

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	IC1, IC2	2	-	TPS7A1901DRBR	Texas Instruments		SON	3.0 x 3.0	
2	IC3, IC4, IC9, IC10	4	-	UCC27714DR	Texas Instruments		SOIC	3.91 x 8.65	
3	IC5	1	-	UCC28951PWR	Texas Instruments		TSSOP	7.8 x 4.4	
4	IC6, IC7	2	-	TL431BI PK	Texas Instruments		SOT-23	2.9 x 1.3	
5	IC8	1	-	LM5575MHX	Texas Instruments		TSSOP	7.8 x 4.4	
6	Q3, Q4, Q7, Q8	4	-	TPH2R408QM	TOSHIBA	MOSFET	SOP Advance	5.0 x 6.0	
7	Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16	8	-	TPH1500CNH	TOSHIBA	MOSFET	SOP Advance	5.0 x 6.0	
8	Q17	1	-	SSM3K15AFS	TOSHIBA	MOSFET	CST3	1.0 x 0.6	
9	Q18	1	-	2SC2712-Y	TOSHIBA	Transistor	SC-70	2.1 x 2.0	
10	Q19	1	-	2SA1162-Y	TOSHIBA	Transistor	SC-70	2.1 x 2.0	
11	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D22, D24, D25	15	-	CMH01	TOSHIBA	High Efficiency Diode	M-FLAT	4.7 x 2.4	
12	D13, D14, D15, D16, D17, D18, D19, D20, D21, D23	10	-	CRS01	TOSHIBA	Schottky Barrier Diode	US-FLAT	2.5 x 1.25	
13	DS1 ,DS2	2	-	TLP291(SE	TOSHIBA	Photocoupler	SO4	7.0 x 2.6	
14	DS3, DS4	2	-	TLP2370	TOSHIBA	Photocoupler	SO6	7.0 x 3.7	
15	L1	1	1 μ H	7443091100	Würth Elektronik	34A, \pm 20 %		13.5 x 14.5	
16	L2, L4	2	1 mH	74404086102	Würth Elektronik	0.48A, \pm 20 %		8.3 x 8.3	
17	L3	1	33 μ H	7443783533330	Würth Elektronik	22A, \pm 20 %		34.5 x 36	
18	T1	1	4:7:2	750344423	Würth Elektronik			Through hole	
19	T2	1	1:200	750316796	Würth Elektronik			Through hole	
20	CN1	1	-	PSS-410253-02	HIROSUGI	2.54 pitch Pin Header		Through hole	
21	R47, R48, R49, R50, R51, R158, R159, R164, R165, R166	10	1.5 k			3W, \pm 5 %		6.4 x 3.2 (2512)	
22	R149	1	10			1W, \pm 5 %		6.3x3.2 (2512)	
23	R20, R22, R24, R28	4	33			1W, \pm 5 %		6.3x3.2 (2512)	

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24	R46, R53-R55, R58	5	10 k			1W, $\pm 1\%$		6.3 x 3.2 (2512)	
25	R52, R160, R161	3	100 k			1W, $\pm 1\%$		6.3 x 3.2 (2512)	
26	R162, R163	1	4.7 k			1W, $\pm 1\%$		6.3 x 3.2 (2512)	
27	R76, R77	2	2.2			250 mW, $\pm 1\%$		3.2 x 1.6 (1206)	
28	R92, R94, R96, R98	4	4.7			250 mW, $\pm 1\%$		3.2 x 1.6 (1206)	
29	R5, R6, R13, R14, R91, R93, R95, R97	8	0			250 mW		3.2 x 1.6 (1206)	
30	R129, R130	2	15 k			250 mW, $\pm 1\%$		3.2 x 1.6 (1206)	
31	R132	1	56 k			250 mW, $\pm 1\%$		3.2 x 1.6 (1206)	
32	R70, R71, R150, R151	4	1			125 mW, $\pm 1\%$		2.0 x 1.2 (0805)	
33	R156, R157	2	2.2			125 mW, $\pm 1\%$		2.0 x 1.2 (0805)	
34	R26, R27, R31, R32, R35, R36, R41, R42	8	1			125 mW, $\pm 1\%$		2.0 x 1.2 (0805)	
35	R75	1	10			125 mW, $\pm 1\%$		2.0 x 1.2 (0805)	
36	R61, R62	2	22			125 mW, $\pm 1\%$		2.0 x 1.2 (0805)	
37	R64	1	27			125 mW, $\pm 1\%$		2.0 x 1.2 (0805)	
38	R124	1	33 k			125 mW, $\pm 1\%$		2.0 x 1.2 (0805)	
39	R125	1	22 k			125 mW, $\pm 1\%$		2.0 x 1.2 (0805)	
40	R123	1	82 k			125 mW, $\pm 1\%$		2.0 x 1.2 (0805)	
41	R145, R146, R147, R148	4	0			62.5 mW		1.6 x 0.8 (0603)	
42	R63	1	100			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
43	R65	1	470			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
44	R57, R66, R82, R107, R119, R120, R127, R153	8	1 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
45	R40, R138, R140, R154	4	1.5 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
46	R56, R126, R131, R137, R139	5	2.2 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
47	R112	1	2.4 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	

