

Bill of materials
Table 1. STEVAL-MKI109D bill of materials

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
1	7	1, 3, D1, D5, D6, D7, D11	50mcd, SMD_LED_G_0603_ REFLOW_S	LED GREEN 0603 50mcd 120°	KINGBRIGHT	KPT-1608CGCK
					WURTH ELEKTRONIK (1)	150060VS75000
2	5	2, 4, D3, D8, D10	150mcd, SMD_LED_Y_0603_ REFLOW_S	LED YELLOW 0603 150mcd 120°	KINGBRIGHT	KPT-1608SYCK
					WURTH ELEKTRONIK (1)	150060YS75000
3	3	BT1, BT2, BT3	160 gf, SMD_KMR211G_PT S810_S	Button PTS810_and SKRPA	C&K COMPONENTS	PTS810SJM250SMTR LFS
					WURTH ELEKTRONIK (1)	434133025816
4	13	C5, C9, C25, C30, C34, C37, C39, C40, C41, C43, C44, C45, C51	10uF, SMD_C_0603_REFL OW_S	CAP CER 0603 10uF 6.3V X5R +/-20%	MULTICOMP	MC0603X106M6R3CT
					WURTH ELEKTRONIK (1)	885012106006
5	48	C10, C23, C33, C38, C42, C46, C47, C48, C49, C52, C53, C54, C55, C56, C58, C59, C61, C62, C63, C67, C73, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C87, C91, C92, C96, C99, C100, Cd1, Cd2, Cd3, Cd4, Cd6, Cd7, Cd8, Cd9, Cd10, Cd11	100nF, SMD_C_0603_REFL OW_S	CAP CER 0603 100nF 50V X7R +/-10%	MULTICOMP	MC0603B104K500CT
					WURTH ELEKTRONIK (1)	885012206095
6	8	8C1, C2, C4, C35, C60, C72, C74, C90	1uF, SMD_C_0603_REFL OW_S	CAP CER 0603 1uF 25V X5R +/-10%	MULTICOMP	MC0603X105K250CT
					WURTH ELEKTRONIK (1)	885012106030
7	3	C6, C21, C26	470nF, SMD_C_0603_REFL OW_S	CAP CER 0603 470nF 16V X5R +/-10%	MULTICOMP	MC0603X474K160CT
8	14	C7, C11, C12, C14, C18, C19, C20, C27, C64, C65, C86, C89, CE1, CE2	100pF, SMD_C_0603_REFL OW_S	CAP CER 0603 100pF 50V C0G/NP0 +/-5%	MULTICOMP	MC0603N101J500CT
					WURTH ELEKTRONIK (1)	885012006057

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9	11	C8, C15, C16, C17, C29, C31, C88, C93, C94, C97, C98	22nF, SMD_C_0603_REFL OW_S	CAP CER 0603 22nF 50V X7R +/-10%	MULTICOMP	MC0603B223K500CT
					WURTH ELEKTRONIK (1)	885382206003
10	3	C13, C24, C66	150pF, SMD_C_0603_REFL OW_S	CAP CER 0603 150pF 50V C0G/NP0 +/-5%	MULTICOMP	MC0603N151J500CT
					WURTH ELEKTRONIK (1)	885012006058
11	3	C3, C22, C32	47uF, SMD_C_0805_REFL OW_S	CAP CER 0805 47uF 6.3V X5R +/-20%	MURATA	GRM21BR60J476ME15L
					WURTH ELEKTRONIK (1)	885012107006
12	5	C28, C36, C50, C95, Cd5	4.7uF, SMD_C_0603_REFL OW_S	CAP CER 0603 4.7uF 10V X5R +/-10%	KEMET	C0603C475K8PAC7867
13	2	C68, C71	3.3pF, SMD_C_0603_REFL OW_S	CAP CER 0603 3.3pF 100V C0G/NP0 +/-5%	KYOCERA AVX	06031A3R3CAT2A
					WURTH ELEKTRONIK (1)	885012006090
14	2	C69, C70	18pF, SMD_C_0603_REFL OW_S	CAP CER 0603 18pF 50V C0G/NP0 +/-5%	MULTICOMP	MC0603N180J500CT
15	2	D2, D9	230mcd, SMD_LED_R_0603_REFLOW_S	LED RED 0603 230mcd 120°	KINGBRIGHT	KPT-1608SURCK
					WURTH ELEKTRONIK (1)	150060RS75000
16	1	D4	100mcd, SMD_LED_B_0603_REFLOW_S	LED BLUE 0603 100mcd 120°	KINGBRIGHT	KPT-1608QBC-D
					WURTH ELEKTRONIK (1)	150060BS75000
17	8	D12, D13, D14, D15, D16, D17, D18, D19	0.3A, SMD_SOD523_REF LOW	BAT30KFILM	ST	BAT30KFILM
18	1	D22	22V, SMD_DFN2_1.6x1.0_REFLOW	ESDA25P35-1U1M	ST	ESDA25P35-1U1M
19	1	FB1	0.35ΩDC, 600Ω/100MHz, 400mA, SMD_R_0603_REFL OW_S	2506036017Y0	FAIR-RITE	2506036017Y0
					WURTH ELEKTRONIK (1)	74279265
20	1	FB2	1.5ΩDC, 2.2kΩ/100MHz, 100mA, SMD_R_0603_REFL OW_S	HZ0603A222R-10	LAIRD TECHNOLOGIE S	HZ0603A222R-10
					WURTH ELEKTRONIK (1)	742792695
21	1	J1	TRH_HDR1X12_01_TO_12	Header 1x12 pins, 2.54mm, 1-12	WURTH ELEKTRONIK	61301211121

