Designator A1	PartNumber RN4870-I/RM128	Manufacturer Microchip Technology	Quantity 1	Comment Bluetooth Module	HelpURL https://www.digikey .com/product- detail/en/microchip- technology/RN4870- I-RM128/RN4870-I- RM128-ND/8037764 https://www.digikey .com/product-
	EEH-ZA1J330P	Panasonic		EP-cap, 33mk, 63V, ±20% CAP ALUM, 220mk, 100V, ±20%, Impedance, dia=12.5 x h=25 x	detail/en/panasonic- electronic- components/EEH- ZA1J330P/P15448CT- ND/3088162 https://www.digikey .com/product- detail/en/united- chemi- con/EKZE101ELL221 MK25S/565-1739-
	EKZE101ELL221MK25S 12101C225KAT2A	United Chemi-Con AVX	1		ND/756255 https://www.digikey .com/product- detail/en/avx- corporation/12101C 225KAT2A/478-7974- 1-ND/3881597 https://www.digikey .com/product- detail/en/tdk-
	C4532X7S2A475M230KB 06031C103KAT2A	TDK	4		corporation/C4532X 7S2A475M230KB/44 5-5211-1- ND/2116346 https://www.digikey .com/product- detail/en/avx- corporation/06031C 103KAT2A/478-1205- 2-ND/563315
C14, C15	GRM188R71C474KA88D	Murata	2	CAP CER, 0.47mk, X7R, ±10%, 16V, 0603 CAP CER, 1000p, NP0, ±10%, 100V,	3295-1-ND/702836 https://www.digikey .com/product- detail/en/avx- corporation/12061A
	12061A102KAT2A 0603YC102MAT4A 0603YC332MAT4A	AVX	1	CAP CER, 1000p, NPO, ±10%, 100V, 1206 CAP CER, 1n, X7R, ±20%, 16V, 0603 CAP CER, 3.3n, X7R, ±20%, 16V, 0603	1-ND/1913258 https://www.digikey .com/products/en?k eywords=0603YC102 MAT4A https://www.digikey .com/products/en?k eywords=0603YC102 MAT4A
C25, C33, C36, C41, C46, C48, C49,	0603YD224KAT2A	AVX	2	CAP CER, 0.22mk, X5R, ±20%, 16V, 0603	https://www.digikey .com/product- detail/en/avx- corporation/0603YD 224KAT2A/478-1246- 1-ND/564278 https://www.digikey .com/product- detail/en/avx- corporation/0603YC 104KAT2A/478-1239-
	0603YC104KAT2A 12101C105KAT2A	AVX	17	CAP CER, 0.1mk, X7R, ±10%, 16V, 0603 CAP CER, 1mk, X7R, ±10%, 100V, 1210	104KA12A/4/8-1239- 1-ND/564271 https://www.digikey .com/product- detail/en/avx- corporation/12101C 105KAT2A/478-2570- 1-ND/717515 https://www.digikey .com/product- detail/en/avx-
	0603YC105KAT2A 0603ZD225KAT2A	AVX	4	CAP CER, 1mk, X7R, ±10%, 16V, 0603 CAP CER, 2.2mk, X5R, ±10%, 10V, 0603	corporation/0603YC 105KAT2A/478-5010- 1-ND/1888221 https://www.digikey .com/product- detail/en/avx- corporation/0603ZD 225KAT2A/478-6212- 1-ND/2391411 https://www.digikey
C30, C62, C67	0805YC475KAT2A	AVX		CAP CER, 4.7mk, X7R, ±10%, 16V, 0805	.com/product-detail/en/avx-corporation/0805YC 475KAT2A/478-5722-1-ND/2136330 https://www.digikey.com/product-detail/en/avx-corporation/0603YC
	0603YC472KAT2A 0603YC683KAT2A	AVX	2	CAP CER, 4.7n, X7R, ±10%, 16V, 0603 CAP CER, 0.068mk, X7R, ±10%, 16V, 0603	472KAT2A/478-12750 1-ND/9949278 https://www.digikey .com/product- detail/en/avx- corporation/0603YC 683KAT2A/478-1237- 1-ND/564269 https://www.digikey
	06033A221JAT2A 06035C682KAT2A	AVX	1	CAP CER, 220p, X7R, ±5%, 25V, 0603 CAP CER, 6.8n, X7R, ±10%, 50V, 0603	.com/product-detail/en/avx-corporation/06033A 221JAT2A/478-12678-2-ND/1599160 https://www.digikey.com/product-detail/en/avx-corporation/06035C 682KAT2A/478-1225-1-ND/564257
