

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	C1	1	0.1 $\mu$ F	ECWF6104JL	Panasonic	Film, 630 V, $\pm 5$ %		Through Hole	
2	C2	1	0.22 $\mu$ F			Ceramic, 50 V, $\pm 10$ %		1.6 x 0.8 (0603)	
3	C3, C18, C43, C49, C50	5	1000 pF			Ceramic, 50 V, $\pm 10$ %		1.6 x 0.8 (0603)	
4	C4	1	10000 pF			Ceramic, 630 V, $\pm 10$ %		3.2 x 1.6 (1206)	
5	C5	1	1 $\mu$ F	LE105-M	OKAYA	Polypropylene Film, 275 VAC, $\pm 10$ %		Through Hole	
6	C6, C7	2	3300 pF			Ceramic, 50 V, $\pm 10$ %		1.6 x 0.8 (0603)	
7	C8, C25	2	2.2 $\mu$ F			Ceramic, 50 V, $\pm 10$ %		1.6 x 0.8 (0603)	
8	C9, C12	2	0.22 $\mu$ F	LE224-MX	OKAYA	Polypropylene Film, 310 VAC, $\pm 10$ %		Through Hole	
9	C10, C17, C20, C33, C40, C64, C65	7	0.1 $\mu$ F			Ceramic, 50 V, $\pm 10$ %		1.6 x 0.8 (0603)	
10	C11	1	22 $\mu$ F			Aluminum Electrolytic, 50 V, $\pm 20$ %		Through Hole	
11	C13, C15, C47	3	2200 pF	DE1E3KX222MN5AA01	MURATA	Disc Ceramic, 250 VAC, $\pm 10$ %		Through Hole	
12	C16, C34	2	0.22 $\mu$ F			Ceramic, 50 V, $\pm 10$ %		1.6 x 0.8 (0603)	
13	C19, C38, C54, C58	4	1 $\mu$ F			Ceramic, 50 V, $\pm 10$ %		1.6 x 0.8 (0603)	
14	C21	1	470 pF			Ceramic, 50 V, $\pm 5$ %		1.6 x 0.8 (0603)	
15	C22	1	220 $\mu$ F			Aluminum Electrolytic, 25 V, $\pm 20$ %		Through Hole	
16	C23	1	1.0 $\mu$ F	ECWFD2W105K	Panasonic	Film, 450 V, $\pm 10$ %		Through Hole	
17	C24	1	0.1 $\mu$ F	MMX0450K104	Nissei	Film, 450 V, $\pm 10$ %		Through Hole	
18	C26, C28	2	220 pF			Ceramic, 50 V, $\pm 5$ %		1.6 x 0.8 (0603)	
19	C27	1	10 pF			Ceramic, 50 V, $\pm 5$ %		1.6 x 0.8 (0603)	
20	C29	1	22 $\mu$ F			Ceramic, 25 V, $\pm 20$ %		3.2 x 2.5 (1210)	
21	C30	1						1.6 x 0.8 (0603)	Not Mounted
22	C31, C32	2	330 $\mu$ F			Aluminum Electrolytic, 450 V, $\pm 20$ %		Through Hole	
23	C35	1	470 pF			Ceramic, 50 V, $\pm 10$ %		1.6 x 0.8 (0603)	
24	C36, C37, C39, C53, C55	5	2.2 $\mu$ F			Ceramic, 50 V, $\pm 10$ %		2.0 x 1.2 (0805)	

