

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mount
1	IC6	1		TA75W393FU	TOSHIBA	Bipolar Dual Comparator, Open Collector Output	SM8		
2	IC8	1		TPD4204F	TOSHIBA	Intelligent Power Device, 600 V, 2.5 A	SSOP30		
3	IC9	1		TBD62003AFG	TOSHIBA	7 Channel Sink Type Transistor Array, 50 V, 500 mA	SOP16-P-225-1.27		
4	IC11	1		TMPM4KLFYAUG	TOSHIBA	Microcontroller	P-LQFP64-1010-0.50-003		
5	IC14	1		TA75S393F	TOSHIBA	Bipolar Comparator, Open Collector Output	SMV		
6	IC15	1		TC7SZ07FE	TOSHIBA	Non-Inverter, Open Drain Output	ESV		
7	IC2	1		VIPER22ADIP-E	ST Microelectronics	Fixed Frequency Off Line Converter		DIP8	
8	IC3	1		L7805CV	ST Microelectronics	Linear Regulator, 5 V, 1.5 A		TO-220	
9	IC4	1		L7812CV	ST Microelectronics	Linear Regulator, 12 V, 1.5 A		TO-220	
10	IC7	1		UCC27424DR	TI	Dual Channel Gate Driver		SOIC8	
11	IC10, IC12, IC13	3		UCC27712DR	TI	Half Bridge Gate Driver		SOIC8	
12	IC5	1		TL3472CDR	TI	Dual Operational Amplifier		SOIC8	
13	PC1, PC2	2		TLP785	TOSHIBA	Photocoupler, Phototransistor Output	DIP4(TLP785)		
14	Q1	1		GT30J65MRB	TOSHIBA	Discrete IGBT, 650 V, 60 A	TO-3P(N)		
15	Q2, Q3, Q4, Q5, Q6, Q7	6		TK20A60W5	TOSHIBA	N-ch Power MOSFET, 600 V, 20 A	TO-220SIS		
16	D1, D5, D7, D9, D10, D13, D14, D16, D17, D19, D20, D21, D23, D24, D25	15		BAS316	TOSHIBA	Switching Diode, 100 V, 0.25 A	USC		
17	D2	1		TRS24N65FB	TOSHIBA	SiC Schottky Barrier Diode, 650 V, 24 A	TO-247		
18	D3	1		CMF02A	TOSHIBA	Fast Recovery Diode, 600 V, 1 A	M-FLAT		
19	D4	1		HER302	MIC	Rectifier Diode, 100 V, 3 A		(Axial)	
20	D6	1		P6KE250CA	JKSEMI	TVS Diode, 600 W		(Axial)	
21	D12	1		CRG04A	TOSHIBA	Diode, 600 V, 1 A	S-FLAT		
22	D15, D18, D22	3		RS1M	UMW	Diode, 1000 V, 1 A		SMD	
23	ZD1, ZD5, ZD6, ZD7	4		ZM4749A-GS18	Vishay	Zener Diode, 24 V		SMD	
24	ZD2, ZD3, ZD9	3		CRZ15	TOSHIBA	Zener Diode, 15 V	S-FLAT		
25	ZD4, ZD8	2		CRZ18	TOSHIBA	Zener Diode, 18 V	S-FLAT		
26	BG1	1		GBJ3510_TO_00601	Panjit	Rectifier Bridge, 1 kV, 35 A		(Through Hole)	