	08051C104JAT2A	AVX		CAP CER, 0.1mk, X7R, ±10%, 100V, 0805	https://www.digikey .com/product- detail/en/avx- corporation/08051C 104JAT2A/478-5780- 1-ND/2136372 https://www.digikey .com/product- detail/en/tdk- corporation/C3216X
	C3216X5R1E476M160AC 0603ZD106MAT2A	TDK AVX	1		5R1E476M160AC/44 5-8047-1- ND/2792164 https://www.digikey .com/product- detail/en/avx- corporation/0603ZD 106MAT2A/478-8050- 1-ND/3900666
C56, C57	06035A160JAT2A	AVX	2	CAP CER, 16p, NP0, ±5%, 50V, 0603	https://www.digikey .com/product- detail/en/linear-
DA1	LT8491EUKJ#PBF	Linear Technology	1	LT8491EUKJ#PBF	technology-analog- devices/LT8491EUKJ- PBF/161-LT8491EUKJ- PBF-ND/11586954 https://www.digikey .com/product- detail/en/linear- technology-analog- devices/LTC4359CDC B- TRMPBF/LTC4359CD
	LTC4359CDCB LMR16006YDDCR	Linear Technology/Analog Devices Texas Instruments	1	IC, Ideal Diode Controller, 6-DFN (2x3) DC/DC buck converter, input 460V, 2.1MHz, output 0.76555V, 0.6A, -40+125°C, SOT23-6	https://www.digikey .com/product- detail/en/texas- instruments/LMR160 06YDDCR/296-40294- 1-ND/5178171 https://www.digikey
	MCP111T-195I/LB STM32F334C4T6	Microchip Technology STMicroelectronics		Supervisor,SOT-23 IC microcontroller, 32-Bit, Cortex-M4, 72MHz, 16KB, 12KB, 23.6V, -40+85°C, 48-LQFP	.com/product- detail/en/microchip- technology/MCP111 T-195I-LB/MCP111T- 195I-LBCT- ND/9642872 https://www.digikey .com/products/en?k
	SN65HVD231DR	Texas Instruments		IC CAN transceiver, 1Mbps, Half-duplex, 33.6V, -40+85°C, 8-SOIC	https://www.digikey .com/product- detail/en/texas- instruments/SN65H VD231DR/296-26343 1-ND/2254977 https://www.digikey .com/product- detail/en/microchip-
	24AA01T-I/OT ISO7721DR	Microchip Technology Texas Instruments	1	IC memory, EEPROM, 1KB (128x8), 400 kHz, I2C, 1.75.5V, - 40+85°C, SOT-23-5 IC digital isolator, 100Mbps, 3000Vrms, 2.255.5V, -55+125°C 8-SOIC	technology/24AA01T I-OT/24AA01T-I-OTCT ND/857670 https://www.digikey .com/product- detail/en/texas- instruments/ISO772 1DR/296-48296-1- ND/8347715
	CP2102N-A02-GQFN24 01110506Z	Silicon Labs Littelfuse	1		ND/9863476 https://www.digikey .com/product- detail/en/littelfuse- inc/01110506Z/F408 3-ND/2519783
	61300411121	Würth Elektronik	1	PLS-4 SINGLE ROW, 4pin, 2.54mm,	https://www.digikey .com/product- detail/en/w-rth- elektronik/61300411 121/732-5317- ND/4846827 https://www.digikey .com/product- detail/en/w-rth- elektronik/61300411
	61300411121 7443633300	Würth Elektronik Würth Elektronik	2	Fixed inductor, 33mkH, ±15%, SMD Shielded, Ferrite (MnZn), ,	121/732-5317- ND/4846827 https://www.digikey .com/product- detail/en/w-rth- elektronik/74436333 00/732-2524-1- ND/2440407 https://www.digikey .com/product- detail/en/bourns-
	SRU8043-330Y LQM21DH100M70L	Bourns Inc. Murata Electronics	1	Fixed inductor, 33mkH, ±15%, SMD Nonstandard, Ferrite, , 1.7A Fixed inductor, 10µH, ±20%, 0805, 250mA	inc/SRU8043- 330Y/SRU8043- 330YCT-ND/2353063 https://www.digikey .com/product- detail/en/murata- electronics/LQM21D H100M70L/490- 18463-1-
R1		Vishay			ND/10135474 https://www.digikey .com/product- detail/en/vishay- dale/WSL25125L000 FEA18/WSLH005CT- ND/2695193 https://www.digikey .com/product- detail/en/vishay- dale/WSL2512R0120
