

# Radioberry-preamp beta1 BOM

Assembly Build - December 20, 2020

Line	Description	Part Number	Sub OK	Designators	Footprint	Pins	Quantity
14236	10uF 1206 $\geq$ X5R $\geq$ 25V $\leq$ 20%	<a href="#">CL31A106KAHNNNE</a>	Y	C101,C102,C110,C113	1206	2	4
2131	4.7uF 0805 $\geq$ X5R $\geq$ 25V $\leq$ 20%	<a href="#">GRM21BR61E475KA12L</a>	Y	C103	0805	2	1
55004	4.7nF 0603 $\geq$ X5R $\geq$ 25V $\leq$ 20%	<a href="#">CL10B472KB8NNNC</a>	Y	C104,C203,C207	0603	2	3
46786	22uF 0805 $\geq$ X5R $\geq$ 16V $\leq$ 20%	<a href="#">CL21A226MOCLRNC</a>	Y	C105,C106,C107,C108, C109,C305	0805	2	6
29074	1uF 0805 $\geq$ X5R $\geq$ 25V $\leq$ 20%	<a href="#">CL21B105KAFNNNE</a>	Y	C111,C306,C307,C308, C309	0805	2	5
15331	0.1uF 0603 $\geq$ X5R $\geq$ 50V $\leq$ 20%	<a href="#">C0603C104M5RACTU</a>	Y	C112,C114,C117	0603	2	3
1940	1nF 0603 $\geq$ X5R $\geq$ 50V $\leq$ 20%	<a href="#">C0603C102M5RACTU</a>	Y	C115,C123	0603	2	2
58143	10nF 0603 $\geq$ X5R $\geq$ 50V $\leq$ 20%	<a href="#">C0603C103M5RACTU</a>	Y	C116	0603	2	1
	100uF 1206 $\geq$ X5R $\geq$ 6.3V $\leq$ 20%	<a href="#">GRM31CR60J107ME39K</a>	Y	C118	1206	2	1
	10pF 0805NP0 $\geq$ 50V $\leq$ 5%	<a href="#">CC0805JRNPO9BN100</a>	Y	C119,C121	0805	2	2
	100pF 0603NP0 $\geq$ 50V $\leq$ 5%	<a href="#">CC0603JRNPO0BN101</a>	N	C120,C122	0603	2	2
15331	0.1uF 0603 $\geq$ X5R $\geq$ 50V $\leq$ 20%	<a href="#">C0603C104M5RACTU</a>	Y	C202,C206,C209,C303, C304,C311,C313,C314, C315,C316,C317,C318, C319,C321,C322	0603	2	15
16531	1uF 0603 $\geq$ X5R $\geq$ 6.3V $\leq$ 20%	<a href="#">GRM188R61E105KA12D</a>	Y	C204,C205,C210,C211	0603	2	4
2142	100pF 0805NP0 $\geq$ 50V $\leq$ 5%	<a href="#">CC0805JRNPO0BN101</a>	N	C310	0805	2	1
	390pF 0805NP0 $\geq$ 50V $\leq$ 5%	<a href="#">CC0805JRNPO0BN391</a>	Y	C312	0805	2	1
	Power	<a href="#">PJ-102AH</a>	Y	CN101	Custom	3	1
	TVS Diode	<a href="#">SMBJ18CA</a>	N	D101	DO-214AA (SMB)	2	1
	2x5 M 0.1in	<a href="#">67997-410HLF</a>	Y	DB203	Custom	10	1
	FUSE PTC 3.0A 24V	<a href="#">MF-LSMF300/24X-2</a>	N	F101	2920 7.36x5.12mm	2	1
	FB 0603 $\geq$ 600R@100MHz $\leq$ 200mOhm@DC 1A $\leq$ 25%	<a href="#">MPZ1608S601ATA00</a>	Y	FB101,FB102,FB201	0603	2	3
	IC REG LINEAR 3.3V 800MA	<a href="#">LD1117S33TR</a>	Y	IC101	SOT223	4	1
21903	0Ohm 0603 $\leq$ 5% $\geq$ 1/10W	<a href="#">RC0603JR-070RL</a>	Y	J201,J202,J203,J205, J207,J301,J302	0603	2	7
	20 Positions Header Connector (2.54mm)	<a href="#">76342-310LF</a>	Y	JP201	2x10	20	1
	Relay	<a href="#">EC2-3NU</a>	Y	K301	Custom	10	1
	3.3uH $\geq$ 2.4A	<a href="#">SRR4528A-3R3Y</a>	N	L101	5x5mm	2	1
	MOSFET P-CH 30V	<a href="#">DMP3099L-7</a>	N	Q101	SOT-23-3	3	1