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22	2	J2a, J2b	TRH_HDR_1X12_F EMALE	Receptacle 1x12 pins, 2.54mm	E-TEC	BL1-036-G-700-01
23	1	J3	TRH_HDR1X12_13_ TO_24	Header 1x12 pins, 2.54mm, 13-24	WURTH ELEKTRONIK	61301211121
24	1	J4	TRH_HDR1X02	Header 1x2 pins, 2.54mm	HARWIN	M20-9990246
					WURTH ELEKTRONIK (1)	61300211121
25	1	J5	24 pins, SMD_TRH_USB-C	USB 3.1 TYPE C, RECEPTACLE, SMD_TRH	WURTH ELEKTRONIK	632723100011
26	1	J6	TRH_HDR2X07_1.2 7MM_BOX	Header 2x7 pins, 1.27mm	SAMTEC	FTSH-107-01-L-D-K
27	1	J7	SMD_RECEP_2x10 _50mil	Receptacle 2x10 pins, 1.27mm, straight, SMD	Samtec	SFMC-110-02-L-D
28	1	J8	TRH_HDR1X03_1.2 7MM	Header 1x3 pins, 1.27mm, straight	SAMTEC	TMS-103-01-G-S
29	1	J9	TRH_HDR1X08_1.2 7MM	Header 1x8 pins, 1.27mm, straight	SAMTEC	TMS-108-01-G-S
30	5	J10, J11, J12, J13, J14	TRH_HDR1X02_2M M	Header 1x2 pins, 2mm, straight	HARWIN	M22-2510205
					WURTH ELEKTRONIK (1)	62000211121
31	1	J15	SMD_MICRO_SD_D M3D-SF	Micro SD Card Slot HRS - DM3D-SF	Hirose	DM3D-SF
32	6	R2, R24, R28, R36, R43, R55	10k, SMD_R_0603_REFL OW_S	RES 0603 10k 0.1% 1/16W	PANASONIC	ERA3AEB103V
33	11	R3, R8, R23, R56, R64, R69, R74, R78, R91, R142, R161	100k, SMD_R_0603_REFL OW_S	RES 0603 100k 0.1% 1/16W	PANASONIC	ERA3AEB104V
34	3	R4, R9, R84	3k0, SMD_R_0603_REFL OW_S	RES 0603 3k0 0.1% 1/16W	PANASONIC	ERA3AEB302V
35	24	R5, R6, R11, R20, R21, R30, R35, R37, R57, R67, R75, R83, R109, R110, R120, R121, R122, R129, R143, R163, R164, R165, R179, R180	10k, SMD_R_0603_REFL OW_S	RES 0603 10k 1% 1/16W	MULTICOMP	MC0063W0603110K
36	9	R7, R18, R63, R65, R72, R77, R88, R141, R149	20k, SMD_R_0603_REFL OW_S	RES 0603 20k 0.1% 1/16W	PANASONIC	ERA3AEB203V
37	1	R10	82k, SMD_R_0603_REFL OW_S	RES 0603 82k 1% 1/16W	MULTICOMP	MC0063W0603182K

