



Bill of Materials for the BDK_GEVK

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
ANT	1	PCB trace antenna L-shape 2.4GHz for the	2.4GHz			N/A	N/A		
BH1	1	SMD battery holder for CR2032 type	3002			Keystone Electronics	3002		
C1	1	MLC capacitor 4u7 10V X5R 10% Murata	4u7	10%		Murata	GRM188R61A475KAJ0D		
C2, C6, C7, C41,	7	MLC capacitor 1uF 35V X5R 10% Murata	1uF	10%		Murata	GRM155R6Y4105KE11D		
C3, C36	2	MLC capacitor 100nF 50V X7R 10%	100 nF	10%		Murata	GRM155R71H104KE14D		
C4	1	MLC capacitor 100pF 50V COG 5% Murata	100 pF	5%		Murata	GRM1555C1H101A01D		
C5	1	MLC capacitor 4u7 25V X5R 10% Murata	4u7	10%		Murata	GRM188R61E475KE15D		
C8	1	MLC capacitor 2u2 35V X5R 10% Murata	2u2	10%		Murata	GRM155R6Y4225KE11D		
C9	1	MLCC capacitor 12pF 25V COG ± 2%	12 pF			Murata	GRM1555C1E120GA01D		
C10, C11	2	MLCC capacitor 1.5pF 50V COG ± 0.25pF	1p5			Murata	GCM1555C1H1R5CA16D		
C12	1	MLC capacitor 10pF 25V COG 5% Murata	10 pF	5%		Murata	GRM1555C1E100JA01D		
C13, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C27, C28, C29, C30, C33, C34, C35	# # # # # # #	MLC capacitor 100nF 25V X5R 10% Murata	100 nF	10%		Murata	GRM155R61E104KA87D		
C14, C26	2	MLC capacitor 10uF 10V X7T 10% Murata	10 uF	10%		Murata	GRM188D71A106KA73D		
C31, C32	2	MLC capacitor 12pF 25V COG 5% Murata	12 pF	5%		Murata	GRM1555C1E120JA01D		
C37	1	MLCC capacitor 4.7nF 250V COG ± 5% TDK	4n7			TDK	C2012C0G2E47J125AA		
C38	1	MLC capacitor 100nF 25V X7R 10% Murata	100 nF	10%		Murata	GRM188R71E104KA01D		
C39, C40	2	MLC capacitor 4u7 35V X5R 10% Murata	4u7	10%		Murata	GRM188R6Y4475KE15D		
CABLE_USB	1	USB A Male to Micro-B Male cable length	USB A Male to Micro-B						
D1, D3	2	SMD LED diode 30 mA LIGHT GREEN 0603 Würth Elektronik	LIGHT GREEN			Würth Elektronik	150060V575000		
D2	1	SMD LED diode 30 mA RED 0603 Würth Würth Elektronik	RED			Würth Elektronik	150060R575000		
J1	1	PTH vertical receptacle 10 pins 2.54mm Samtec	SSW-110-03-G-S			Samtec	SSW-110-03-G-S		
J2, J3	2	PTH vertical receptacle 8 pins 2.54mm	SSW-108-03-G-S			Samtec	SSW-108-03-G-S		
J4	1	PTH vertical receptacle 6 pins 2.54mm Samtec	SSW-106-03-G-S			Samtec	SSW-106-03-G-S		
J5	1	Micro USB B SMD connector WR-COM	629 105 136 821			Würth Elektronik	629105136821		
J6, J9	2	SMD vertical male header 2x5pins 1.27mm Samtec	FTSH-105-01-F-DV-K			Samtec	FTSH-105-01-F-DV-K		
J7, J11, J12	3	Header 1x2 pins PTH 2.54mm pitch Gold Würth Elektronik	613 002 111 21			Würth Elektronik	61300211121		
J10	1	Vertical SMD header 2x5 pins pitch 2mm Molex	087759-1014			Molex	0877591014		
J13	1	PTH right angle male header 2 pins 2.54 mm pitch Würth Elektronik	613 002 110 21			Würth Elektronik	61300211021		
JP7, JP11, JP12	3	Jumper 2.54mm pitch black Würth Elektronik	Jumper 2.54mm pitch						
J_RF	1	RF Coaxial cable connector/switch SMD mount Murata	MM8130-2600			Murata	MM8130-2600RA2		
L1	1	WE PMCI inductor 2.2uH 1000mA 166mOhm, ± 20%	2u2	20%		Würth Elektronik	74479275222		

