

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	IC1, IC2, IC4, IC5, IC7, IC8	6		TLP5774H	TOSHIBA	Driver Coupler, 4 A	SO6L		
2	IC3, IC6, IC9	3		TC7WZ08FU	TOSHIBA	Dual 2-Input AND Gates, CMOS	SM8		
3	IC11	1		LT1158CSW	Analog Devices	Half Bridge Driver			
4	IC12, IC13, IC14, IC15	4		TAR5S50U	TOSHIBA	LDO, 5 V, Bipolar	UFV		
5	IC16, IC17, IC18, IC19, IC24	5		TLP7820	TOSHIBA	Optically Isolated Amplifier	SO8L(LF4)		
6	IC20, IC21	2		TA75W01FU	TOSHIBA	Dual Operational Amplifiers, Bipolar	SM8		
7	IC22, IC23, IC25,	3		TC75W55FU	TOSHIBA	Dual Operational Amplifiers, CMOS	SM8		
8	IC26, IC31	2		TC75S103F	TOSHIBA	CMOS Operational Amplifier, CMOS	SMV		
9	IC27, IC28, IC29	3		TC75W59FU	TOSHIBA	Dual CMOS Comparators, CMOS	SM8		
10	IC30	1		MIC1557YM5-TR	Microchip	Oscillator			
11	IC32	1		R-78E5.0-1.0	Recom Power	DC/DC Converters			
12	Q1, Q2, Q3, Q4, Q5, Q6	6		TW045Z120C / TW045N120C	TOSHIBA	SiC MOSFET, Nch, 1200 V, 40 A	TO-247 / TO-247-4L(X)		
13	Q7, Q8, Q9, Q10, Q11, Q12, Q15	7		SSM3K15AFU	TOSHIBA	MOSFET, Nch, 30 V, 100 mA	USM		
14	Q13, Q14	2		SSM6K818R	TOSHIBA	MOSFET, Nch, 30 V, 15 A	TSOP6F		
15	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D19, D20, D21, D23, D24, D25, D27, D28, D29, D37, D38, D39, D40, D41, D42, D43	32		CUS10F40	TOSHIBA	Schottky Barrier Diode, 40 V, 1 A	USC		
16	D31, D32, D33, D34, D35, D36	6		1SS389	TOSHIBA	Schottky Barrier Diode, 10 V, 0.1 A	ESC		

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17	DS1, DS2, DS3, DS4	4		150080VS75000	Wurth Elektronik	LED, Green, 2 V, 20 mA		2.0 x 1.2 (0805)	
18	ZD1, ZD2, ZD3, ZD4	4		BZT52C2V0-7-F	Diodes Incorporated	Zener Diode, 2 V			
19	R1, R2, R3, R4	4	1 mΩ			±1 %, 3 W		6.4 x 3.2 (2512)	
20	R13, R16, R30, R33, R38, R41	6	470 Ω			±1 %, 250 mW		2.0 x 1.2 (0805)	
21	R14, R17, R31, R34, R39, R42	6	33 Ω			±1 %, 125 mW		2.0 x 1.2 (0805)	
22	R15, R18, R27, R28, R29, R32, R35, R40, R43, R65, R112, R116, R118, R119, R120, R166, R169, R174, R177, R182, R185, R187, R188, R190	24	0 Ω			31.6 A		2.0 x 1.2 (0805)	
23	R25, R26, R36, R37, R44, R45, R99, R109, R121, R122, R123, R124, R125, R126, R130, R131, R132, R133, R137, R138, R139, R140, R144, R145, R146, R147, R148, R149, R150, R151, R161, R162, R163, R164, R165, R167, R170, R171, R172, R175, R178, R179, R180, R183	44	10 kΩ			±0.5 %, 100 mW		1.6 x 0.8 (0603)	
24	R48, R49, R63, R110	4	10 Ω			±1 %, 125 mW		2.0 x 1.2 (0805)	
25	R50	1	10 mΩ			±1 %, 1.5 W		3.2 x 1.6 (1206)	
26	R51, R54, R57, R60	4	33 kΩ			±1 %, 250 mW		2.0 x 1.2 (0805)	
27	R52, R55, R58, R61	4	150 mΩ			±1 %, 333 mW		2.0 x 1.2 (0805)	
28	R53, R56, R59, R62, R98	5	1 kΩ			±1 %, 250 mW		2.0 x 1.2 (0805)	