	RCWE251250L0FNEA CRCW060310R0JNEAC	Vishay			reale/WSL2512R0120 FEA18/WSLH- .012DKR- ND/2695348 https://www.digikey .com/product- detail/en/vishay- dale/CRCW060310R 0JNEAC/541-4057-1- ND/7928740 https://www.digikey
R5, R6	CRCW12061R20FKEA	Vishay			nttps://www.digikey .com/product- detail/en/vishay- dale/CRCW12061R2 0FKEA/541-1.20FFCT- ND/1962233 https://www.digikey .com/product- detail/en/vishay- dale/CRCW06033R0 0JNEA/541-3.0GCT-
	CRCW06033R00JNEA WSL2512R0120FEA18	Vishay			ND/1179308 https://www.digikey .com/product- detail/en/vishay- dale/WSL2512R0120 FEA18/WSLH012DKR- ND/2695348 https://www.digikey
R15, R20, R39, R42, R44, R53, R71, R74, R75, R77, R78, R79, R80, R82,	ERJ-3GEYJ3R3V CRCW06030000Z0EA	Vishay Vishay		Res, SMD, 3.3, ±5%, 0603, 0.1W Res, SMD, 0, ±1%, 0603, 0.1W	.com/product-detail/en/vishay-dale/CRCW06033R0 0FKEAHP/541- 3.00STR-ND/2225897 https://www.digikey .com/product-detail/en/vishay-dale/CRCW0603000 0Z0EA/541-0.0GCT-ND/1179296
	CRCW060391K0FKEA	Vishay			https://www.digikey .com/product- detail/en/vishay- dale/CRCW060391K 0FKEA/541-91.0KHCT ND/1180034 https://www.digikey .com/product- detail/en/vishay-
	CRCW06031M10FKEA CRCW0603196KFKEA	Vishay			dale/CRCW06031M1 0FKEA/541- 1.10MHCT- ND/1180156 https://www.digikey .com/product- detail/en/vishay- dale/CRCW0603196 KFKEA/541-196KHCT- ND/1180069
R19, R52, R63, R81, R87, R97, R98, R101, R104	CRCW06031K00FKEA	Vishay	9	Res, SMD, 1k, ±1%, 0603, 0.1W	https://www.digikey .com/product- detail/en/vishay- dale/CRCW06031K0 0FKEA/541-1.00KHCT ND/1179809 https://www.digikey .com/product-
	CRCW060322K6FKEA CRCW0603115KFKEA	Vishay		Res, SMD, 22.6k, ±1%, 0603, 0.1W Res, SMD, 115k, ±1%, 0603, 0.1W	https://www.digikey .com/product- detail/en/vishay- dale/CRCW0603115 KFKEA/541-115KHCT- ND/1180044
R23, R55	CRCW060328K0FKEAHP	Vishay	2		https://www.digikey .com/product- detail/en/vishay- dale/CRCW060328K 0FKEAHP/541- 28.0KSCT- ND/2826000 https://www.digikey .com/product- detail/en/vishay-
	CRCW06035K60FKEA CRCW0603200KFKEAC	Vishay		Res, SMD, 5.6k, ±1%, 0603, 0.1W	dale/CRCW06035K6 0FKEA/541-5.60KHCT ND/1179894 https://www.digikey .com/product- detail/en/vishay- dale/CRCW0603200 KFKEAC/541-4027-1- ND/7928710 https://www.digikey
R26	CRCW060320K0FKEC	Vishay	1		.com/product-detail/en/vishay-dale/CRCW060320K 0FKEC/541-2993-1-ND/6073636 https://www.digikey.com/product-detail/en/vishay-dale/CRCW06038K0 6FKEA/541-8.06KHCT
	CRCW06038K06FKEA CRCW060311K3FKEA	Vishay		Res, SMD, 8.06k, ±1%, 0603, 0.1W	https://www.digikey .com/product- detail/en/vishay- dale/CRCW060311K 3FKEA/541-11.3KHCT
	CRCW0603100KFKEA CRCW06031K30FKEA	Vishay			detail/en/vishay-dale/CRCW0603100 KFKEA/541-100KHCT-ND/1180038 https://www.digikey.com/product-detail/en/vishay-dale/CRCW06031K3 0FKEA/541-1.30KHCT
	CRCW06031R00FKEAC	Vishay			https://www.digikey .com/product- detail/en/vishay- dale/CRCW06031R0 0FKEAC/541-3956-1- ND/7928639 https://www.digikey .com/product- detail/en/vishay- dale/CRCW0603549