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48	R117, R118, R136	3	3.3 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
49	R143	1	3.9 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
50	R87	1	4.7 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
51	R99, R100, R101, R102, R103, R104	6	6.8 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
52	R7, R8, R17, R18, R29, R30, R33, R34, R37, R38, R44, R45, R59, R60, R73, R74, R83, R84, R89, R90, R113, R114, R115, R116, R122, R152	26	10 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
53	R39, R43, R86, R88, R133, R134	6	22 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
54	R141	1	24 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
55	R85, R135, R142	3	33 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
56	R79, R109	2	47 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
57	R81	1	150 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
58	R108	1	100 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
59	R110, R111	2	220 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
60	R106	1	680 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
61	R80	1	120 k			62.5 mW, $\pm 1\%$		1.6 x 0.8 (0603)	
62	C3, C4, C5, C33, C34, C35	6	22 μ F	875076161003	Würth Elektronik	Aluminum Polymer, 80 V, $\pm 10\%$		10.0 x 10.3	
63	C1, C2, C25, C26	4	2.2 nF	885342211010	Würth Elektronik	Ceramic, 3000 V, $\pm 10\%$		4.5 x 3.2 (1812)	
64	C28, C31	2	220 pF			Ceramic, 200 V, $\pm 5\%$		3.2 x 1.6 (1206)	
65	C40, C81	2	150 nF			Ceramic, 200 V, $\pm 10\%$		3.2 x 1.6 (1206)	
66	C29, C32	2	10 μ F			Ceramic, 100 V, $\pm 10\%$		3.2 x 2.5 (1210)	

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67	C6, C8, C10, C11, C12, C13, C14, C15, C17, C18, C19, C20, C21, C22, C36, C38, C39, C58, C60, C64, C66	21	2.2 μ F			Ceramic, 100 V, \pm 10 %		3.2 x 2.5 (1210)	
68	C51	1	0.15 μ F			Ceramic, 100 V, \pm 10 %		3.2 x 1.6 (1206)	
69	C7, C9, C41, C42, C63	5	0.1 μ F			Ceramic, 100 V, \pm 10 %		3.2 x 1.6 (1206)	
70	C52, C69, C70, C72, C79, C80	6	0.1 μ F			Ceramic, 50 V, \pm 10 %		1.6 x 0.8 (0603)	
71	C62	1	4700 pF			Ceramic, 50 V, \pm 10 %		1.6 x 0.8 (0603)	
72	C56	1	2200 pF			Ceramic, 50 V, \pm 10 %		1.6 x 0.8 (0603)	
73	C44	1	10 nF			Ceramic, 50 V, \pm 10 %		1.6 x 0.8 (0603)	
74	C67	1	33 nF			Ceramic, 50 V, \pm 10 %		1.6 x 0.8 (0603)	
75	C57	1	22 nF			Ceramic, 50 V, \pm 10 %		1.6 x 0.8 (0603)	
76	C53, C54, C61, C65	4	10 nF			Ceramic, 50 V, \pm 10 %		1.6 x 0.8 (0603)	
77	C37, C43	2	22 μ F			Ceramic, 25 V, \pm 10 %		3.2 x 1.6 (1206)	
78	C45, C46, C47, C50, C71, C74, C75	7	1 μ F			Ceramic, 25 V, \pm 10 %		1.6 x 0.8 (0603)	
79	C48, C49	2	0.22 μ F			Ceramic, 25 V, \pm 10 %		1.6 x 0.8 (0603)	
80	C77, C78	2	4.7 μ F			Ceramic, 25 V, \pm 10 %		2.0 x 1.2 (0805)	
81	C73	1	330 pF			Ceramic, 50 V, \pm 10 %		1.6 x 0.8 (0603)	
82	E1, E2, E5, E6	4	-	OP-486	OSADA	Screw Terminal 50A		11.85 x 15.1	
83	E3, E4	2	-	K302035-01	Ojiya Seiko	Heat Sink			
84	Q1, Q2, Q5, Q6	4	-	TPH2R408QM	TOSHIBA	MOSFET	SOP Advance	5.0 x 6.0	Not Mounted
85	R15, R16, R19, R21, R23, R25	6	-					6.3 x 3.2 (2512)	Not Mounted

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86	R3, R4, R11, R12, R67, R68, R69, R72, R78, R105, R121, R128, R144, R155	14	-					1.6 x 0.8 (0603)	Not Mounted
87	C23, C24	2	-					4.5 x 3.2 (1812)	Not Mounted
88	C16, C27, C30, C59	4	-					3.2 x 1.6 (1206)	Not Mounted
89	C55, C68, C76	3	-					1.6 x 0.8 (0603)	Not Mounted
90	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP21, TP22, TP23, TP24	24	-	HYT-4024BR	HIROSUGI	Test Pin			Not Mounted
91	R1, R2, R9, R10	4	-					3.2 x 1.6 (1206)	Not Mounted

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