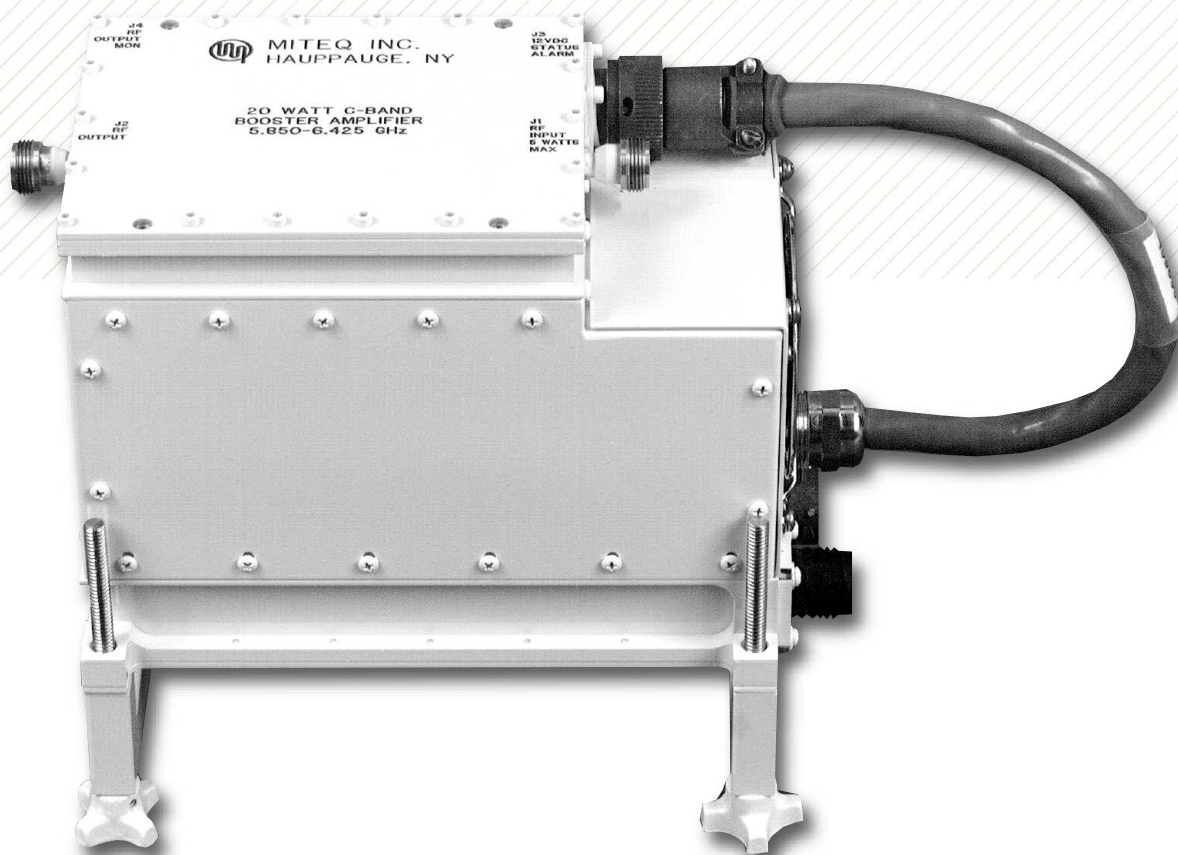


Solid State Booster Amplifiers

**20 Watt C-Band
Model BA-5864-20**



The Booster Amplifiers are Class A linear Solid State Power Amplifiers (SSPA) designed to mount on the output of an existing lower power transceiver. Mounts are provided for easy outdoor installation on a typical 1" x 2" or 2" x 4" antenna boom.

