

Item No.	Designator	Quantity	Value	Part Number	Manufacturer	Description	Package name	Standard dimensions mm (inch)	Not Mounted
1	IC1	1		LTC7810ILXE#PBF	Analog Devices	Synchronous Step-Down DC-DC Controller	LQFP48		
2	IC2	1		ISL6336DIRZ	Intersil	VR11.1, 6-Phase PWM Controller	QFN48		
3	IC3, IC4, IC5, IC6, IC7	5		ISL6596IRZ-T	Intersil	Synchronous Rectified MOSFET Driver	DFN10		
4	IC9	1		LT8609AHDDM-5#TRPBF	Analog Devices	Synchronous Step-Down Regulator	DFN10		
5	Q1, Q3	2		TPH1400ANH	TOSHIBA	N-ch Power MOSFET, 100 V, 42 A	SOP Advance		-
6	Q2, Q4	2		TPH5R60APL	TOSHIBA	N-ch Power MOSFET, 100 V, 110 A	SOP Advance		-
7	Q5, Q7, Q9, Q14, Q16	5		TPH8R903NL	TOSHIBA	N-ch Power MOSFET, 30 V, 38 A	SOP Advance		-
8	Q6, Q8, Q10, Q15, Q17	5		TPHR9203PL1	TOSHIBA	N-ch Power MOSFET, 30 V, 320 A	SOP Advance		-
9	D1, D2	2		CRH01	TOSHIBA	Rectifier Diode, 200 V, 1 A	S-FLAT		-
10	R1, R29	2	2.2 Ω			±1 %, 100 mW		1.6 x 0.8 (0603)	
11	R2, R36	2	8.2 kΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	
12	R5, R6	2	110 kΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	
13	R8	1	0 Ω			1 A		1.6 x 0.8 (0603)	
14	R9	1	12 kΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	
15	R10	1	22 kΩ			±0.5 %, 62.5 mW		1.6 x 0.8 (0603)	
16	R11, R58	2	2.7 kΩ			±0.5 %, 62.5 mW		1.6 x 0.8 (0603)	
17	R12, R13, R82, R83, R84, R94, R95	7	2.2 Ω			±1 %, 125 mW		2.0 x 1.25 (0805)	
18	R14, R15, R16, R17, R85, R86, R88, R89, R91, R92, R97, R99, R101, R102	14	1 Ω			±1 %, 125 mW		2.0 x 1.25 (0805)	
19	R18, R19	2	15 kΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	
20	R20, R21	2	10 kΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	
21	R22, R49, R57, R65, R66, R67, R117, R122	8	0 Ω			1 A		1.6 x 0.8 (0603)	
22	R24	1	220 kΩ			±0.5 %, 62.5 mW		1.6 x 0.8 (0603)	
23	R25	1	20 kΩ			±0.5 %, 62.5 mW		1.6 x 0.8 (0603)	
24	R26, R48	2	10 Ω			±1 %, 100 mW		1.6 x 0.8 (0603)	
25	R27, R40	2	100 kΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	
26	R28, R39, R42, R43, R123, R124	6	1 kΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	
27	R30	1	1.5 kΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	
28	R31	1	47 Ω			±1 %, 100 mW		1.6 x 0.8 (0603)	
29	R33	1	3.3 kΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	

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30	R41, R106, R107, R108, R109, R110, R111, R112, R113, R121	10	10 kΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	
31	R51	1	1 MΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	
32	R52, R53, R54, R55, R60, R61, R62, R63, R64	9	100 Ω			±1 %, 100 mW		1.6 x 0.8 (0603)	
33	R56	1	220 kΩ			±0.5 %, 62.5 mW		1.6 x 0.8 (0603)	
34	R59	1	82 kΩ			±0.5 %, 62.5 mW		1.6 x 0.8 (0603)	
35	R68	1	11 kΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	
36	R69	1	3.3 kΩ			±5 %, 100 mW		1.6 x 0.8 (0603)	
37	R70, R71, R72, R73, R74	5	130 Ω			±1 %, 100 mW		1.6 x 0.8 (0603)	
38	R76, R77, R78, R79, R80	5	5.6 kΩ			±1 %, 62.5 mW		1.6 x 0.8 (0603)	
39	R116	1	33 kΩ			±1 %, 100 mW		1.6 x 0.8 (0603)	
40	R118	1	27 kΩ			±0.5 %, 62.5 mW		1.6 x 0.8 (0603)	
41	R119	1	56 kΩ			±0.5 %, 62.5 mW		1.6 x 0.8 (0603)	
42	R120	1	3.9 kΩ			±1 %, 125 mW		1.6 x 0.8 (0603)	
43	C1, C7, C19, C20	4	100 nF			Ceramic, 50 V, ±10 %		1.6 x 0.8 (0603)	
44	C2, C4, C6, C8	4	560 μF	80SXV56M	Panasonic	Aluminum Polymer, 80 V, ±20 %		10 x 10	
45	C3, C10, C12, C14, C16	5	2.2 μF			Ceramic, 16 V, ±10 %		3.2 x 1.6 (1206)	
46	C5	1	4.7 μF			Ceramic, 25 V, ±10 %		1.6 x 0.8 (0603)	
47	C9	1	100 pF			Ceramic, 50 V, ±5 %		1.6 x 0.8 (0603)	
48	C11	1	3.3 nF			Ceramic, 50 V, ±10 %		1.6 x 0.8 (0603)	
49	C13	1	330 nF			Ceramic, 10 V, ±10 %		1.6 x 0.8 (0603)	
50	C15, C72, C73, C74, C75, C76, C77, C96, C97, C99, C100	11	100 nF			Ceramic, 16 V, ±10 %		1.6 x 0.8 (0603)	
51	C17, C18	2	220 nF			Ceramic, 50 V, ±10 %		1.6 x 0.8 (0603)	
52	C21, C22	2	100 nF			Ceramic, 25 V, ±10 %		3.2 x 1.6 (1206)	
53	C24	2	10 μF			Ceramic, 25 V, ±10 %		1.6 x 0.8 (0603)	
54	C26, C29	2	120 μF	35SVF120M	Panasonic	Aluminum Polymer, 35 V, ±20 %		10 x 10	
55	C27	1	22 pF			Ceramic, 50 V, ±0.5 %		1.6 x 0.8 (0603)	
56	C32, C63, C64, C65, C66, C67, C68, C87, C88, C90, C91	11	1 μF			Ceramic, 25 V, ±10 %		1.6 x 0.8 (0603)	
57	C33	1	1 nF			Ceramic, 25 V, ±10 %		1.6 x 0.8 (0603)	

