

High Performance Amplifier, 10 dB Gain 0.5 - 60 MHz

AM-109

V2.00

Features

- Push-Pull Circuitry
- Ideal for HF Antenna Distribution

Guaranteed Specifications* (From - 55°C to + 85°C Case Temp)

Frequency Range	0.5-60 MHz
Gain (+ 25°C) @ 10 MHz	10.7 ± 0.5 dB
Frequency Response	± 0.5 dB Max
Gain Variation with Temperature	± 0.5 dB Max
Output Power (1 dB Compression)	
0.5-60 MHz	+ 27 dBm Min
2-32 MHz	+ 28 dBm Min
Noise Figure	
0.5-60 MHz	7 dB Max
2-32 MHz	6 dB Max
Reverse Transmission	
	- 15 dB Max
	- 18 dB Typ
VSWR	
0.5-60 MHz	1.6:1 Max
2-32 MHz	1.3:1 Max
Intermodulation Intercept Point (for two-tone output power up to + 10 dBm)	
Second Order (0.5-60 MHz)	+ 70 dBm Min
Second Order (2-32 MHz)	+ 75 dBm Min
Third Order (0.5-60 MHz)	+ 40 dBm Min
Third Order (3-32 MHz)	+ 45 dBm Min
Bias Power	+ 20 VDC @ 225 mA Max (180 mA, 3.6W Typical)

Operating Characteristics

Impedance	50 Ohms Nominal
Maximum Rating	
RF Input	+ 24 dBm Max

Environmental

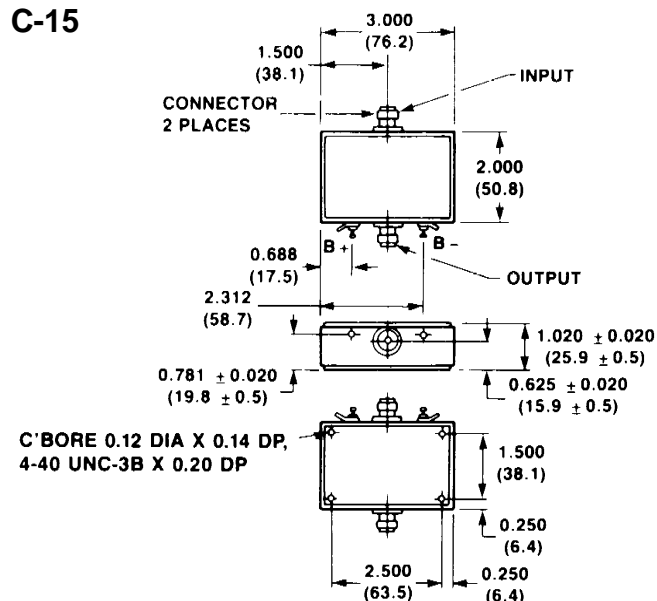
MIL-STD-883 Screening Available.

* All specifications apply when operated at +20 VDC with 50 ohm source and load impedance.

This product contains elements protected by United States Patent Number 3,624,536.

Heat Sinking: Operation at case temperature above 95°C is not recommended. Heat sinking adequate to dissipate 3.6 W. Must be provided in use.

C-15

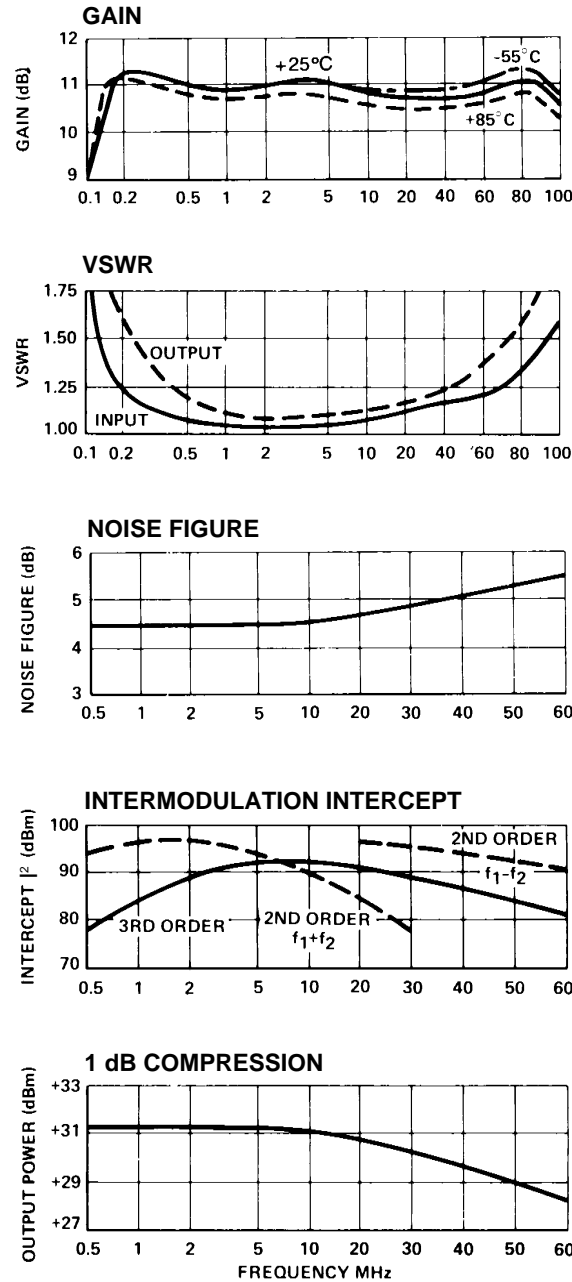


Dimensions in () are in mm.
Unless otherwise noted: .xxx = ±0.015 (.x = ±0.4)
WEIGHT (APPROX.): 9 OUNCES 255 GRAMS

Ordering Information

Model No.	Package
AM-109 BNC	Connectorized
AM-109 SMA	Connectorized

Typical Performance



Typical S-Parameter Data

AM-109	S11		S21		S12		S22	
FREQUENCY	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
0.5	0.01	36.2	3.47	14.2	0.13	5.9	0.07	18.8
1.0	0.01	160.9	3.41	5.8	0.14	1.7	0.04	12.2
2.0	0.01	169.6	3.41	0.5	0.14	-1.7	0.04	4.4
5.0	0.01	-153.3	3.40	-7.4	0.14	-7.9	0.04	-5.3
10.0	0.01	-112.8	3.39	-17.0	0.14	-16.6	0.04	-17.1
20.0	0.03	-105.2	3.36	-34.7	0.13	-33.8	0.04	-51.6
40.0	0.07	-129.1	3.38	-69.4	0.13	-67.7	0.08	-168.4
50.0	0.09	-145.9	3.42	-87.1	0.13	-84.9	0.11	162.0
60.0	0.10	-163.6	3.45	-106.4	0.12	-103.0	0.18	141.9

Frequency in MHz.