

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Packaging	Typical Dimension mm(inches)
1	C1	1	0.47 $\mu$ F	ECQU2A474ML	Panasonic	Film, 275V, $\pm$ 10%	DIP	25.5 x 8.5
2	C2,C7	2	0.1 $\mu$ F	ECQUAAF104ML	Panasonic	Film,275V, $\pm$ 10%	DIP	25.5 x 8.5
4	C4	1	0.68 $\mu$ F	—	—	Ceramic, 16V, $\pm$ 10%	—	2.0 x 1.25 (0805)
5	C5	1	3.3 $\mu$ F	—	—	Ceramic, 10V, $\pm$ 10%	—	3.2 x 1.6 (1206)
6	C6,C8,C32	3	2200pF	DE1E3KX222MA5BA01	MURATA	Ceramic, 250VAC, $\pm$ 20%	DIP	10.0 x 8.0
9	C9	1	1nF	—	—	Ceramic, 50V, $\pm$ 10%	—	1.6 x 0.8 (0603)
10	C12	1	0.47 $\mu$ F	ECWF2W474JAQ	Panasonic	Film, 450V, $\pm$ 10%	DIP	13.0 x 8.7
11	C13,C25, C26	3	0.1 $\mu$ F	—	—	Ceramic,50V, $\pm$ 10%	—	1.6 x 0.8 (0603)
12	C14,C15, C27	3	33 $\mu$ F	EKY-350ELL330ME110	NICHEMI	Aluminum Electrolytic, 35V, $\pm$ 20%	DIP	10.0 x 16.0
14	C17	1	10nF	—	—	Ceramic,50V, $\pm$ 10%	—	1.6 x 0.8 (0603)
15	C18	1	100pF	DEA1X3A101JN2A	MURATA	Ceramic,1KV, $\pm$ 20%	DIP	6.0 x 4.0
16	C19,C20	2	100 $\mu$ F	EKXJ451ELL101MMP1S	NICHEMI	Aluminum Electrolytic, 450V, $\pm$ 20%	DIP	18.0 x 35.5
18	C21,C22	2	4.7 $\mu$ F	—	—	Ceramic,25V, $\pm$ 15%	—	3.2 x 1.6 (1206)
20	C23	1	470nF	—	—	Ceramic,25V, $\pm$ 10%	—	2.0 x 1.25 (0805)
21	C24	1	2.2nF	—	—	Ceramic,50V, $\pm$ 15%	—	1.6 x 0.8 (0603)
25	C28	1	47nF	—	—	Ceramic,50V, $\pm$ 15%	—	1.6 x 0.8 (0603)
26	C29	1	47pF	—	—	Ceramic,1KV, $\pm$ 20%	—	3.2 x 1.6 (1206)
27	C30	1	56 $\mu$ F	EKY-350ELL560MF110	NICHEMI	Aluminum Electrolytic, 35V, $\pm$ 20%	DIP	6.3 x 11
28	C31	1	33nF	ECWF4333JL	Panasonic	Metallized PP, 400V, $\pm$ 5%	DIP	12.5 x 6.7
30	C33,C38	2	330pF	—	—	Ceramic,100V, $\pm$ 60ppm/ $^{\circ}$ C	—	1.6 x 0.8 (0603)
31	C34,C39	2	1 $\mu$ F	—	—	Ceramic,50V, $\pm$ 15%	—	3.2 x 1.6 (1206)
32	C35,C36,C37, C40,C42	5	100nF	—	—	Ceramic,50V, $\pm$ 15%	—	1.6 x 0.8 (0603)
38	C41,C43,C44	3	1500 $\mu$ F	EKY-350ELL152MK35S	NICHEMI	Aluminum Electrolytic, 35V, $\pm$ 20%	DIP	12.5 x 35
42	C45	1	1000 $\mu$ F	EKY-350ELL102MK25S	NICHEMI	Aluminum Electrolytic, 35V, $\pm$ 20%	DIP	12.5 x 35
43	CN1	1	AC INPUT	B2P3-VH	JST	—	—	—
46	CN4	1	DC OUTPUT	B4P-VH	JST	—	—	—

