



modular rf

MODEL AR-20HC2
[AR-20H, CONFIGURATION 2]
20 WATTS CW/PEP
300-500 MHz

The Model AR-20HC2 is a portable, lightweight, RF booster. The AR-20HC2 produces 20 Watts from a nominal 1 Watts CW/PEP radio input and covers the frequency band of 300-500 MHz. The unit is designed for use with the FSK and other latest modern networking formats like ANW2C and SRW. It also includes Voltage Spike Suppression, Over Temperature Protection, RF sensing T/R Switching, Harmonic Filters, Co-Site Filtering, lightning protection, and protection against antenna mismatch.

GENERAL SPECIFICATIONS

FREQUENCY RANGE	300-500 MHz
POWER OUTPUT PEP	>20 Watts typical CW or PEP AM Modulation 1 kHz DOM 70% (<10% distortion typical)
INPUT POWER RANGE	Nominal 0.75W - 3W CW or PEP for full 20W output. Up to 8W without damage <i>(see plot below for input vs. output power characteristics)</i>
RF KEYING SENSITIVITY	0.75 Watt CW (min)
T/R SWITCHOVER TIME	<25 μS typical
NOISE FIGURE	2.5 dB typical
LNA GAIN	10 dB typical
MODULATION	All Legacy and Modern complex tactical communications waveforms like FSK, ANW2C and SRW
DUTY CYCLE	50% typical at 55C
INPUT/OUTPUT IMPEDANCE	50 Ohm nominal
INPUT VSWR	1.5:1 nominal
HARMONICS	Better than -60 dBc typical
SPURIOUS OUTPUTS	Better than -70 dBc typical
POWER REQUIREMENT	9.5 to 36 VDC
CURRENT	<3.5A Amps @ 24V typical

ENVIRONMENTAL SPECIFICATIONS

OPERATING TEMPERATURE	-40 to +70 °C Ambient
ALTITUDE (operating)	20,000 ft
IMMERSION (water)	IP67
VIBRATION / SHOCK / HUMIDITY / ENVIRO	MIL-STD-810

MECHANICAL SPECIFICATIONS

SIZE (HxWxD)	1.86 x 3.75 x 8.78 inches (including connectors)
WEIGHT	2.6 lbs
COOLING	Natural convection required
RF CONNECTORS	RF - Radio – TNC RF - Antenna – BNC
DC CONNECTOR	Multi-pin connector (Mating Connector Supplied)
CONSTRUCTION	Aluminum housing with integral heatsink

OPTIONAL EQUIPMENT

Mounting Plate Kit	
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DOC-0000010 Rev D
13 NOVEMBER 2018

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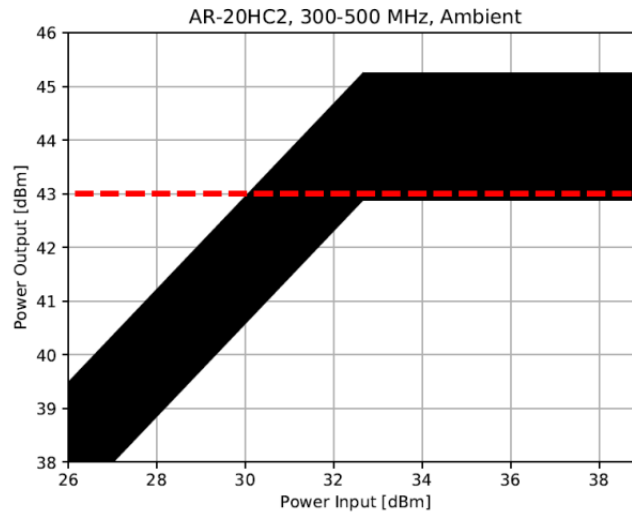
*Photo for illustration purposes only – actual connectors may vary (see specifications above)



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The following figure illustrates typical power output vs. power input under nominal conditions. The red line represents 20 Watts of output power.



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