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27	LED1, LED2, LED3, LED4, LED5	5		17-21/R6C-AP1Q2L/3T	Everlight Electronics	LED, Red		2.0 x 1.2 (0805)	
28	R1, R95	2	10 mΩ			±1 %, 5 W		5.0 x 11.0 (2043)	
29	R2, R3, R47	3	510 Ω			±1 %, 0.125 W		2.0 x 1.2 (0805)	
30	R4, R5, R151	3	510 Ω			±1 %, 0.1 W		1.6 x 0.8 (0603)	
31	R6, R33	2	7.5 kΩ			±1 %, 0.1 W		1.6 x 0.8 (0603)	
32	R7, R31	2	15 kΩ			±1 %, 0.125 W		2.0 x 1.2 (0805)	
33	R8, R32	2	15 kΩ			±1 %, 0.1 W		1.6 x 0.8 (0603)	
34	R9, R17, R35, R36, R41	5	100 Ω			±1 %, 0.125 W		2.0 x 1.2 (0805)	
35	R10, R15, R84, R85, R86, R87, R88, R89, R93	9	100 Ω			±1 %, 0.1 W		1.6 x 0.8 (0603)	
36	R13	1	1.5 kΩ			±1 %, 0.1 W		1.6 x 0.8 (0603)	
37	R14	1	3.3 kΩ			±1 %, 0.1 W		1.6 x 0.8 (0603)	
38	R16, R45, R83	3	0			1 A		1.6 x 0.8 (0603)	
39	R18, R42, R50, R72, R74, R81, R108, R121, R124, R128, R131, R139, R143, R148, R149, R150	16	10 kΩ			±1 %, 0.125 W		2.0 x 1.2 (0805)	
40	R19	1	100 kΩ			±1 %, 3 W		(Axial)	
41	R20, R21	2	51 Ω			±1 %, 0.125 W		2.0 x 1.2 (0805)	
42	R22, R46, R53, R57, R58	5	2 kΩ			±1 %, 0.125 W		2.0 x 1.2 (0805)	
43	R23, R24, R25, R26, R27, R28	6	470 kΩ			±1 %, 0.25 W		3.2 x 1.6 (1206)	
44	R29, R30, R34, R48, R52, R67, R68, R69, R70, R71, R73, R75, R77, R79, R136, R142	16	1 kΩ			±1 %, 0.125 W		2.0 x 1.2 (0805)	
45	R37, R38, R39, R40, R94, R96, R104, R105	8	39 Ω			±1 %, 0.5 W		3.2 x 2.5 (1210)	
46	R43, R134	2	22 Ω			±1 %, 0.25 W		3.2 x 1.6 (1206)	
47	R49, R51, R54, R66, R76, R78, R80, R144	8	5.1 kΩ			±1 %, 0.125 W		2.0 x 1.2 (0805)	
48	R55, R56	2	20 kΩ			±1 %, 0.125 W		2.0 x 1.2 (0805)	

