

BILL OF MATERIALS

Item	Quantity	Reference	Part / Value	Voltage / Watt / Ampere	Type / TECHNOLOGY informations	Tolerance	Package	Manufacturer	Manufacturer's ordering code / Orderable Part Number	Comment	Supplier	Supplier's ordering code
1	27	C1,C2,C3,C4,C6,C9,C12,C16,C17,C21,C23,C26,C27,C29,C30,C33,C34,C36,C39,C42,C45,C46,C47,C48,C50,C51,C56	100NF	50V	CER	10%	603	N.A.	100NF_50V_X7R_0603_10%			
2	5	C5,C57,C58,C59,C60	100NF	50V	CER	15%	603	N.A.	100NF_50V_X7R_0603			
3	1	C7	NP	50V	ALU	20%	L8.3_W8.3_H10.2_PANA-F	PANASONIC	EEEF1H221AP		RS	729-6302
4	1	C8	220UF	50V	ALU	20%	L8.3_W8.3_H10.2_PANA-F	PANASONIC	EEEF1H221AP		RS	729-6302
5	1	C10	4.7UF	6.3V	CER	10%	805	N.A.	4.7UF_6V3_X5R_0805			
6	1	C11	10UF	25V	CER	10%	1206	TDK	C3216X7R1E106K160AB	Mounted part	RS	903-9170
			10UF	10V	CER	10%	1206	MURATA	GRM31CR71A106KA01	Original recommended part facing procurement issues	RS	723-6559
7	1	C13	10UF	35V	CER	10%	1206	MURATA	GRM31CR6YA106KA12		RS	790-0613
8	3	C14,C35,C53	10NF	50V	CER	10%	603	N.A.	10NF_50V_X7R_0603_10%			
9	1	C15	150PF	50V	CER	5%	603	N.A.	150PF_50V_COG_0603			
10	2	C18,C20	47NF	50V	CER	15%	603	N.A.	47NF_50V_X7R_0603			
11	1	C19	220NF	16V	CER	10%	603	N.A.	220NF_16V_X7R_0603			
12	1	C22	470NF	35V	CER	10%	603	N.A.	470NF_35V_X7R_0603			
13	1	C24	22UF	25V	CER	20%	1206	N.A.	22UF_25V_X5R_1206_20%			
14	2	C25,C28	4.7UF	6.3V	CER	10%	603	N.A.	4.7UF_6V3_X5R_0603_10%			
15	2	C31,C32	15PF	50V	CER	5%	603	KEMET	C0603C150J5GACTU	Mounted part	RS	169-9966
			15PF	50V	CER	5%	603	MURATA	GRM1885C1H150JA01J	Original recommended part facing procurement issues	DIGIKEY	490-11443-2-ND
16	2	C37,C38	4.7PF	50V	CER	0.25pF	603	N.A.	GRM1885C1H4R7CA01		DIGIKEY	490-14611-1-ND
17	1	C40	10UF	35V	CER	10%	1206	N.A.	10UF_35V_X7R_1206			
18	1	C41	10UF	6.3V	CER	15%	603	N.A.	10UF_6V3_X5R_0603			
19	4	C43,C44,C49,C52	1UF	16V	CER	10%	603	N.A.	1UF_16V_X7R_0603			
20	2	C54,C55	10PF	100V	CER	0.5pF%	603	TDK	CGA3E2C0G2A100D080AD	Mounted part	FARNELL	2906961
			10PF	50V	CER	5%	603	MURATA	GCM1885C1H100JA16D	Original recommended part facing procurement issues	DIGIKEY	490-4766-2-ND
21	1	C61	1NF	50V	CER	10%	603	N.A.	1NF_50V_X7R_0603_10%			
22	1	C62	NP	50V	CER	10%	603	N.A.	1NF_50V_X7R_0603_10%			
23	2	D1,D2	GREEN		LED		805	WURTH ELEKTRONIK	150080VS75000			
24	1	D3	YELLOW		LED		805	WURTH ELEKTRONIK	150080YS75000			
25	6	D4,D9,D11,D12,D13,D15	RED		LED		805	WURTH ELEKTRONIK	150080RS75000			
26	3	D5,D6,D8	TS4148RY		SCHOTTKY		805	TAIWAN SEMICONDUCTOR	TS4148RY		MOUSER	821-TS4148-0805-RY
27	1	D7	SMAJ40CA		TVS		SMA	STMICROELECTRONICS	SMAJ40CA		RS	714-7109
28	1	D10	STPS2L30A		SCHOTTKY		SMA	STMICROELECTRONICS	STPS2L30A		RS	249-202
29	1	D14	USBLC6-2P6		TVS/ESD/EMI		SOT666	STMICROELECTRONICS	USBLC6-2P6		RS	624-7687
30	1	D16	NP		SCHOTTKY		SOD323	STMICROELECTRONICS	BAT54JFILM		RS	880-5260
31	1	F1	0.5A		FUSE		1206	LITTELFUSE	0430.500WR			
32	6	J1,J3,J27,J28,J30,J34	MTSW-102-09-G-S-236		HEADER		CON_HEADER_1X2_L18.54_W2.54_P2.54	SAMTEC	MTSW-102-09-G-S-236			
33	16	J2,J4,J5,J6,J10,J11,J12,J14,J15,J33,J35,J36,J37,J38,J39,J40	H3161-01 QTY=2		SOCKET		CON_SHUNT_H3161-01_P10.16	HARWIN	H3161-01 QTY=2		DIGIKEY	952-1467-ND QTY=2
34	4	J7,J16,J17,J18	61300621121		HEADER		CON_HEADER_2X3_L7.62_W5.08_P2.54	WURTH ELEKTRONIK	61300621121		RS	828-1522