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29	R66, R67, R69, R70	4	100 k Ω			$\pm 1\%$, 2 W		6.4 x 3.2 (2512)	
30	R68	1	0 Ω			2.0 A		6.4 x 3.2 (2512)	
31	R71	1	22 Ω			$\pm 1\%$, 250 mW		2.0 x 1.2 (0805)	
32	R78, R79, R80, R81, R82, R83, R92	7	100 Ω			$\pm 1\%$, 250 mW		2.0 x 1.2 (0805)	
33	R84, R93	2	470 k Ω			$\pm 1\%$, 250 mW		2.0 x 1.2 (0805)	
34	R85, R94	2	680 k Ω			$\pm 1\%$, 125 mW		2.0 x 1.2 (0805)	
35	R86, R89	2	33 k Ω			$\pm 0.5\%$, 100 mW		1.6 x 0.8 (0603)	
36	R87, R88	2	27 k Ω			$\pm 0.5\%$, 100 mW		1.6 x 0.8 (0603)	
37	R90, R114, R115, R127, R134, R141	6	4.7 k Ω			$\pm 0.5\%$, 100 mW		1.6 x 0.8 (0603)	
38	R91, R96, R111, R117, R128, R135, R142	7	15 k Ω			$\pm 0.5\%$, 100 mW		1.6 x 0.8 (0603)	
39	R95	1	3.9 k Ω			$\pm 0.5\%$, 100 mW		1.6 x 0.8 (0603)	
40	R97	1	33 k Ω			$\pm 1\%$, 100 mW		1.6 x 0.8 (0603)	
41	R100	1	10 k Ω			$\pm 1\%$, 100 mW		1.6 x 0.8 (0603)	
42	R101, R102, R103, R104, R105, R106, R107, R108	8	22 Ω			$\pm 1\%$, 250 mW		2.0 x 1.2 (0805)	
43	R129, R136, R143, R152, R153, R155, R156	7	2.2 k Ω			$\pm 1\%$, 100 mW		1.6 x 0.8 (0603)	
44	R154, R157	2	22 k Ω			$\pm 1\%$, 100 mW		1.6 x 0.8 (0603)	
45	R158, R159, R160	3	0 Ω			2.0 A		5.0 x 2.5 (2010)	
46	R168, R173, R176, R181, R184	5	1 k Ω			$\pm 0.5\%$, 125 mW		2.0 x 1.2 (0805)	
47	C21, C24, C27, C30, C33, C36, C40, C42, C77, C79, C88, C89, C90, C97, C99, C102, C104, C107, C109, C112, C114, C115, C116,	34	0.1 μ F			Ceramic, 50 V, $\pm 10\%$		1.6 x 0.8 (0603)	

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	C117, C119, C120, C121, C122, C123, C124, C125, C126, C128, C148								
48	C22, C23, C25, C26, C28, C29, C31, C32, C34, C35, C37, C38, C44, C45, C46, C47, C48, C54, C55, C61, C62, C68, C69, C76, C78, C96, C98, C101, C103, C106, C108, C111, C113, C129, C130, C131, C132, C133, C134	39	4.7 μ F			Ceramic, 50 V, ± 10 %		2.0 x 1.2 (0805)	
49	C41	1	0.01 μ F			Ceramic, 50 V, ± 5 %		2.0 x 1.2 (0805)	
50	C43	1	10 μ F			Ceramic, 100 V, ± 10 %		5.7 x 5.0 (2220)	
51	C49, C56, C63, C70	4	1 μ F			Ceramic, 50 V, ± 10 %		2.0 x 1.2 (0805)	
52	C50, C57, C64, C71	4	0.01 μ F			Ceramic, 50 V, ± 10 %		1.6 x 0.8 (0603)	
53	C51, C53, C58, C60, C65, C67, C72, C74, C149, C150	10	10 μ F			Ceramic, 50 V, ± 20 %		2.0 x 1.2 (0805)	
54	C75, C95, C100, C105, C1110	5	4700 pF			Ceramic, 50 V, ± 5 %		1.6 x 0.8 (0603)	
55	C82	1	20 μ F	EZP-V80206MTB	Panasonic	Film, 800 V, ± 10 %			
56	C84, C85, C86, C87, C127	5	0.047 μ F			Ceramic, 1.5 kV, ± 10 %		5.7 x 5.0 (2220)	
57	C91, C92, C93, C94, C118, C136, C139, C140, C142, C144, 146	11	470 pF			Ceramic, 50 V, ± 5 %		1.6 x 0.8 (0603)	
58	C135	1	1000 pF			Ceramic, 50 V, ± 10 %		1.6 x 0.8 (0603)	
59	C137, C138, C141, C143, C145, C147	6	47 pF			Ceramic, 50 V, ± 5 %		1.6 x 0.8 (0603)	

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60	C151, C152, C153, C154, C155, C156, C157, C158, C159, C160, C161, C162, C163, C164, C165	15	27 pF			Ceramic, 50 V, $\pm 5\%$		1.6 x 0.8 (0603)	
61	T1	1		P0585ANL	Pulse Electronics	Transformer, 1:1:1:1:1			
62	L1	1	51 μ H	744227	Wurth Elektronik	Common Mode Choke, 1 A, 2 Lines			
63	J14	1	0 Ω			26 A		1.6 x 0.8 (0603)	
64	CN1, CN2, CN6, CN7, CN8, CN9	6		OT-005	Osada	Screw Terminal, 25 A, M3			
65	CN3	1		FTSH-120-04-L-DH-A-C	Samtec	Pin Header, 1.27mm, 20 x 2 Positions			
66	CN4	1		1984989	Phoenix Contact	Terminal Block, 4 Positions, 2 A, 300 V			
67	HS1, HS2, HS3	3		C247-050-2AE	OHMITE	Heat Sink			
68	JP5, JP7, JP9, JP11	4		M50-3530342	Harwin	Pin Header, 1.27mm, 3 Positions			
69	JP5, JP8, JP10, JP12	4		M50-1900005	Harwin	Jumper Socket, 1.27mm			
70	IC10	1		LTC1799IS5	Analog Devices	Oscillator, 1 kHz to 33 MHz			NOT MOUNT
71	R46	1	100 k Ω			$\pm 0.5\%$, 100 mW		1.6 x 0.8 (0603)	NOT MOUNT
72	R113	1	10 Ω			$\pm 1\%$, 125 mW		2.0 x 1.2 (0805)	NOT MOUNT
73	R186	1	100 Ω			$\pm 1\%$, 250 mW		2.0 x 1.2 (0805)	NOT MOUNT
74	R189	1	0 Ω			31.6 A		2.0 x 1.2 (0805)	NOT MOUNT
75	C39	1	0.1 μ F			Ceramic, 50 V, $\pm 10\%$		1.6 x 0.8 (0603)	NOT MOUNT
76	J13	1	0 Ω			26 A		1.6 x 0.8 (0603)	NOT MOUNT

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