L2	1	Taiyo Yuden multilayer chip inductor for HF applications 15 nH 0.3A 460mOhm	15 nH			Taiyo Yuden	HK100515N-T	
L3	1	Multilayer RF inductor 1n8 0402 Murata	1n8			Murata	LQG15HS1N8S02D	
L4	1	Multilayer RF inductor 3n 0402 Murata	3 nH			Murata	LQG15HS3N0S02D	
L5	1	EMI Suppression ferrite bead SMD 30Ohm 3A Würth Elektronik	30 Ohm @ 100 MHz			Würth Elektronik	742792609	
PB_BLE, PB_RST	2	SMD pushbutton top actuated 6x6x4.3mm Würth Elektronik	430 182 043 816			Würth Elektronik	430182043816	
PMOD1, PMOD2	2	PTH right angle receptacle 2x6 2.54mm Würth Elektronik	613 012 243 121			Würth Elektronik	613012243121	
Q1	1	NMOS 50V 0.2A 200mA 3.5Ohm ON Semiconductor	BSS138L			ON Semiconductor	BSS138LT1G	
R1, R8, R9, R21, R22	5	SMD thick film resistor 68R 0603 1% 100 mW Panasonic	68R	1%		Panasonic	ERJ3EKF68R0V	
R2, R12, R13, R38, R40	5	SMD thick film resistor 10k 0603 1% 100 mW Panasonic	10k	1%		Panasonic	ERJ3EKF1002V	
R3, R4, R5, R6, R7, R11, R35, R36, R37, R44, R45, R46	# # # #	SMD thick film resistor 33k 0603 1% 100 mW Panasonic	33k	1%		Panasonic	ERJ3EKF3302V	
R10, R17, R47	3	SMD thick film resistor 100k 0603 1% 100 mW Panasonic	100k	1%		Panasonic	ERJ3EKF1003V	
R14, R18, R23	3	SMD thick film resistor 6k8 0603 1% 100 mW Panasonic	6k8	1%		Panasonic	ERJ3EKF6801V	
R15, R16	2	SMD thick film resistor 39R 0603 1% 100 mW Panasonic	39R	1%		Panasonic	ERJ3EKF39R0V	
R19, R20, R29, R30, R31	5	SMD thick film resistor 150R 0603 1% 100 mW Panasonic	150R	1%		Panasonic	ERJ3EKF1500V	
R26	1	SMD thick film resistor 0R 0603 100 mW, AEC-Q200, Panasonic	0R			Panasonic	ERJ-3GEY0R00V	
R27, R28, R32, R33, R34, R39, R43	7	SMD thick film resistor 4k7 0603 1% 100 mW Panasonic	4k7	1%		Panasonic	ERJ3EKF4701V	
R42	1	SMD thick film resistor 1M 0603 5% 100 mW ROHM Semiconductor	1M	5%		ROHM Semiconductor	KTR03E2P105	
S1, S2, S3, S4	4	Pan head cross screw M3x8 DIN7985	M3x8 DIN7985					
SPB1, SPB2, SPB3, SPB4	4	Steel spacer internal/internal M3x6 thread 50mm Würth Elektronik	Plastic spacer M3 F/F 10/40 HEX7					
U1	1	RS110: Radio SoC, Bluetooth® 5 Certified IC ON Semiconductor	NCH-RSL10-101Q48-ABG			ON Semiconductor	NCH-RSL10-101Q48-ABG	
U2	1	Axsem 8052F100 low power RF microcontroller	AX8052F100			ON Semiconductor	AX8052F100-2-TA05	
U3	1	Linear Voltage Regulator, LDO, Ultra Low Iq, Ultra Low Noise, 200 mA ON Semiconductor	NCP7025N33T1G			ON Semiconductor	NCP7025N33T1G	
U4	1	Low current 2.7 V voltage detector with active low CMOS RESET output ON Semiconductor	NCP300LSN27			ON Semiconductor	NCP300LSN27T1G	
U5	1	EMI Common Mode Filter with ESD Protection for High Speed Serial Digital Interfaces ON Semiconductor	EM1212MTTAG			ON Semiconductor	EM1212MTTAG	
U6	1	ARM Cortex-M3 running at up to 96 MHz 256kB Flash+52kB SRAM Microchip Technology /Atmel	ATSAM3U2CA-AU			Microchip Technology /Atmel	ATSAM3U2CA-AU	
U7, U8	2	Intelligent load switch 400 mA with reverse current protection and current limit ON Semiconductor	FPF2110			ON Semiconductor	FPF2110	
X1	1	XTAL 48MHz 20ppm 8pF ECS Inc.	48 MHz			ECS Inc.	ECS-480-8-47-JTN-TR	
X2	1	XTAL 32.768kHz 20ppm 9pF Epson Timing	32.768 kHz			Epson	FC-135 32.7680KA-AC3	
X3	1	XTAL 12MHz 30ppm 12pF TX Corporation	12 MHz 30 ppm			TXC	7V-12.000MAHE-T	