	CRCW0603549RFKEA CRCW060321K0FKEA	Vishay		Res, SMD, 549, ±1%, 0603, 0.1W	RFKEA/541-549HCT-ND/1179779 https://www.digikey.com/product-detail/en/vishay-dale/CRCW060321K 0FKEA/541-21.0KHCT ND/1179958 https://www.digikey
R34, R37, R38, R48, R59, R60, R61, R62, R65, R66, R76, R83, R89, R91, R93, R95, R96, R105	CRCW060310K0JNEAC	Vishay	18	Res, SMD, 10k, ±5%, 0603, 0.1W	.com/product-detail/en/vishay-dale/CRCW060310K 0JNEAC/541-3957-1-ND/7928640 https://www.digikey .com/product-detail/en/vishay-dale/CRCW06033K0 1FKEA/541-3.01KHCT
	CRCW06033K01FKEA CRCW060332K4FKEA	Vishay		Res, SMD, 3.01k, ±1%, 0603, 0.1W Res, SMD, 32.4k, ±1%, 0603, 0.1W	ND/1179862 https://www.digikey .com/product- detail/en/vishay- dale/CRCW060332K 4FKEA/541-32.4KHCT
	CRCW0603124KFKEA	Vishay		Res, SMD, 124k, ±1%, 0603, 0.1W	detail/en/vishay-dale/CRCW0603124 KFKEA/541-124KHCT-ND/1180048 https://www.digikey.com/product-detail/en/vishay-dale/CRCW060353K
	CRCW060353K6FKEA CRCW060397K6FKEA	Vishay		Res, SMD, 53.6k, ±1%, 0603, 0.1W Res, SMD, 97.6k, ±1%, 0603, 0.1W	https://www.digikey .com/product- detail/en/vishay- dale/CRCW060397K 6FKEA/541-97.6KHCT ND/1180037 https://www.digikey
	CRCW060311K5FKEA CRCW06034K99FKEAC	Vishay		Res, SMD, 11.5k, ±1%, 0603, 0.1W Res, SMD, 4.99k, ±1%, 0603, 0.1W	https://www.digikey .com/product- detail/en/vishay- dale/CRCW06034K9 9FKEAC/541-3985-1-
	CRCW0603110KFKEA	Vishay			https://www.digikey .com/product- detail/en/vishay- dale/CRCW0603110 KFKEA/541-110KHCT- ND/1180042 https://www.digikey .com/product- detail/en/vishay-
	CRCW060335K7FKEA CRCW060333K2FKEAC	Vishay Vishay		Res, SMD, 35.7k, ±1%, 0603, 0.1W Res, SMD, 33.2k, ±1%, 0603, 0.1W	dale/CRCW060335K 7FKEA/541-35.7KHCT ND/1179985 https://www.digikey .com/product- detail/en/vishay- dale/CRCW060333K 2FKEAC/541-4052-1- ND/7928735 https://www.digikey
R54	B57401V2472J062	TDK		NTC resistor, 4k7, ±5%, 0805, 3650K, -55+125°C	.com/product-detail/en/tdk-electronics-inc/B57401V2472J06 2/495-7444-1-ND/6073136 https://www.digikey.com/product-detail/en/vishay-dale/CRCW0603330 RFKEAC/541-4026-1-
	CRCW0603330RFKEAC CRCW08055K10FKEA	Vishay		Res, SMD, 330, ±1%, 0603, 0.1W Resistor film, 5.1k, ±1%, 0805,	https://www.digikey .com/product- detail/en/vishay- dale/CRCW08055K1 0FKEA/541-5.10KCCT- ND/1180863 https://www.digikey
R64, R67, R68, R69, R70, R72, R99,	CRCW06038K45FKEA	Vishay		Res, SMD, 8.45k, ±1%, 0603, 0.1W	.com/product-detail/en/vishay-dale/CRCW06038K4 5FKEA/541-8.45KHCT ND/1179916 https://www.digikey .com/product-detail/en/vishay-dale/CRCW060322R 0JNEA/541-22GCT-
R100, R102, R103	CRCW060322R0JNEA CRCW0805120RJNEA	Vishay		Resistor film, 120, ±5%, 0805,	ND/1179329 https://www.digikey .com/product- detail/en/vishay- dale/CRCW0805120 RJNEA/541-120ACT- ND/1180318 https://www.digikey .com/product- detail/en/te-
	FSM2JSMAATR 434123050816	TE Connectivity Würth Elektronik			detail/en/te- connectivity- alcoswitch- switches/FSM2JSMA ATR/450-1792-1- ND/3503931 https://www.digikey .com/product- detail/en/w-rth- elektronik/43412305 0816/732-7053-1- ND/5225501
	434123050816 SMAJ48A-13-F	Würth Elektronik Diodes Incorporated			ND/5225501 https://www.digikey .com/product- detail/en/diodes- incorporated/SMAJ4 8A-13-F/SMAJ48A- FDICT-ND/816024 https://www.digikey .com/product- detail/en/central- semiconductor-