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25	C56, C57, C59, C60, C61, C62, C63, C66, C67, C69	10	560 $\mu$ F		Panasonic	Aluminum Organic Polymer, 16 V, $\pm$ 20 %		Through Hole	
26	C68	1	0.01 $\mu$ F			Ceramic, 50 V, $\pm$ 10 %		1.6 x 0.8 (0603)	
27	C70	1	10 $\mu$ F			Ceramic, 50 V, $\pm$ 10 %		3.2 x 2.5 (1210)	
28	C71, C72, C74, C75, C76, C77	6	22 $\mu$ F			Ceramic, 25 V, $\pm$ 20 %		2.0 x 1.2 (0805)	
29	C73	1	2200 pF			Ceramic, 50 V, $\pm$ 10 %		1.6 x 0.8 (0603)	
30	C78	1	56 $\mu$ F			Aluminum Electrolytic, 35 V, $\pm$ 20 %		Through Hole	
31	C79	1	0.01 $\mu$ F			Film, 630 V, $\pm$ 10 %		Through Hole	
32	C80, C81	2	2.2 $\mu$ F			Ceramic, 25 V, $\pm$ 10 %		1.6 x 0.8 (0603)	
33	D1, D2, D13	1	-	CRG04A	TOSHIBA	General purpose diode	S-FLAT	1.6 x 3.5	
34	D3, D4, D5, D7, D11, D12, D17, D19, D24, D25, D26	11	-	1SS187	TOSHIBA	Switching diode	S-Mini	2.9 x 2.5	
35	D6, D22	2	-	CRF03A	TOSHIBA	Fast recovery diode	S-FLAT	1.6 x 3.5	
36	D8, D14	2	-	CRH01	TOSHIBA	High efficiency diode	S-FLAT	1.6 x 3.5	
37	D9, D16, D20, D21	4	-	CRS04	TOSHIBA	Schottky darrier diode	S-FLAT	1.6 x 3.5	
38	D10	1	-	D25XB60-7000	SHINDENGEN	Diode bridge		Through Hole	
39	D15	1	-	S3V60	SHINDENGEN	Diode bridge		Through Hole	
40	D18	1	-	TRS6E65F	TOSHIBA	SiC schottky darrier diode		Through Hole	
41	D23	1	-	CRS13	TOSHIBA	Schottky darrier diode	S-FLAT	1.6 x 3.5	
42	F1	1	10A	FSL250V10AEM	Nippon Seisen	250V			
43	HS1, HS2	2	-	15FP35-L150	LSI	Heatsink			
44	HS3	1	-	38SQ38H10	LSI	Heatsink			
45	L1, L2	2	5 mH	ADR-25-07-050T	UENO	Choke coil			
46	L3	1	335 $\mu$ H	BCH20W-10335Y	UENO	Inductor			
47	PC1	1	-	TLP785F	TOSHIBA	Photocoupler		Through Hole	
48	Q1	1	-	RN2401	TOSHIBA	Transistor	S-Mini	2.9 x 2.5	
49	Q2, Q3, Q4, Q5	5	-	RN1402	TOSHIBA	Transistor	S-Mini	2.9 x 2.5	

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50	Q6	1	-	TK090A65Z	TOSHIBA	MOSFET		Through Hole	
51	Q7, Q8	2	-	TK20A60W5	TOSHIBA	MOSFET		Through Hole	
52	Q10, Q11, Q12, Q13	4	-	TPH1R306P1	TOSHIBA	MOSFET	SOP Advance	5.0 x 6.0	
53	Q14, Q15, Q16	3	-	TPHR9203PL	TOSHIBA	MOSFET	SOP Advance	5.0 x 6.0	
54	R1	1	120 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
55	R2, R3, R4	3	220 k			1/4 W, $\pm 5\%$		3.2 x 1.6 (1206)	
56	R5	1	39 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
57	R6, R7	2	270 k			1/4 W, $\pm 10\%$		3.2 x 1.6 (1206)	
58	R8	1	2.7 k			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
59	R9	1	1 M			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
60	R10, R11	2	82 k			1/4 W, $\pm 5\%$		3.2 x 1.6 (1206)	
61	R12, R14, R98, R99, R113, R115, R116	7	10			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
62	R13, R70, R72, R65	4						1.6 x 0.8 (0603)	Not Mounted
63	R15	1	100			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
64	R16, R91, R96	3	100 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
65	R17	1	56 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
66	R18	1	330 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
67	R19, R51, R104	3	220			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
68	R20	1	27 k			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
69	R21	1	18 k			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
70	R22, R102	2	2.2 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
71	R23	1	47 k			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
72	R24, R25, R28, R30, R31, R49, R75, R81, R82, R97	10	10 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
73	R26	1	22			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
74	R27	1	22 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
75	R29	1	36 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	