Features

- Over-temperature protection
- Temperature compensation
- Output RF DC detector
- Forced air cooling
- Field replaceable fans
- RF output monitor
- Mute control
- Amplifier current fault detection
- Weather resistant assembly
- Summary alarm
- CE compliant

Frequency (GHz)	Output Power at 1 dB Compression (Watts/dBm)	Model Number
5.850 – 6.425	10/40	BA-5864-10
5.850 – 6.425	20/43	BA-5864-20
5.850 – 6.425	25/43.98	BA-5864-25
5.850 – 6.425	30/40.77	BA-5864-30
5.850 – 6.425	35/45.44	BA-5864-35
13.75 – 14.5	8/39	BA-137145-8
13.75 – 14.5	16/42	BA-137145-16
14.0 – 14.5	8/39	BA-140145-8
14.0 – 14.5	16/42	BA-140145-16

Specifications

Nondamage power input	
Below 7 GHz	+37 dBm (5 W) maximum
Above 7 GHz	+36 dBm (4 W) maximum
Gain (at center band)	
8 Watt models	14 ±1 dB
10 Watt models	20 ±1 dB
16 Watt models	18 ±1 dB
20 Watt models	20 ±1 dB
25 Watt models	19 ±1 dB
30 Watt models	19 ±1 dB
35 Watt models	19 ±1 dB
Gain flatness	0.6 dB/40 MHz, 1.0 dB peak-to-peak/RF band
Gain slope	0.2 dB/10 MHz maximum
Gain stability	3.5 dB maximum/-40 to +55°C
Out-of-band gain (14.0–14.5 GHz models only)	0 dB maximum (12.8–13.28 GHz)
Third order intermodulation	With 2 carriers, each 6 dB below rated P1 dB, 25 dBc maximum
Spurious outputs	60 dBc maximum relative to rated P1 dB
Noise figure	20 dB maximum
Receive band output power density (10.95–12.75 GHz)	-160 dBm/Hz maximum with input terminated (14.0–14.5 GHz models only)
VSWR	
Input	1.3:1 dB maximum
Output	1.5:1 dB maximum
Input/output impedance	50 ohms
Output RF monitor	-40 dBc nominal
Output DC detector	2.0 V minimum at rated power
Mute	60 dB typical

Options

1. 48 VDC prime power.
 DC power input: 41–56 VDC
 Power consumption
 Model BA-5864-10: 110 W typical
 Model BA-5864-20, Model BA-137145-8, Model BA-140145-8: 140 W typical
 Model BA-137145-16, Model BA-140145-16: 230 W typical
 Connector: MS3112E12-3P (mating connector MS3116F12-3S supplied)
 Add /48 to model number
 Example: BA-5864-20 becomes BA-5864-20/48
2. Input connector.
 - A. CPR-229G (C-band models).
 - B. Type SMA female (Ku-band models).
3. Output connector.
 - A. CPR-229G (C-band models).
 - B. Type SMA female (Ku-band models).

Note: Missing option numbers are not applicable to this product.

General Specifications

Primary Power Requirements

Voltage	90–250 VAC
Frequency	47–63 Hz
Power factor	99% typical
Power consumption	
Model BA-5864-10	150 W typical
Model BA-5864-20, BA-137145-8, BA-140145-8	190 W typical
Model BA-5864-25	280 W typical
Model BA-5864-30	300 W typical
Model BA-137145-16, BA-140145-16	330 W typical
Model BA-5864-35	340 W typical