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49	R59, R60, R61, R62	4	2 Ω			±1 %, 0.25 W		3.2 x 1.6 (1206)	
50	R63, R64, R65	3	180 kΩ			±1 %, 0.25 W		3.2 x 1.6 (1206)	
51	R82	1	4.7 Ω			±1 %, 0.125 W		2.0 x 1.2 (0805)	
52	R90, R125, R132	3	47 Ω			±1 %, 0.125 W		2.0 x 1.2 (0805)	
53	R91, R122, R126, R129, R137, R140	6	47 Ω			±1 %, 0.25 W		3.2 x 1.6 (1206)	
54	R92, R145	2	10 kΩ			±1 %, 0.1 W		2.0 x 1.2 (0805)	
55	R97, R98	2	27 kΩ			±1 %, 0.125 W		2.0 x 1.2 (0805)	
56	R99	1	1.2 kΩ			±1 %, 0.125 W		2.0 x 1.2 (0805)	
57	R101	1	20 kΩ			±1 %, 0.1 W		1.6 x 0.8 (0603)	
58	R102, R146	2	12 kΩ			±1 %, 0.1 W		1.6 x 0.8 (0603)	
59	R103	1	2 kΩ			±1 %, 0.1 W		1.6 x 0.8 (0603)	
60	R106	1	39 Ω			±1 %, 2 W		(Axial)	
61	R107	1	2 kΩ			±1 %, 1 W		(Axial)	
62	R120, R123, R127, R130, R138, R141	6	1.1 kΩ			±1 %, 0.25 W		3.2 x 1.6 (1206)	
63	R135	1	10 kΩ			±1 %, 0.25 W		3.2 x 1.6 (1206)	
64	R147	1	2.2 kΩ			±1 %, 0.1 W		1.6 x 0.8 (0603)	
65	RC1	1		RE1201	Okaya Electric	RC Network, 0.1 μF, 120 Ω		(Through Hole)	
66	C1, C2, C7	3	1.5 μF	MKP155K275	TENTA	Film, 275 Vac, ± 10 %		(Through Hole)	
67	C3, C4, C5, C6, C61	5	4700 pF			Ceramic, 250 Vac, ± 20 %		(Radial)	
68	C8	1	0.47 μF	MKP474K275	TENTA	Film, 275 Vac, ± 10 %		(Through Hole)	
69	C9, C12, C29, C30, C36, C56, C78, C84, C85	9	1000 pF			Ceramic, 50 V, ± 10 %, X7R		2.0 x 1.2 (0805)	
70	C10, C62	2	330 pF			Ceramic, 1 kV, ± 10 %		(Radial)	
71	C11, C13	2	1000 pF			Ceramic, 50 V, ± 10 %, X7R		1.6 x 0.8 (0603)	
72	C14, C15, C16, C58, C68, C74, C76, C89	8	0.1 μF			Ceramic, 50 V, ± 10 %, X7R		1.6 x 0.8 (0603)	
73	C18, C26, C27	3	2200 pF			Ceramic, 50 V, ± 10 %, X7R		1.6 x 0.8 (0603)	
74	C19, C28, C35, C37, C81	5	0.01 μF			Ceramic, 50 V, ± 10 %, X7R		2.0 x 1.2 (0805)	
75	C20	1	100 pF			Ceramic, 50 V, ± 10 %, X7R		2.0 x 1.2 (0805)	
76	C21	1	2.2 μF			Ceramic, 50 V, ± 10 %, X7R		2.0 x 1.2 (0805)	

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77	C22, C23, C24, C31, C32, C33, C34, C39, C40, C42, C48, C49, C50, C51, C52, C53, C54, C57, C60, C64, C65, C69, C70, C71, C72, C73, C75, C83, C86, C87, C88, C97, C98, C99, C110	35	0.1 μ F				Ceramic, 50 V, \pm 10 %, X7R		2.0 x 1.2 (0805)	
78	C25	1	1000 pF			Ceramic, 2 kV, \pm 10 %		(Radial)		
79	C38	1	1 μ F			Ceramic, 50 V, \pm 10 %, X7R		2.0 x 1.2 (0805)		
80	C41, C43	2	4.7 μ F			Ceramic, 25 V, \pm 10 %, X7R		2.0 x 1.2 (0805)		
81	C55, C90	2	0.1 μ F	ECQ-E6104JF	Panasonic	Film, 630 V, \pm 5 %		(Radial)		
82	C77	1	100 pF			Ceramic, 50 V, \pm 5 %, NPO		1.6 x 0.8 (0603)		
83	C79, C91	2	4700 pF			Ceramic, 50 V, \pm 10 %, X7R		1.6 x 0.8 (0603)		
84	C80	1	0.01 μ F	ECQ-E6103JF	Panasonic	Film, 630 V, \pm 5 %		(Radial)		
85	C82	1	1000 pF			Ceramic, 1 kV, \pm 10 %		(Radial)		
86	C100	1	10 μ F			Ceramic, 25 V, \pm 10 %		2.0 x 1.2 (0805)		
87	C101, C102, C103	3	0.1 μ F			Ceramic, 1 kV, \pm 5 %		4.5 x 3.2 (1812)		
88	C111	1	0.01 μ F			Ceramic, 50 V, \pm 10 %		1.6 x 0.8 (0603)		
89	EC1, EC2	2	470 μ F	450VXG470MEFC SN35X45	Rubycon	Aluminum-Electrolytic, 450 V, \pm 20 %		(Through Hole)		
90	EC3, EC18	2	47 μ F	ESY476M035AE3 AA	KEMET	Aluminum-Electrolytic, 35 V, \pm 20 %		(Radial)		
91	EC4	1	470 μ F	ESH477M025AG4 AA	KEMET	Aluminum-Electrolytic, 25 V, \pm 20 %		(Radial)		
92	EC5, EC6	2	100 μ F	ESK107M025AE3 AA	KEMET	Aluminum-Electrolytic, 25 V, \pm 20 %		(Radial)		
93	EC7, EC19	2	10 μ F	ESS106M050AE2 AA	KEMET	Aluminum-Electrolytic, 50 V, \pm 20 %		(Radial)		
94	EC8, EC9, EC10	3	33 μ F	ESH336M050AE3 AA	KEMET	Aluminum-Electrolytic, 50 V, \pm 20 %		(Radial)		
95	EC11, EC13, EC14, EC15, EC17, EC20	6	47 μ F	EEV476M035S9G AA	KEMET	Aluminum-Electrolytic, 35 V, \pm 20 %		SMD		
96	EC12	1	100 μ F	EEV107M035A9H AA	KEMET	Aluminum-Electrolytic, 35 V, \pm 20 %		SMD		
97	L1	1	6.5 to 10 mH	Customized model	-	Common Mode Choke, 20 A		(Through Hole)		