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76	R32	1	56			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
77	R33	1	150			1/4 W, $\pm 5\%$		3.2 x 1.6 (1206)	
78	R34, R35	2	5.1	A5MC-5R1JK L3.5	Uchihashi Estec	2.1 W, $\pm 5\%$		Through Hole	
79	R36, R37, R38	3	150 k			1/10 W, $\pm 0.5\%$ , $\pm 25$ ppm		2.0 x 1.2 (0805)	
80	R39	1	130 k			1/10 W, $\pm 0.5\%$ , $\pm 25$ ppm		2.0 x 1.2 (0805)	
81	R40	1	120 k			1/10 W, $\pm 0.5\%$ , $\pm 25$ ppm		2.0 x 1.2 (0805)	
82	R41	1	9.1 k			1/10 W, $\pm 0.5\%$		1.6 x 0.8 (0603)	
83	R42, R46	2	2.2			1/4 W, $\pm 5\%$		3.2 x 1.6 (1206)	
84	R43, R44, R45	3	68 m			1 W, $\pm 1\%$		3.2 x 1.6 (1206)	
85	R47, R84, R105	3	4.7 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
86	R48, R59, R60	3	10 k			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
87	R50	1	470 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
88	R52, R53, R54, R55, R56	5	180 k			1/4 W, $\pm 1\%$		2.0 x 1.2 (0805)	
89	R57	1	9.1 k			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
90	R58	1	22 k			1/8 W, $\pm 0.5\%$		2.0 x 1.2 (0805)	
91	R61	1	1 k			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
92	R62	1	3.3 k			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
93	R63, R64, R65, R66, R67	5	470 k			1/8 W, $\pm 0.5\%$		2.0 x 1.2 (0805)	
94	R68	1	27 k			1/8 W, $\pm 0.5\%$		2.0 x 1.2 (0805)	
95	R69	1	68 k			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
96	R71	1	43 k			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
97	R73, R103, R117	3	0			1/10 W		1.6 x 0.8 (0603)	
98	R74, R76	2	0			1/4 W		3.2 x 1.6 (1206)	
99	R77, R78	2	47			1/4 W, $\pm 5\%$		3.2 x 1.6 (1206)	
100	R79	1	750 k			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
101	R80	1	360 k			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
102	R83	1	2.2			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Package	Not Mounted
103	R86	1	220			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
104	R88, R89	2	4.7			1/4 W, $\pm 5\%$		3.2 x 1.6 (1206)	
105	R92, R93, R94, R95	4	0			2 A		3.2 x 1.6 (1206)	
106	R100	1	3.3 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
107	R101	1	3.9 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
108	R106	1	150			1/10 W, $\pm 1\%$		1.6 x 0.8 (0603)	
109	R107	1	8.2 k			1/10 W, $\pm 0.5\%$		1.6 x 0.8 (0603)	
110	R108	1	2.2 k			1/10 W, $\pm 0.5\%$		1.6 x 0.8 (0603)	
111	R109, R110, R111, R112	4	100			1/4 W, $\pm 5\%$		3.2 x 1.6 (1206)	
112	R114	1	1 k			1/10 W, $\pm 5\%$		1.6 x 0.8 (0603)	
113	RL1	1	-	G5CA-1A-DC12V	OMRON	DC12 V, 10 A		Through Hole	
114	T1	1	-	TR072-132-0	PAT			Through Hole	
115	T2	1	-	TR071-132-0	PAT			Through Hole	
116	TB1	1	-	OTB-771N-BL-3P	OSADA	300 v, 24 A			
117	TB2	1	-	OTB-781N-B-4P	OSADA	250 V, 24A			
118	TH1	1	-	EC2F103A2-40113	SEMITEC	10 k $\Omega$ $\pm 1\%$ , 3435K		Through Hole	
119	U1, U4	2	-	TA75W393FU	TOSHIBA		SM8	2.9 x 4.0	
120	U2	1	-	UCC28910D	Texas Instruments				
	U3	1	-	UCC28180D	Texas Instruments				
	U5	1	-	UCC256303D	Texas Instruments				
	U6	1	-	NJM2904M	NJRC				
	U7, U10	2	-	TL431LIBIDBZR	Texas Instruments				
	U8, U9	2	-	UCC24612-2DBV	Texas Instruments				
	U11	1	-	TPS2412D	Texas Instruments				
	VAR1	1	680 V	ERZV10D681	Panasonic			Through Hole	
	ZD1	1	6.8 V	CRY68	TOSHIBA		S-FLAT	1.6 x 3.5	
	ZD2	1	6.2 V	CRY62	TOSHIBA		S-FLAT	1.6 x 3.5	
	ZD3	1	-				S-FLAT		Not Mounted

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