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38	3	R14, R95, R99	4k7, SMD_R_0603_REFL OW_S	RES 0603 4k7 0.1% 1/16W	PANASONIC	ERA3AEB472V
39	1	R15	24k, SMD_R_0603_REFL OW_S	RES 0603 24k 0.1% 1/10W	PANASONIC	ERA3AEB243V
40	17	R1, R16, R25, R32, R33, R34, R38, R47, R128, R131, R132, R170, R171, R172, R173, Ri5, Ri7	100k, SMD_R_0603_REFL OW_S	RES 0603 100k 1% 1/16W	MULTICOMP	MC0063W06031100K
41	7	R17, R50, R82, R166, R168, RE1, RE2	100R, SMD_R_0603_REFL OW_S	RES 0603 100R 1% 1/16W	MULTICOMP	MC0063W06031100R
42	4	R19, R106, R108, R119	6k8, SMD_R_0603_REFL OW_S	RES 0603 6k8 1% 1/16W	MULTICOMP	MC0063W060316K8
43	5	R26, R79, R89, R102, R174	1k5, SMD_R_0603_REFL OW_S	RES 0603 1k5 1% 1/16W	MULTICOMP	MC0063W060311K5
44	3	R27, R58, R147	27k, SMD_R_0603_REFL OW_S	RES 0603 27k 0.1% 1/10W	PANASONIC	ERA3AEB273V
45	6	R29, R44, R81, R162, RE3, RE4	1k, SMD_R_0603_REFL OW_S	RES 0603 1k 1% 1/16W	MULTICOMP	MC0063W060311K
46	2	R31, R54	2k7, SMD_R_0603_REFL OW_S	RES 0603 2k7 1% 1/16W	MULTICOMP	MCWR06X2701FTL
47	5	R39, R59, R117, R118, R144	3k3, SMD_R_0603_REFL OW_S	RES 0603 3k3 1% 1/16W	MULTICOMP	MC0063W060313K3
48	2	R40, R41	2k4, SMD_R_0603_REFL OW_S	RES 0603 2k4 1% 1/16W	MULTICOMP	MC0063W060312K4
49	1	R42	220k, SMD_R_0603_REFL OW_S	RES 0603 220k 1% 1/16W	MULTICOMP	MC0063W06031220K
50	2	R45, R46	330R, SMD_R_0603_REFL OW_S	Thermistor PTC 0603 330R 1% 75mW	VISHAY	TFPT0603L3300FV
51	2	R48, R87	300R, SMD_R_0603_REFL OW_S	RES 0603 300R 0.1% 1/16W	PANASONIC	ERA3AEB301V
52	2	R49, R103	8k2, SMD_R_0603_REFL OW_S	RES 0603 8k2 1% 1/16W	MULTICOMP	MC0063W060318K2
53	1	R51	2k4, SMD_R_0603_REFL OW_S	RES 0603 2k4 0.1% 1/10W	PANASONIC	ERA3AEB242V
54	1	R52	470R, SMD_R_0603_REFL OW_S	RES 0603 470R 0.1% 1/16W	PANASONIC	ERA3AEB471V

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55	2	R53, R113	6.8R, SMD_R_0805_REFL OW_S	RES 0805 6R8 1% 1/8W	WELWYN	ASC0805-6R8FT5
56	10	R12, R60, R100, R101, R104, R175, R176, R177, R178, Rc1	4k7, SMD_R_0603_REFL OW_S	RES 0603 4k7 1% 1/16W	MULTICOMP	MC0063W060314K7
57	1	R66	137k, SMD_R_0603_REFL OW_S	RES 0603 137k 1% 1/10W	VISHAY DRALORIC	CRCW0603137KFKEA
58	2	R70, R92	1k, SMD_R_0603_REFL OW_S	RES 0603 1k 0.1% 1/16W	SUSUMU	RR0816P-102-B-T5
59	2	R71, R94	10R, SMD_R_0805_REFL OW_S	RES 0805 10R 0.1% 1/8W	YAGEO	RT0805BRD0710RL
60	1	R73	330k, SMD_R_0603_REFL OW_S	RES 0603 330k 1% 1/16W	MULTICOMP	MC0063W06031330K
61	5	R76, R86, R130, R140, R159	10R, SMD_R_0603_REFL OW_S	RES 0603 10R 1% 1/16W	MULTICOMP	MC0063W0603110R
62	1	R85	1k5, SMD_R_0603_REFL OW_S	RES 0603 1k5 0.1% 1/16W	SUSUMU	ERA3AEB152V
63	6	R90, R93, R98, R134, R135, R158	22R, SMD_R_0603_REFL OW_S	RES 0603 22R 1% 1/16W	MULTICOMP	MC0063W0603122R
64	1	R96	150k, SMD_R_0603_REFL OW_S	RES 0603 150k 1% 1/16W	MULTICOMP	MC0063W06031150K
65	1	R97	110k, SMD_R_0603_REFL OW_S	RES 0603 110k 1% 1/16W	MULTICOMP	MCWR06X1103FTL
66	4	R13, R105, R107, R123	2k2, SMD_R_0603_REFL OW_S	RES 0603 2k2 1% 1/16W	MULTICOMP	MC0063W060312K2
67	3	R112, R181, R182	0R, SMD_R_0603_REFL OW_S	RES 0603 0R0 1% 1/16W	MULTICOMP	MC0063W06030R
68	1	R116	6k8, SMD_R_0603_REFL OW_S	RES 0603 6k8 0.1% 1/10W	PANASONIC	ERA3AEB682V
69	2	R124, R125	220R, SMD_R_0603_REFL OW_S	RES 0603 220R 1% 1/16W	MULTICOMP	MC0063W06031220R
70	4	Ri1, Ri2, Ri3, Ri4	499k, SMD_R_0603_REFL OW_S	RES 0603 499k 1% 1/16W	VISHAY DRALORIC	CRCW0603499KFKEA
71	1	T1	0.1A, 45V, SMD_SOT363_REF LOW_S	BCM847BS	NXP	BCM847BS,115
72	2	T2, T10	P-MOS 6A -12V, SMD_SOT23-6_REF LOW	FDC606P_b	ON Semi / ST	FDC606P / STT7P2UH7