	CMMR1U-02 TR	Central Semi.	2		corp/CMMR1U-02- TR-PBFREE/1514- CMMR1U- 02TRPBFREECT- ND/4807014 https://www.digikey .com/product- detail/en/w-rth- elektronik/150060RS 75000/732-4978-1-
	150060RS75000 BZT52C12T-7	Wurth Diodes Incorporated		LED GREEN, 0603 Zener diode, 12V, 300mW, SOD-523	ND/4489899 https://www.digikey .com/product- detail/en/diodes- incorporated/BZT52 C12T-7/BZT52C12T- 7DICT-ND/2181075 https://www.digikey .com/product- detail/en/diodes-
	SMAT70A-13-F SMAJ24A-13-F	Diodes Incorporated Diodes Incorporated		TVS DIODE UNI, 70V, 400W, SMA	incorporated/SMAT7 0A-13-F/SMAT70A- FDICT-ND/804910 https://www.digikey .com/product- detail/en/diodes- incorporated/SMAJ2 4A-13-F/SMAJ24A- FDICT-ND/724994 https://www.digikey .com/product-
VD8, VD11, VD16	150060VS75000	Wurth	3	LED GREEN, 0603	detail/en/wurth- electronics- inc/150060VS75000/ 732-4980-1- ND/4489904 https://www.digikey .com/product- detail/en/vishay- semiconductor-
VD9 VD10, VD13	MBR0580S1-7 150060BS75000	Vishay Wurth			diodes-division/VS- 10MQ100NTRPBF/10 MQ100NPBFCT- ND/812503 https://www.digikey .com/product- detail/en/wurth- electronics- inc/150060BS75000/ 732-4966-1- ND/4489893
	150060BS75000 ESDCAN06-2BLY	STMicroelectronics		TVS diode, 24V, 230W peak, 3A,	https://www.digikey .com/product- detail/en/stmicroele ctronics/ESDCAN06- 2BLY/497-19090-1- ND/10057130 https://www.digikey .com/product- detail/en/wurth- electronics-
	150060YS75000 USBLC6-2SC6	Wurth ST Microelectronics		LED, 0603 TVS USB ESD, 5V, SOT23-6L	electronics- inc/150060YS75000/ 732-4981-1- ND/4489907 https://www.digikey .com/product- detail/en/stmicroele ctronics/USBLC6- 2SC6/497-5235-1- ND/1121688 https://www.digikey
VT1, VT2, VT3, VT4	BSC110N15NS5	Infineon Technologies	4	MOSFET N-ch, 150V, PG-TDSON-8	.com/product-detail/en/infineon-technologies/BSC11 0N15NS5ATMA1/BSC 110N15NS5ATMA1TR ND/5959916 https://www.digikey .com/product-detail/en/diodes-
	MMBT3904-7-F FDMS86101	Diodes Inc. ON Semiconductor	3	NPN transistor, 40V, 200mA, SOT- 23 MOSFET N-ch, 100V, 12A, 8- PowerTDFN	incorporated/MMBT 3904-7-F/MMBT3904- FDICT-ND/815727 https://www.digikey .com/product- detail/en/on- semiconductor/FDM S86101/FDMS86101 CT-ND/2060386 https://www.digikey
	5000 5001	Keystone Keystone		#NAME? #NAME?	.com/product- detail/en/keystone- electronics/5000/36- 5000-ND/255326 https://www.digikey .com/product- detail/en/keystone- electronics/5001/36- 5001-ND/255327 https://www.digikey .com/product-
	IDC-20M 3220-20-0300-00	On Shore Technology Inc. CNC Tech			
ХР9	ZX62R-B-5P(30)	Hirose Electric	1	USB micro B Connector, 2pin, 9.53mm, 300VAC,	https://www.digikey .com/product- detail/en/hirose- electric-co-ltd/ZX62R B-5P(30)/H125274CT- ND/5994760 https://www.digikey .com/products/en?k eywords=6PCV-02-
XT1, XT2, XT4	6PCV-02-006 1725669	TE Connectivity Phoenix Contact	3	Connector, 2pin, 9.53mm, 300VAC, 25A TERM CONN., 3pin, 2.54mm	eywords=6PCV-02- 006 https://www.digikey .com/product- detail/en/phoenix- contact/1725669/27 7-1274-ND/267463 https://www.digikey