Summary Alarm

Contact closure/open for DC voltage and/or amplifier alarm

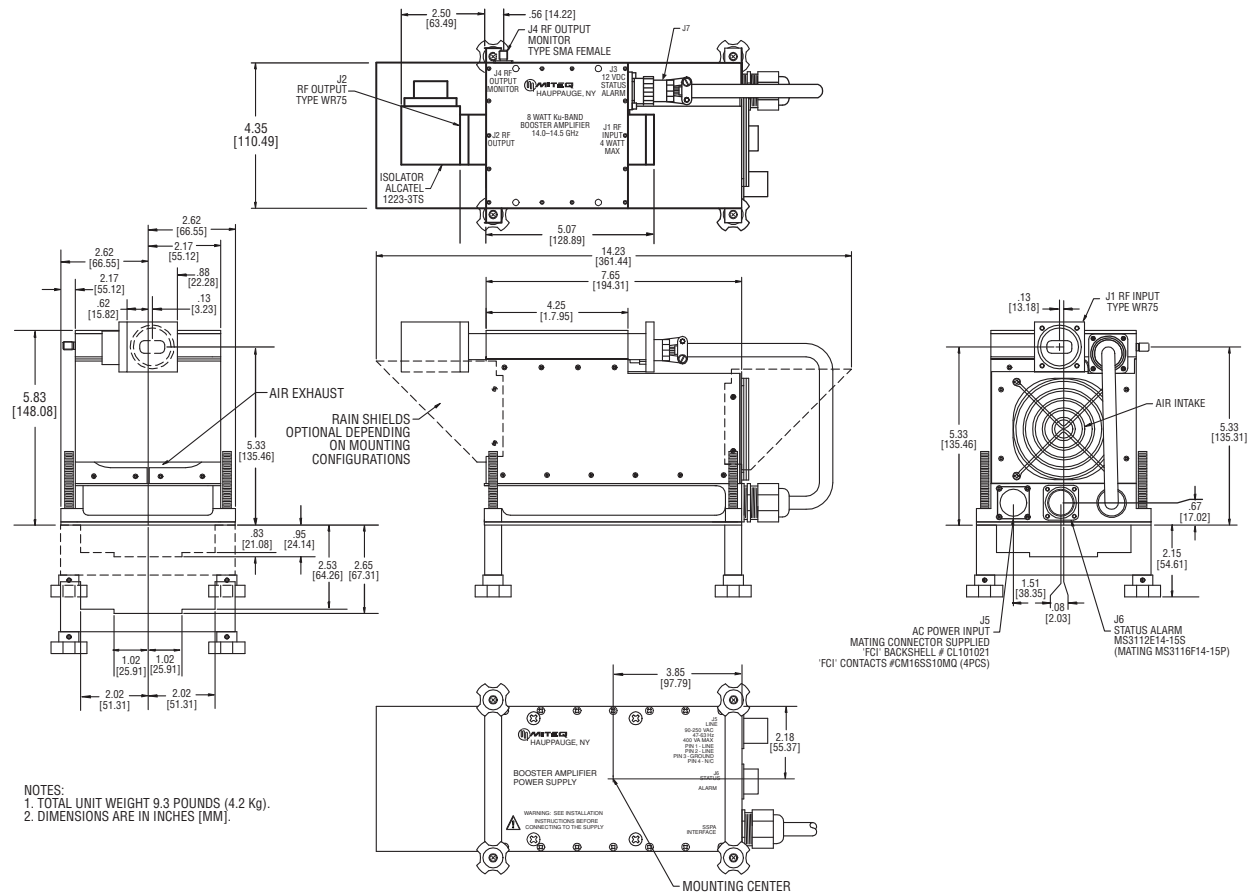
Physical

RF connector	
C-band	N female (CPR-229G optional)
Ku-band	WR-75 square plain with sealing groove (SMA female optional)
RF output monitor connector	
C-band	N female
Ku-band	SMA female
Power connector	FCI Clipper series CL1M1102 (mating connector supplied)
Summary alarm interface mating connector	MS3112E14-15S (mating connector supplied)
Weight	8–15 pounds (3.6–6.8 kg) typical

Environmental

Operating	
Ambient temperature	-40 to +55° C
Atmospheric pressure	Up to 15,000 feet with adiabatic derating at 1°C/1000 feet
Relative Humidity	Up to 100% including condensation and frost
Nonoperating	
Temperature	-50 to +70°C
Atmospheric pressure	Up to 40,000 feet
Shock and Vibration	Normal handling by commercial carriers

Outline Drawing



8 Watt Ku-Band Model BA-140145-8