

24-23cm. RF Power Amplifier

Qty	Value	Device	Part ID	Source	Part No. or Vendor ID
Resistors					
3	0R	RESISTOR 0603	R2,R19,R30	Digikey	311-0.0GRCT-ND
3	68R	RESISTOR 1206	R7,R8,R9	Digikey	311-120FRCT-ND
1	330R	RESISTOR Variable 2.2mm	R6	Digikey	490-3918-1-ND
1	470R	RESISTOR 0805	R4,R5	Digikey	311-470CRCT-ND
1	1k10	RESISTOR 0805	R15	Digikey	311-1.10KCRCT-ND
1	2k4	RESISTOR 0603	R21	Digikey	311-2.40KCRCT-ND
2	2k4	RESISTOR 0805	R26,R27	Digikey	311-2.40KCRCT-ND
1	3k09	RESISTOR 0805	R13	Digikey	311-3.09KCRCT-ND
1	4k7	RESISTOR 0603	R22	Digikey	311-4.70KCRCT-ND
1	4k7	RESISTOR 0805	R18	Digikey	311-4.70KCRCT-ND
1	5k60	RESISTOR 0805	R16	Digikey	311-5.60KCRCT-ND
1	9k76	RESISTOR 0805	R12	Digikey	311-9.76KCRCT-ND
1	10k	RESISTOR 0603	R20	Digikey	311-10.0KCRCT-ND
2	10k	RESISTOR 0805	R24,R25	Digikey	311-10.0KCRCT-ND
1	12k4	RESISTOR 0805	R14	Digikey	311-12.4KCRCT-ND
1	39k	RESISTOR 1206	R28	Digikey	311-39.0KCRCT-ND
1	68k	RESISTOR 0805	R23	Digikey	311-68.0KCRCT-ND
1	82k	RESISTOR 0805	R29	Digikey	311-82.0KCRCT-ND
1	100k	RESISTOR 0805	R10	Digikey	311-100KCRCT-ND
1	220k	RESISTOR 0805	R11,R17	Digikey	311-220KCRCT-ND
0	1M00	RESISTOR 0603 input attenuator - not installed	R1,R3	Digikey	
Capacitors					
2	68pF	CAP_NONPOLARIZED 0603	C1,C18	Digikey	712-1362-1-ND
1	82pF	CAP_NONPOLARIZED 0603	C11	Digikey	712-1367-1-ND
2	100pF	CAP_NONPOLARIZED 0603	C4,C5	Digikey	445-1281-1-ND
5	1nF	CAP_NONPOLARIZED 0603	C10,C16,C17,C22,C23	Digikey	490-1494-1-ND
2	4.7nF	CAP_NONPOLARIZED 0603	C3,C6	Digikey	490-1506-1-ND
2	0.1uF	CAP_NONPOLARIZED 0603	C12,C19	Digikey	490-1524-1-ND
1	1.0uF16V	CAP_NONPOLARIZED 0603	C9	Digikey	587-1251-1-ND
4	10uF16V	CAP_NONPOLARIZED 0805	C13,C14,C20,C21	Digikey	587-1295-1-ND
3	10uF25V	CAP_NONPOLARIZED 0805	C7,C8,C15	Digikey	490-5523-1-ND
1	22uF6.3V	CAP_NONPOLARIZED 0805	C2	Digikey	587-1958-1-ND
Inductors					
1	33nH	RF inductor 0603 EPCOS	L1	Digikey	495-1836-1-ND
Diodes & Transistors					
2	BAV16WS	SiDiode SOD323 also 1N4148WS	D1,D2	eBay	POLIDA ELECTRICAL(H.K)LIMITED
1	L0L29k Or	Smart LED Orange 0603	D3	Digikey	475-2740-1-ND
1	L0L29k Grn	Smart LED Green 0603	D4	Digikey	475-2709-1-ND
1	MMBZ5232B	5.6V Zener SOT23	D5	eBay	HoneyComps
1	HSMS-286C	Dual Schottky detector SOT323	D6	Digikey	516-1937-ND
1	1N4004	SiDiode SMA	D7	eBay	ICMarket2009
1	MBR120	Schottky diode SOD123	D8	eBay	RF Basic Store
2	BZX84C6V8LT1	6.8V Zener SOT23	D9,D10	eBay	RF Basic Store
2	IRLML9303	PCH MOSFET SOT23	Q1,Q2	Digikey	IRLML9303TRPBFCT-ND
1	BC857	PNP SOT23	Q3	eBay	Zeus Electronics
2	2N7002	NCH MOSFET SOT23	Q4,Q5	eBay	ji_parts store
IC's					
1	1117ADJ	LDO REG SOT223	U1	eBay	Ele-parts
1	SXA-389BZ	wide band RF amp SOT-89	U2	eBay	ibmtrading
1	RA18H1213G	RF power amp 1.3GHz 5 pin brick	U3	eBay	UTSOURCE STORE