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58	C34	1	3.3 nF			Ceramic, 50 V, ±10 %		1.6 x 0.8 (0603)	
59	C35	1	47 pF			Ceramic, 50 V, ±5 %		1.6 x 0.8 (0603)	
60	C36	1	1 nF			Ceramic, 50 V, ±5 %		1.6 x 0.8 (0603)	
61	C37, C40	2	1 nF			Ceramic, 50 V, ±10 %		1.6 x 0.8 (0603)	
62	C41	1	22 nF			Ceramic, 50 V, ±10 %		1.6 x 0.8 (0603)	
63	C42, C43, C44, C45, C46	5	220 pF			Ceramic, 50 V, ±5 %		1.6 x 0.8 (0603)	
64	C48, C50, C52, C54, C56	5	100 nF			Ceramic, 10 V, ±10 %		1.6 x 0.8 (0603)	
65	C60, C61, C62, C84, C85	5	10 pF			Ceramic, 50 V, ±0.5 %		1.6 x 0.8 (0603)	
66	C69, C70, C71, C93, C94	5	220 nF			Ceramic, 50 V, ±10 %		1.6 x 0.8 (0603)	
67	C78, C79, C80, C81, C82, C83, C102, C103, C105, C106	10	10 µF			Ceramic, 25 V, ±10 %		1.6 x 0.8 (0603)	
68	C108	1	1 µF			Ceramic, 25 V, ±10 %		1.6 x 0.8 (0603)	
69	C109	1	4.7 µF			Ceramic, 25 V, ±10 %		1.6 x 0.8 (0603)	
70	C110, C112	2	100 nF			Ceramic, 50 V, ±10 %		1.6 x 0.8 (0603)	
71	C111	1	100 nF			Ceramic, 50 V, ±10 %		1.6 x 0.8 (0603)	
72	C114	1	47 µF			Ceramic, 10 V, ±20 %		2.0 x 1.25 (0805)	
73	C115, C116, C117, C118, C119, C120, C123, C124, C125, C126, C127, C128, C129, C130, C131, C132, C133, C134, C135, C136, C137, C138, C139, C140, C141, C142, C143, C145, C146, C147, C149, C150, C151, C153, C154, C155, C156, C157, C158, C160, C161, C162	42	22 µF			Ceramic, 6.3 V, ±20 %		1.6 x 0.8 (0603)	
74	C121	1	4.7 µF			Ceramic, 25 V, ±10 %		1.6 x 0.8 (0603)	
75	C122	1	10 µF			Ceramic, 25 V, ±10 %		1.6 x 0.8 (0603)	
76	C144, C148, C152, C159, C163	5	470 µF	EEFSX0D471XE	Panasonic	Aluminum Polymer, 2 V, ±20 %		7.3 x 4.3 (2917)	
77	S1	1		219-8LPST	CTS	SMD DIP switch, 8 positions		21.79 x 9.91	
78	L1, L2	2		7443632200	Würth Elektronik	Inductor, 22 µH ±20 %, 12.5 A		21.8 x 21.5	
79	L3	1		74437324100	Würth Elektronik	Inductor, 10 µH ±20 %, 1.5 A		4.45 x 4.06	

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80	L4, L5, L6, L7, L8	5		744308020	Würth Elektronik	Inductor, 200 nH ± 20 %, 25 A		10.2 x 8.0	
81	L10	1		744774022	Würth Elektronik	Inductor, 2.2 µH ±20 %, 4.6 A		5.8 x 5.2	
82	CN1	1		CL620-0052-8-71	Hirose	Pin header, 2 pins		Through Hole	
83	E1, E2	2		OT-007	Osada	Screw terminal, 25 A, M3		Through Hole	
84	E7, E8	2		OP-1100	Osada	Screw terminal, 1000 V, 135 A, M6		Through Hole	
85	Q11, Q12, Q13, Q20, Q21	5		TPHR9203PL1	TOSHIBA	N-ch MOSFET, 30 V, 320 A	SOP Advance		—
86	R3, R4, R7, R23, R32, R34, R35, R37, R38, R44, R45, R46, R50, R114, R115	15						1.6 x 0.8 (0603)	Not Mount
87	R87, R90, R93, R98, R100	5						2.0 x 1.25 (0805)	Not Mount
88	C23, C28, C30, C31, C38, C39, C49, C51, C53, C55, C57, C113	12						1.6 x 0.8 (0603)	Not Mount
89	C164	1						7.3 x 4.3 (2917)	Not Mount

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