

Broadband Radio with Filter Version 4 - 22.0206 - Bill of Materials - February 09, 2022

Qty	Desig	Value	Package	Mfr	Mfr #	Digikey/Mouser
1	ANT1	L_Ferrite	60mmx10mm Rod			
1	C2	330pF 50V X7R ±10%	0603	Samsung	CL10B331KB8NNNC	1276-1787-1-ND
1	C5	330nF 6.3V X5R ±20%	0402	Samsung	CL05A334MQ5NNNC	1276-1474-1-ND
6	C6,C7,C11-C13,C15	0.1µF 16V X7R ±10%	0603	Yageo	311-1088-1-ND	311-1088-1-ND
2	C1,C3	10nF 50V C0G/NP0 ±5%	0805	Kemet	C0805C103J5GAC7800	399-C0805C103J5GAC7800CT-ND
4	C16,C17,C38,C39	10nF 16V X5R ±10%	0603	Kyocera	0603YD103KAT2A	478-0603YD103KAT2ACT-ND
2	C20,C36	180pF 50V C0G/NP0 ±10%	0603	Vishay	VJ0603D181KXAAJ	20-1328-1-ND
4	C8,C9,C21,C37	82pF 50V C0G/NP0 ±1%	0603	Kemet	CBR06C820F5GAC	399-16259-1-ND
2	C23,C31	1.1nF 50V C0G/NP0 ±5%	0805	Kemet	C0805C112J5GAC7800	399-14552-1-ND
2	C24,C32	560pF 100V C0G/NP0 ±10%	0805	Vishay	VJ0805D561KXBAJ	720-1354-1-ND
2	C25,C33	300pF 50V C0G/NP0 ±10%	0603	Vishay	VJ0603D301KXAAJ	720-1332-1-ND
1	C26	510pF 50V C0G/NP0 ±5%	0603	Kemet	C0603C511J5GAC7867	399-C0603C511J5GAC7867CT-ND
1	C27	200pF 250V C0G/NP0 ±10%	0805	Vishay	VJ0805D201KXPAJ	720-1346-1-ND
1	C28	100pF 25V C0G/NP0 ±1%	0402	Kemet	CBR04C101F3GAC	399-11246-1-ND
1	C29	47pF 50V C0G/NP0 ±5%	0402	Kemet	C0402C470J5GAC7867	399-C0402C470J5GAC7867CT-ND
2	C22,C30	2.0nF 50V C0G/NP0 ±5%	0805	Kemet	C0805C202J5GAC7800	399-15025-1-ND
2	C18,C34	820pF 16V C0G/NP0 ±5%	0805	Vishay	VJ0805D821JXJQJHT	720-VJ0805D821JXJQJHTCT-ND
2	C19,C35	360pF 50V C0G/NP0 ±2%	0603	Kemet	C0603C361G5GAC7867	399-14514-1-ND
1	C41	100nF 10V X5R ±10%	0402	Samsung	CL05A104KP5NNNC	1276-1022-1-ND
2	C10	100nF 16V X7R ±10%	0603	Yageo	CC0603KRX7R7BB104	311-1088-1-ND
2	C42,C43	47nF 50V X5R ±5%	0603	Samsung	CL10B473JB8NNNC	1276-2070-1-ND
2	C44,C45	1µF ±10% 10V X5R	0603	Samsung	CL10A105KP8NNNC	1276-1182-1-ND
1	C4	10µF 10V X5R ±10%	1206	Samsung	CL31A106KPHNNNE	1276-1148-1-ND
4	C46,C47,C54	10µF 10V X5R ±10%	0603	Samsung	CL10A106KP8NNNC	1276-1192-1-ND
2	C48,C49	22nF	0603	Kyocera	0603ZC223KAT2A	478-12753-1-ND
4	C50-C53	4.7µF ±10% 10V X5R	0603	Samsung	CL10A475KP8NNNC	1276-1044-1-ND
1	D1	TVS Diode Pair	SOT-23	Diodes Inc	DRTR5V0U1SO-7	DRTR5V0U1SO-7DICT-ND
1	FL1	10.7MHz Ceramic Filter	6 Pin 3.45x3.1mm P1.28mm	Murata	SFECF10M7DF00-R0	81-SFECF10M7DF00-R0
1	J1,J4,J5	Coax Conn	SMA Vertical	Amphenol	132134-10	ARF2755-ND
1	J6	Conn_02x06_Odd_Even	2x09 P2.54mm Vertical	Sullins	PBC09DAAN	S2011E-09-ND
1	J8	Conn_02x09_Odd_Even	2x06 P2.54mm Vertical	Sullins	PBC06DAAN	S2011E-06-ND
1	L1	620nH 300mA 1.4Ω	2520	Abrakon	AISC-1008-R62G	535-13025-1-ND
1	L2	500nH RF Choke	3.81x3.81mm	Mini Circuits	TCCH-80+	139-TCCH-80
2	L7,L23	680nH ±5% 2.36Ω	0805	Coilcraft	0805HP-681XJRC	994-0805HP-681XJRC
2	L10,L18	360nH ±2% 4Ω	0603	Coilcraft	0603HP-R36XGLW	994-0603HP-R36XGLW
2	L11,L19	150nH ±2% 288mΩ	0805	Coilcraft	0805HP-151XGRC	994-0805HP-151XGRC