1	LM56	Thermostat SO-8	U4	Digikey	LM56CIMX/NOPBCT-ND
Connectors					
1	SMA Female	PCB Mount SMA Female Jack nut bulkhead right angle	J1	eBay	Yu-Tong Electronic
1	SMA Female	SMA Female Straight RF Solder Receptacle Connector	J2	eBay	RONG6112
1	PowerPole	Shell & 2 30A pins		eBay	ceramicracer
1	1x5 2mm	JST PH series 2 mm PTT, Pwr, RFDemod	P4	eBay	LittleRcMart
2	1x2 2mm	JST PH series 2 mm Swln & Fan	P5,P6	eBay	HobbyMart Shop
1	1X3 2mm	JST PH series 2 mm OT & Tx LEDs	P7	eBay	HobbyMart Shop
7 Connectors					
Hardware					
4	6-32	3/8" flat head screws nuts and washers (3mm)	Feet	Ottawa Fastner Supply	
4	4-40	1/4" panhead screws	PCB-heatsink	Ottawa Fastner Supply	
2	4-40	3/8" pan head screws	1590Y-heatsink	Ottawa Fastner Supply	
2	4-40	3/8" flat head screws	1590Y-heatsink	Ottawa Fastner Supply	
2	4-40	1" flat head screws	relay onto side of 1590Y	Ottawa Fastner Supply	
1	4-40	3/8" pan head screws	1590Y chassis near LEDs		
3	4-40	nuts		Ottawa Fastner Supply	
13	4-40	outside tooth lock washers	all	Ottawa Fastner Supply	
1	4-40	ground lug	1590Y chassis near LEDs		
2	2-56	3/16" pan head screws	PCB-heatsink	Schooner	
2	2-56	outside tooth lock washers	PCB-heatsink	Schooner	
1	2-56	1/2" pan head screw	Powerpole-heatsink	Schooner	
2	2-56	flat washers	Powerpole-heatsink	Schooner	
2	standoffs	1/8" for 4:40 or 3mm unthreaded or washers	relay onto side of 1590Y		
1	PCB	84x27 mm 2 layer plate through holes		iteadstudio	
Enclosure & I/O Connectors					
1	Enclosure	Hammond 92x92x42mm 1590Y		Digikey	HM955-ND
1	Rx Out SMA	SMA female with nut to SMA male pigtail cable	relay to Rx out	eBay	rfsuppliers - order 10cm length
1	Tx Out 'N'	N female bulkhead to SMA male pigtail cable	relay to Antenna	eBay	rfsuppliers - order 10cm length
1	PA out SMA	SMA Male to SMA Male pigtail cable RG316 /RG174 / RG	relay to PA RF out	eBay	rfsuppliers - order 10cm length
1	I/O Signalling	6 pin mini-DIN female chassis mount	J100	Digikey	CP-2860-ND from CUI
1	OT LED	5mm Ultra Bright Red LED	D100	eBay	Satistronics
1	TX LED	5mm Ultra Bright Orange/Amber LED	D101	eBay	Satistronics
1	Pwr LED	5mm Ultra Bright Green LED	D102	eBay	Satistronics
4	Feet	SQ08 Rubber Feet 15mm Dia x10mm h+ hardware		eBay	sunetec
1	Thermal gap filler	Tgrease 800 30cc jar		Digikey	926-1007-ND
1	Heatsink	min 100x100x30h - thick base preferred	user supplied		no pricing
1	SMA coax relay	with sense contacts	user supplied		no pricing
1	Fan	90 mm fan	user supplied		no pricing
1	Fan guard	for 90 mm fan	user supplied		no pricing
1	6 pin mini-DIN	Male mini-DIN cable (PC keyboard cables work well)	user supplied		no pricing
2	16 ga wire	5mm red and black pcs insulated for Powerpole con	user supplied		no pricing