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47	D1,D2,D5	3	—	S2G-13-F	DIODES	—	SMB	4.57 x 3.94
49	D3,D12, D16,D18	4	—	RB521SM-40	ROHM	—	EMD2	1.2 x 0.8
50	D4,D14	2	—	UDZV18B	ROHM	—	UMD2	2.5 x 1.25
52	D6,D9,D10, D11,D15,D19, D20,D21	8	—	1SS355VM	ROHM	—	UMD2	2.5 x 1.25
53	D7	1	—	UDZV15B	ROHM	—	UMD2	2.5 x 1.25
54	D8	1	—	STTH5L06FP	ST MICRO	—	TO-220FPAC	9.3 x 10.4
59	D13	1	—	RFN1L6S	ROHM	—	PMDS	4.5 x 2.6
63	D17	1	—	UDZV15B	ROHM	—	UMD2	2.5 x 1.25
68	D22,D24	2	—	RB160M-90	ROHM	—	PMDU	3.5 x 1.6
69	D23	1	—	UDZV27B	ROHM	—	UMD2	2.5 x 1.25
71	DB1	1	—	D10XB60	SHINDENGEN	10A 600V	SIP	25.0 x 4.6
72	F1	1	—	021506.3	Littelfuse	6.3A 250VAC	DIP	5.0 x 20.0
83	L1	1	—	ADR20H-4A100S	UENO	4A 10mH	DIP	28.0 x 20.0
84	L2,L3	2	—	AFP12-50-100	UENO	5A 100μH	DIP	26.0 x 17.0
86	L4	1	—	15332C	MURATA	11.8A 3.3μH	DIP	16.8 x 21.3
87	L5	1	—	BL01RN1A1F1J	MURATA	10A 10μH	DIP	3.6 x 5
88	PC3,PC4	2	—	TLP785FGB	TOSHIBA	—	DIP4	4.6x10.16
90	Q1	1	—	RUC002N05	ROHM	—	SOT-323	3.1 x 1.5
91	Q2,Q7,Q8	3	—	TK290A65Y	TOSHIBA	—	TO-220SIS	15.0 x 10.0
92	Q3,Q6	2	—	2SC2412K	ROHM	—	SOT-346	3.0 x 1.8
93	Q4,Q5	2	—	RUC002N05	ROHM	—	SOT-323	3.1 x 1.5
98	Q9,Q10	2	—	TPH9R506PL	TOSHIBA	—	SOP Advance	5.0x6.0
100	R1,R19,R20, R38,R43,R64, R65,R77,R95, R96	10	10k	—	—	100mW ±5%	—	1.6 x 0.8 (0603)
101	R2,R22,R25, R48,R66,R102	6	4.7k	—	—	100mW ±5%	—	1.6 x 0.8 (0603)
102	R3,R4,R50, R93,R100	5	1.5k	—	—	100mW ±5%	—	1.6 x 0.8 (0603)
104	R5,R6,R42, R63	4	2.2k	—	—	100mW ±5%	—	1.6 x 0.8 (0603)
106	R7	1	22k	—	—	100mW ±1%	—	1.6 x 0.8 (0603)
107	R8,R9,R10	3	220k	—	—	250mW ±5%	—	3.2 x 1.6 (1206)
110	R11,R71,R88	3	22k	—	—	100mW ±5%	—	1.6 x 0.8 (0603)
111	R14	1	470	—	—	100mW ±5%	—	1.6 x 0.8 (0603)
112	R15,R16,R46	3	330k	—	—	250mW ±5%	—	3.2 x 1.6 (1206)
114	R17,R18,R61, R62	4	47	—	—	250mW ±5%	—	3.2 x 1.6 (1206)
118	R21,R23,R24	3	0.15	—	—	500mW ±1%	—	3.2 x 2.5 (1210)
123	R26,R27,R28, R30,R31,R32	6	120	—	—	250mW ±5%	—	3.2 x 1.6 (1206)
126	R29	1	100k	—	—	100mW ±5%	—	1.6 x 0.8 (0603)
130	R33	1	390k	—	—	100mW ±1%	—	1.6 x 0.8 (0603)

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131	R34,R35,R36	3	1M	—	—	100mW ±1%	—	1.6 × 0.8 (0603)
134	R37	1	100	—	—	250mW ±5%	—	3.2 × 1.6 (1206)
136	R39,R41	2	470k	—	—	250mW ±5%	—	3.2 × 1.6 (1206)
137	R40	1	15k	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
141	R44	1	150k	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
142	R45	1	3.9k	—	—	100mW ±1%	—	1.6 × 0.8 (0603)
144	R47	1	18k	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
146	R49	1	8.2k	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
148	R51	1	39k	—	—	250mW ±5%	—	3.2 × 1.6 (1206)
149	R52,R81	2	330	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
150	R53,R54,R55	3	220k	—	—	250mW ±5%	—	3.2 × 1.6 (1206)
153	R56	1	10	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
154	R57,R83,R94	3	1k	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
155	R58	1	3.3k	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
156	R59,R60	2	22	—	—	250mW ±5%	—	3.2 × 1.6 (1206)
164	R67	1	5.6k	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
165	R68,R70,R84	3	10	—	—	250mW ±5%	—	3.2 × 1.6 (1206)
166	R69	1	4.7	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
169	R72,R89	2	6.8k	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
170	R74,R87	2	2.2	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
171	R75,R76,R80, R82	4	10k	—	—	250mW ±5%	—	3.2 × 1.6 (1206)
174	R79,R97	2	1	—	—	100mW ±5%	—	1.6 × 0.8 (0603)
180	R85,R86,R91, R92	4	1k	—	—	250mW ±5%	—	3.2 × 1.6 (1206)
193	R101	1	39k	—	—	100mW ±1%	—	1.6 × 0.8 (0603)
195	T1	1	—	PQ3220	—	Turn ratio = 24:2 Ls=120uH Ip=9.8Apk/3.8 6Arms	—	—

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Packaging	Typical Dimension mm(inches)
196	T2	1	—	ETD34	—	Turn ratio = 42:5:5:3 Lp = 800uH Ls = 109uH Ip=2.4Apk/1.7 2Arms Is=8.76Arms	—	—
197	TH1	1	—	B57211P120M301	EPCOS	4A	DIP	13.0 x 6.0
202	IC1	1	—	NCP1608BDR2G	ON SEMI	—	SOIC	5.0 x 4.0
203	IC2	1	—	NCP1396ADR2G	ON SEMI	—	SOIC	10.0 x 4.0
204	IC3,IC4	2	—	NCP4304ADR2G	ON SEMI	—	SOIC	5.0 x 4.0
206	IC5	1	—	NJM1431AF	NJRC	—	SOT-23	2.9 x 1.6

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