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35	2	J8,J9	61300421121		HEADER		CON_HEADER_2X2_L5.08_W5.08_P2.54	WURTH ELEKTRONIK	61300421121		RS	828-1513
36	1	J13	KNM1P5.75_2SQV80NE-T		HEADER		CON_KNM1P5.75_2SQV80NE-T	STELVIO-KONTEK WURTH ELEKTRONIK	KNM1P5.75_2SQV80NE-T			
37	3	J19,J20,J41	61300311121		HEADER		CON_HEADER_1X3_L17.62_W2.54_P2.54	WURTH ELEKTRONIK	61300311121			
38	2	J21,J22	61303821121		HEADER		CON_HEADER_2X1_9_L49_W5_P2.54	WURTH ELEKTRONIK	61303821121			
39	2	J23,J26	61300811821		HEADER		CON_HEADER_1X8_L20.32_W2.54_P2.54	WURTH ELEKTRONIK	61300811821			
40	1	J24	61301011821		HEADER		CON_HEADER_1X1_0_L25.4_W2.54_P2.54	WURTH ELEKTRONIK	61301011821		FARNELL	1841230
41	1	J25	61300611821		HEADER		CON_HEADER_1X6_L15.24_W2.54_P2.54	WURTH ELEKTRONIK	61300611821			
42	3	J29,J32,J43	61300211121		HEADER		CON_HEADER_1X2_L5.08_W2.54_P2.54	WURTH ELEKTRONIK	61300211121			
43	1	J31	65100516121		USB		CON_1734035-1	WURTH ELEKTRONIK	65100516121			
44	1	J42	61302021121		HEADER		CON_HEADER_2X1_0_L25.4_W5.08_P2.54	WURTH ELEKTRONIK	61302021121			
45	1	LD1	RED-GREEN		LED		PLCC4	AVAGO	HSMF-A201-A00J1		FARNELL	1058420RL
46	1	L1	33uH	0.65A	INDUCTOR	20%	L4_W4_H1.8	WURTH ELEKTRONIK	74404042330		RS	814-2537
47	1	L2	600R	1A	FERRITE	25%	603	WURTH ELEKTRONIK	742792651		RS	124-1835
48	2	L3,L4	330R	0.4A	FERRITE	25%	603	WURTH ELEKTRONIK	782631331			
49	7	M1,M3,M27,M28,M29,M30,M34	CLOSED		BLACK		JUMPER	WURTH ELEKTRONIK	60900213421			
50	16	M2,M4,M5,M6,M10,M11,M12,M14,M15,M33,M35,M36,M37,M38,M39,M40	CLOSED		STRAP		JUMPER	HARWIN	D3082-05		DIGIKEY	952-1873-ND
51	3	M7,M8,M9	CLOSED 1-2		BLUE		JUMPER	WURTH ELEKTRONIK	60900213621			
52	2	M19,M20	OPEN		RED		JUMPER	WURTH ELEKTRONIK	60900213521			
53	2	M32,M43	OPEN		BLACK		JUMPER	WURTH ELEKTRONIK	60900213421			
54	1	M44	243-211		TERMINAL BLOCK			WAGO	243-211		RS	122-8732
55	1	M161	CLOSED 1-2 (inactive)		RED		JUMPER	WURTH ELEKTRONIK	60900213521			
56	2	M162,M172	CLOSED 5-6 (inactive)		RED		JUMPER	WURTH ELEKTRONIK	60900213521			
57	1	M171	CLOSED 1-3		RED		JUMPER	WURTH ELEKTRONIK	60900213521			
58	1	M181	CLOSED 3-5		RED		JUMPER	WURTH ELEKTRONIK	60900213521			
59	1	M182	CLOSED 4-6		RED		JUMPER	WURTH ELEKTRONIK	60900213521			
60	1	Q1	NPN		CMS		SOT23	ON SEMICONDUCTOR	BC847BL			
61	1	Q2	P-MOS		CMS		SO8	STMICROELECTRONICS	STS7PF30L		RS	920-8871
62	28	R1,R3,R5,R6,R8,R10,R14,R16,R20,R21,R24,R31,R36,R37,R39,R43,R46,R52,R54,R56,R58,R60,R62,R83,R87,R88,R89,R90	NP	1/10W	RES	5%	603	N.A.	0R_5%_0603			
63	14	R2,R7,R29,R30,R33,R34,R35,R63,R64,R65,R66,R71,R92,R94	10K	1/10W	RES	5%	603	N.A.	10K_5%_0603			
64	6	R4,R9,R17,R22,R74,R77	1.2K	1/10W	RES	5%	603	N.A.	1.2K_5%_0603			
65	1	R11	4.7M	1/10W	RES	5%	603	N.A.	4.7M_5%_0603			