1 L12	6.8μH (40 Turns 30AWG)	T30-2	Amidon		Kitsandparts.com
1 L13	3.9μH (38 Turns 30AWG)	T25-6	Amidon		Kitsandparts.com
1 L14	2.0μH (27 Turns 30AWG)	T25-6	Amidon		Kitsandparts.com
3 L6,L15,L22	1.1μH (20 Turns 30AWG)	T25-6	Amidon		Kitsandparts.com
2 L8,L16	1.8μH ±2% 2.6Ω	2520	Murata	LQW2UAS1R8G0CL	81-LQW2UAS1R8G0CL
2 L9,L17	750nH ±5% 1.54Ω	2520	Coilcraft	1008CS-751XJLC	994-1008CS-751XJLC
2 L4,L20	4.3μH (32 Turns 30AWG)	T30-2	Amidon		Kitsandparts.com
2 L5,L21	2.2μH (29 Turns 30AWG)	T25-6	Amidon		Kitsandparts.com
1 R1	150Ω ± 1% 0.1W	0603	Yageo	RC0603FR-07150RL	311-150HRCT-ND
2 R2,R3	51.1Ω	0603	Yageo	RC0603FR-0751R1L	311-51.10HRCT-ND
2 R4,R5	2.21k ± 0.5% 0.1W	0603	Yageo	RT0603DRE072K21L	311-2513-1-ND
2 R6,R24	1kΩ	0603	Yageo	RT0603DRE072K21L	311-1.00KHRCT-ND
9 R7-R9,R16-R21	2.0kΩ ± 1% 0.1W	0603	Yageo	RC0603FR-072KL	311-2.00KHRCT-ND
4 R11-R14	4.7kΩ ± 1% 0.1W	0603	Yageo	RC0603FR-074K7L	311-4.70KHRCT-ND
2 R10	10kΩ ± 1% 0.0625W	0402	Yageo	RC0402FR-0710KL	311-10.0KLRCT-ND
2 R15	10kΩ ± 1% 0.1W	0603	Yageo	RC0603FR-0710KL	311-10.0KHRCT-ND
2 R22,R23	100kΩ ± 1% 0.1W	0603	Yageo	RC0603FR-07100KL	311-100KHRCT-ND
2 S2,S3	2 Piece RF Shield	29.36x18.50mm	Laird	BMI-S-209-F	903-1212-1-ND
1 SH1	2 Piece RF Shield	26.21x26.21mm	Laird	BMI-S-203-F	903-1052-1-ND
1 T1	4Turns Trifilar 2:1 (30AWG)	7x1.7mm	Amidon	BN-43-2402	Kitsandparts.com
1 U1	PGA-103	SOT-89-3	Mini Circuits	PGA-103+	139-PGA-103+
1 U2	RF Attenuator	QFN-20-1EP_4x4mm_P0.5mm	Peregrine	PE4312C-Z	81-PE4312C-Z
1 U3	Mixer Down Conv	PLCC-20	Analog Dev	AD831APZ	505-AD831APZ-ND
1 U4	Inverter	SOT-23-5	TI	74LVC1G14DBVR	296-11607-1-ND
4 U5-U8	Analog Switch 2x4xSPST	TSSOP-16 4.4x5x0.65mm	TI	SN74CBT3253CPWR	296-19207-1-ND
1 U9	SI5351A-B-GT	MSOP-10_3x3mm_P0.5mm	Skyworks	SI5351A-B-GTR	634-SI5351A-B-GTR
2 U10,U11	SI4735-D60-GU	SSOP24 3.9x8.7mm_P0.65mm	Skyworks	SI4735-D60-GU	336-2140-ND
U12	i2c I/O Expander	SSOP20 5.3x7.2mm_P0.65mm	Microchip	MCP23008-ESS	MCP23008-ESS-ND
1 U13	Dual Inverter	SOT23-6	TI	74LVC2G04DBVR	296-13261-1-ND
1 U14	RF Switch SPDT	SOT23-6	Analog Dev	HMC221BETR	505-HMC221BETRCT-ND
1 Y1	25MHz 10ppm	4Pin_3.2x2.5mm	Abracon	ABM8G-25.000MHZ-18-D2Y-T	535-10275-1-ND