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73	2	T3, T8	PNP, 0.1A, -65V, SMD_SOT416-3_RE FLOW	BC857BT PNP 65V 0.1A	Onsemi	BC857BTT1G
74	2	T4, T9	PNP, 1.5A, -30V, SMD_SOT23-3	2STR2230_b	ST	2STR2230
75	3	T6, T12, T16	0.1A, -50V, SMD_SOT416-3_RE FLOW	PDTC115EE NPN+R 50V 0.1A	NXP	PDTC115EE
76	2	T7, T11	N-MOS, 2.3A, -20V, SMD_SOT23-3	STR2N2VH5_b	ST	STR2N2VH5
77	2	T14, T15	P-MOS, 0.9A, 20V, SMD_SOT416-3_RE FLOW	NTA4151PT1G	ON Semi	NTA4151PT1G
78	1	T17	N-MOS, 6A, 30V, SMD_PowerFLAT_2 x2	STL6N3LLH6	ST	STL6N3LLH6
79	1	U1	STM32H563ZIT6, SMD_LQFP144_RE FLOW	STM32H563ZIT6	ST	STM32H563ZIT6
80	3	U2, U11, U18	TSV632IQ2T, SMD_DFN8_2x2_RE FLOW	TSV632IQ2T_ver1	ST	TSV632IQ2T
81	7	U3, U4, U15, U16, U31, U32, U33	TSZ122IQ2T, SMD_DFN8_2x2_RE FLOW	TSZ122IQ2T_ver1	ST	TSZ122IQ2T
82	2	U5, U24	SN74AVC4T245RSV R, SMD_UQFN16_2.6x 1.8_TI_REFLOW	SN74AVC4T245RSV R	TI	SN74AVC4T245RSVR
83	6	U6, U7, U8, U9, U13, U17	NS5A4684SMNTBG, SMD_QFN10L_ONS EMI_1.8x1.4_REFL OW	NS5A4684SMNTBG	ON SEMICONDUCT OR	NS5A4684SMNTBG
84	1	U10	TS3431CILT, SMD_SOT23-3	TS3431CILT	ST	TS3431CILT
85	1	U12	LD39050PU33R, SMD_DFN6_3x3_EP _STBC08_REFLOW	LD39050PU33R	ST	LD39050PU33R
86	1	U19	TCPPO1-M12, QFN12_TCPPO1- M12_STM	TCPPO1-M12	ST	TCPPO1-M12
87	1	U20	EMIF06-MSD02N16, SMD_QFN40P350X 120X50-17L	EMIF06-MSD02N16	ST	EMIF06-MSD02N16
88	1	U21	M24C64-FMH6TG, SMD_DFN5_1.7x1.4 _0.4_REFLOW	M24C64-FMH6TG	ST	M24C64-FMH6TG
89	2	U22, U23	SN74AVC2T245RS WR, SMD_UQFN10_1.8x 1.4_TI_REFLOW	SN74AVC2T245RS WR	TI	SN74AVC2T245RSWR
90	1	U25	LDK220M33R, SMD_SOT23-5_HAN D	LDK220M33R	ST	LDK220M33R

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91	1	U26	ST890DTR, DFN8L-3x3_STM	ST890DTR	ST	ST890DTR
92	1	U27	USBLC6-2P6, SMD_SOT666_REF LOW	USBLC6-2P6	ST	USBLC6-2P6
93	1	Um1	LDK220M36R, SMD_SOT23-5_REF LOW	LDK220M36R	ST	LDK220M36R
94	1	X1	16MHz, SMD_X_ABM8	Q ABM8-16MHz SMD	ABRACOM	ABM8-16.000MHZ-B2-T
					WURTH ELEKTRONIK (1)	830055951
95	1	X2	ABS-06-10, 32.768KHz, SMD_X_2.0x1.2_S	ABS06-107-32.768k Hz-T 4pF	ABRACON	ABS06-107-32.768KHZ-T
					WURTH ELEKTRONIK (1)	830107326401
96	2	SJ13, SJ14	----	Jumper Shunt 1x2 pins, 2mm	MULTICOMP	SPC20180

1. Alternative manufacturer.

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