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66	1	R12	68R	1W	RES	5%	1218	N.A.	68R_5%_1218_1W			
67	1	R13	40.2K	1/10W	RES	0%	603	N.A.	40.2K_0.1%_0603			
68	2	R15,R19	1K	1/10W	RES	5%	603	N.A.	1K_5%_0603			
69	1	R18	10K	1/10W	RES	0%	603	N.A.	10K_0.1%_0603			
70	18	R23,R25,R26,R44,R45,R47,R48,R49,R50,R51,R53,R55,R57,R59,R61,R97,R98,R100	0R	1/10W	RES	5%	603	N.A.	0R_5%_0603			
71	4	R27,R28,R76,R95	100K	1/10W	RES	5%	603	N.A.	100K_5%_0603			
72	3	R32,R42,R70	8.2K	1/10W	RES	5%	603	N.A.	8.2K_5%_0603			
73	3	R38,R85,R93	NP	1/10W	RES	5%	603	N.A.	10K_5%_0603			
74	1	R40	18K	1/10W	RES	5%	603	N.A.	18K_5%_0603			
75	2	R41,R79	15K	1/10W	RES	5%	603	N.A.	15K_5%_0603			
76	2	R67,R68	680R	1/10W	RES	5%	603	N.A.	680R_5%_0603			
77	1	R69	2.2K	1/10W	RES	5%	603	N.A.	2.2K_5%_0603			
78	4	R72,R81,R82,R91	100R	1/10W	RES	5%	603	N.A.	100R_5%_0603			
79	1	R73	36K	1/10W	RES	5%	603	N.A.	36K_5%_0603			
80	1	R75	1.5K	1/10W	RES	5%	603	N.A.	1.5K_5%_0603			
81	4	R78,R80,R84,R86	4.7K	1/10W	RES	5%	603	N.A.	4.7K_5%_0603			
82	1	R96	NP	1/10W	RES	5%	603	N.A.	470K_5%_0603			
83	1	R99	NP	1/10W	RES	5%	603	N.A.	18K_5%_0603			
84	1	R101	0R	1/8W	RES	5%	805	N.A.	0R_5%_0805			
85	6	S1,S2,S3,S4,S5,S6	434111025826		BUTTON		L6_W3.8_H2.5	WURTH ELEKTRONIK	434111025826		RS	785-6406
86	2	TP1,TP2	TPSMD-1MM		TEST POINT		Test Point	N.A.	TPSMD-1MM			
87	5	U1,U6,U7,U9,U10	NL17SZ04DFT2G		LOGIC		SOT353	ON SEMICONDUCTOR	NL17SZ04DFT2G		RS	802-1601
88	6	U2,U3,U5,U8,U16,U18	ACPL-W61L-000E		ISOLATOR		SS06	BROADCOM	ACPL-W61L-000E		RS	714-0215
89	1	U4	STKNX-AC		TRANSCEIVER		VFDFPN24_L4_W4 P0.5	STMICROELECTRONICS	STKNX-AC			
90	1	U11	STM32F103RBT6		MCU		LQFP64	STMICROELECTRONICS	STM32F103RBT6		FARNELL	1447640
91	1	U12	SN74AHC1G08DBV		LOGIC		SOT23-5	TEXAS INSTRUMENTS	SN74AHC1G08DBV		DIGIKEY	296-1091-1-ND
92	1	U13	M24128-BWMN6P		MEMORY		SO8	STMICROELECTRONICS	M24128-BWMN6P		DIGIKEY	497-8577-5-ND
93	1	U14	LD1117S50TR		CONVERTER		SOT223	STMICROELECTRONICS	LD1117S50TR		RS	686-9379
94	1	U15	LD39050PU33R		CONVERTER		DFN6	STMICROELECTRONICS	LD39050PU33R		RS	880-5317
95	1	U17	LD3985M33R		CONVERTER		SOT23-5	STMICROELECTRONICS	LD3985M33R			
96	1	U19	STM32F103CBT6		MCU		LQFP48	STMICROELECTRONICS	STM32F103CBT6		FARNELL	1606327
97	1	Y1	16MHZ-10PPM-8PF		QUARTZ		L2.0_W1.6_H0.45	NDK	EXS00A-CS06655			
98	1	Y2	32.768kHz-20PPM-7pF		QUARTZ		L2.05_W1.2_H0.55	NDK	EXS00A-MU00389			
99	1	Y3	8MHZ-20PPM-8PF		QUARTZ		L3.2_W2.5_H1.0	NDK	EXS00A-CG04874			

LEGEND:

Modification versus previous revision Rev131