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	Thermal Sensor	MCP9700T-E/TT	N	Q201	SOT-23-3	3	1
	Inductive Load Driver	NUD3124LT1G	N	Q202,Q203	SOT-23-3	3	2
	RF LDMOS	AFT05MS003NT1	N	Q301,Q302	SOT-89-3	3	2
	16.2K 0603 $\leq 1\% \geq 1/10W$	RC0603FR-0716K2L	Y	R102	0603	2	1
	1.8K 0603 $\leq 1\% \geq 1/10W$	RC0603FR-071K8L	Y	R103	0603	2	1
	4.7K 0603 $\leq 5\% \geq 1/10W$	RC0603FR-074K7L	Y	R104	0603	2	1
4597	2.2K 0603 $\leq 5\% \geq 1/10W$	RC0603FR-072K2L	Y	R201,R202,R217,R218	0603	2	4
23502	100 0603 $\leq 1\% \geq 1/10W$	RC0603FR-07100RL	Y	R204,R207,R220,R221	0603	2	4
23693	270 0603 $\leq 5\% \geq 1/10W$	RC0603FR-07270RL	Y	R205,R304,R311	0603	2	3
21904	1K 0603 $\leq 5\% \geq 1/10W$	RC0603FR-071KL	Y	R206	0603	2	1
23694	27K 0603 $\leq 1\% \geq 1/10W$	RC0603FR-0727KL	Y	R210,R211	0603	2	2
23987	9.1K 0603 $\leq 1\% \geq 1/10W$	RC0603FR-079K1L	Y	R212,R213	0603	2	2
23889	4.7K 0603 $\leq 5\% \geq 1/10W$	RC0603FR-074K7L	Y	R216,R219	0603	2	2
	0.04 1206 $\leq 1\% \geq 1/4W$	RL1206FR-070R04L	Y	R303	1206	2	1
	12 0805 $\leq 5\% \geq 1/8W$	RC0805FR-0712RL	Y	R306,R312	0805	2	2
	5.9 0805 $\leq 0.1\% \geq 1/8W$	RMCF0805FT5R90	Y	R307	0805	2	1
	866 0805 $\leq 0.1\% \geq 1/8W$	RP73PF2A866RBTFD	Y	R309,R310	0805	2	2
	SMA Straight	5-1814832-1	Y	RF301,RF302,RF303	Custom	5	3
	4:1 RF Transformer	B62152A4X30	Y	T301	Custom	4	1
	1:1 RF Transformer	MABAES0060	N	T302	SM-22-5 3.81x3.81mm	5	1
	Switching Regulator	ST1S10PHR	N	U101	8-SOIC (3.90mm) EP	8	1
	LDO 10V 150mA	LP2985-10DBVR	N	U102	SOT-23-5	5	1
	Slow ADC	MAX11613EUA	N	U201	8-MSOP (3.00mm)	8	1
	Digital Rheostat 5K	MCP4662-502E/UN	N	U202	10-MSOP (3.00mm)	10	1
	Current Sense AMP	INA199A1DC	N	U301	SC-70-6	6	1
	21cm PFTE silver plated 24to30AWG wire	400R0111-24-9	N	W301	Custom	0	1

**Line Items:** SMT:45 Assembled TH:5

**Parts:** SMT:104 Assembled TH:5

**Pins:** SMT:246 Assembled TH:43

**Do Not Assemble:** C201 C208 C301 C302 C320 C323 DB201 DB202 J204 J206 R101 R203 R208 R209 R214 R215 R301 R302 R305 R308