 (0603)	Not Mount
142	C65	1	2.2 μF			Film, 275 V, ±10 %		Through Hole	Not Mount
143	C77	1	100 pF			Ceramic, 50 V, ±5 %		1.6 x 0.8 (0603)	Not Mount
144	C808	1	2200 pF			Ceramic, 50 V, ±10 %		1.0 x 0.5 (0402)	Not Mount
145	L3	1				Jumper (shorted using 22AWG)		Through Hole	Not Mount

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### 第5条 準拠法

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