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98	L_PFC	1	400 μ H	Customized model (JY PFC 10A-400uH-B)	JYCNT Electronics	Inductor, 10 A		(Through Hole)	
99	BYQ	1		Customized model	Please refer Design Guide (RD219-DGUIDE)	Transformer		(Through Hole)	
100	FB1, FB2	2		MFBW1V2012-000-R	Eaton	Ferrite Beads, 0 Ω , 3 A		2.0 x 1.2 (0805)	
101	PTC	1		MZ3-B-47ROM	Chengdu Shunkang Electronics	PTC Thermistor, 47 Ω		(Through Hole)	
102	TH1	1		MZ6 800-1200R	Shantou Jingcheng electronics	PTC Thermistor, 1 k Ω		(Radial)	
103	Z1, Z2, Z3	3		ZOV-14D621K	Shenzhen Yike Technology	Varistor, 385 Vac		(Radial)	
104	SA1	1		2RM470L-8	BrightKing	Discharge Tube, 470 Vdc, 10 A		(Radial)	
105	F1	1			Aihong Electronics	Fuse, 250 Vac, 30 A		30 x 6 (Radial)	
106	RY1	1		SFK-112DM	SANYOU	Relay		(Through Hole)	
107	RY2	1		JZC-32F/012-HS3(555)	Xiamen Hongfa Electroacoustic	Relay		(Through Hole)	
108	CN1, CN2	2		B5B-XH-A	JST	Connector, Header, 5 Pin		(Through Hole)	
109	CN3, CN5, CN11	3		B6B-XH-A	JST	Connector, Header, 6 Pin		(Through Hole)	
110	CN8	1		B4B-XH-A	JST	Connector, Header, 4 Pin		(Through Hole)	
111	CN9	1		B2B-XH-A	JST	Connector, Header, 2 Pin		(Through Hole)	
112	CN10	1		B5P-VH	JST	Connector, Header, 5 Pin		(Through Hole)	
113	CN-VL1, CN-VN1, COM, U, V, W	6		DJ6110-6.3*0.8	LENOSM	Terminal		(Through Hole)	
114	IC1	1						SOIC8	Not Mount
115	D8, D11	2					S-FLAT		Not Mount
116	R109, R110, R112, R113, R114, R115, R116, R117	8						1.6 x 0.8 (0603)	Not Mount
117	R100, R111	2						2.0 x 1.2 (0805)	Not Mount
118	R44	1						3.2 x 1.6 (1206)	Not Mount
119	C17, C46, C47, C66	4						1.6 x 0.8 (0603)	Not Mount

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mount
120	C44, C45, C59, C92, C93, C94, C95, C96	8						2.0 x 1.2 (0805)	Not Mount
121	C63, EC16	2						(Radial)	Not Mount
122	Y1	1		NX5032GA-10MHZ-STD-CSK-7	NDK	Crystal Oscillator, 10 MHz		5.0 x 3.2	Not Mount

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