

Low Noise Amplifier, 16 dB Gain 5 - 500 MHz

AM-/AMC-143

V2.00

Features

- 1.9 dB Typical Midband Noise Figure
- +7 dBm Typical Midband Output Power
- +20 dBm Typical Third Order Intercept

Guaranteed Specifications*

(From - 55°C to + 85°C Case Temp)

Frequency Range	5-500 MHz
Gain (+ 25°C) @ 50 MHz	15.8 ± 0.5 dB
Frequency Response	± 1 dB Max
Gain Variation with Temperature	± 0.8 dB Max
Output Power (1 dB Compression)	+ 4 dBm Min
Noise Figure	
5-500 MHz	3.5 dB Max
5-100 MHz	2.7 dB Max
Reverse Transmission	- 16 dB Max - 21 dB Typ
VSWR	2.5:1 Max
Intermodulation Intercept Point (for two-tone output power up to - 10 dBm)	
Second Order	+ 24 dBm Min
Third Order	+ 16 dBm Min
Bias Power	+ 15 VDC @ 15 mA Max (13 mA, 200 mW Typical)

Operating Characteristics

Impedance	50 Ohms Nominal
Maximum Rating	
RF Input	+ 20 dBm Max
Environmental	
MIL-STD-883 screening available.	

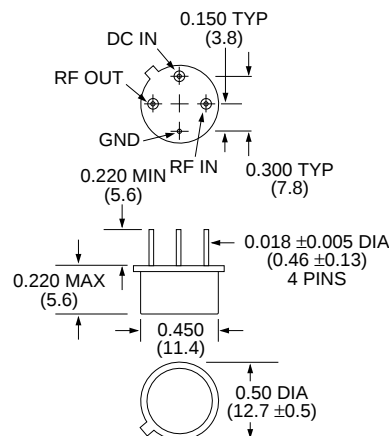
*All specifications apply when operated at +15 VDC, with 50 ohm source and load impedance.
This product contains elements protected by United States Patent Number 3,624,536.

Ordering Information

Model No.	Package
AM-143* PIN	TO-8-1
AMC-143 SMA	Connectorized

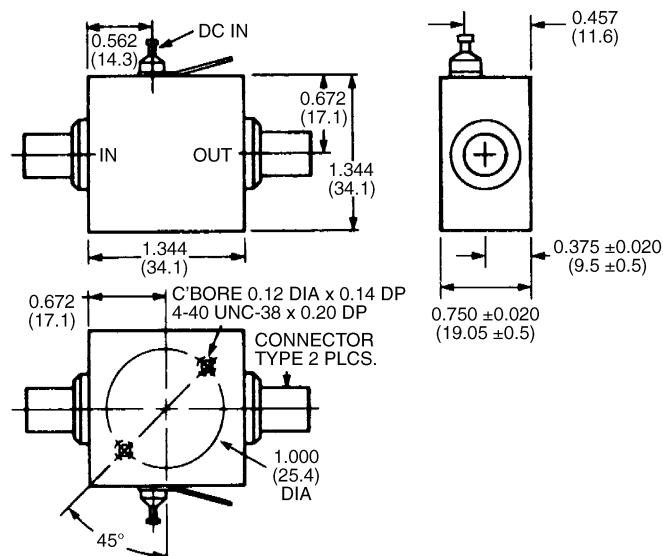
*Mounting kit part number AU00071 required for PCB applications.

TO-8-1



Dimensions in () are in mm.
Unless Otherwise Noted: .xxx = ±0.010 (.xx = ±0.25)
.xx = ±0.02 (.x = ±0.5)
WEIGHT (APPROX.): 0.10 OUNCES 2.8 GRAMS

C-32



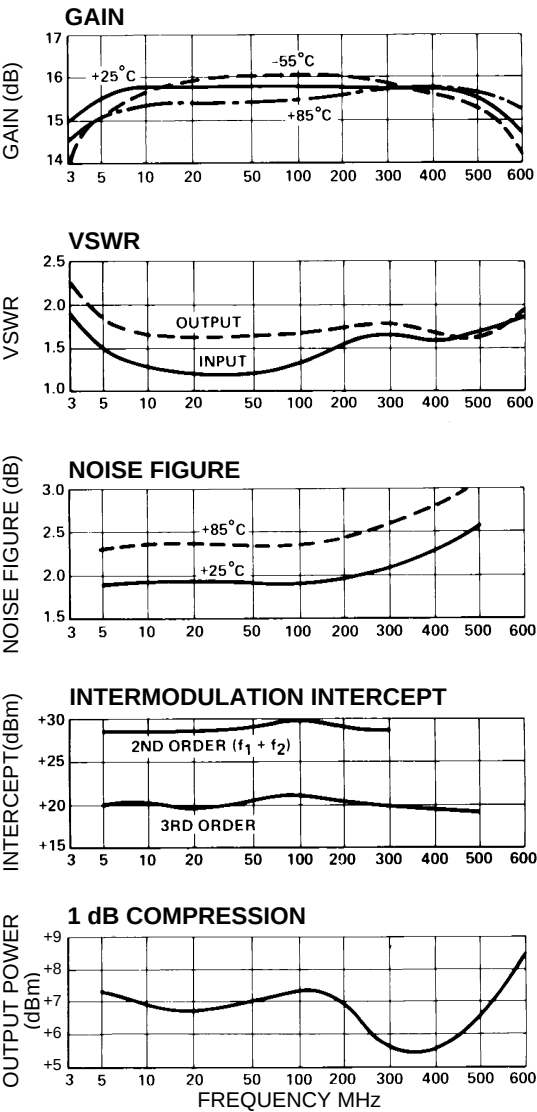
Dimensions in () are in mm.
Unless Otherwise Noted: .xxx = ±0.010 (.xx = ±0.25)
.xx = ±0.02 (.x = ±0.5)
WEIGHT (APPROX.): 1.62 OUNCES 46 GRAMS

Specifications Subject to Change Without Notice.

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Typical Performance



Typical S-Parameter Data

AM-143 Frequency	S ₁₁		S ₂₁		S ₁₂		S ₂₂	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
5.0	0.20	-60.7	5.90	-161.0	0.09	-160.5	0.32	-24.9
10.0	0.12	-63.8	6.07	-171.8	0.09	-172.6	0.27	-24.9
20.0	0.09	-65.3	6.16	-179.8	0.10	178.9	0.26	-17.4
50.0	0.10	-82.7	6.08	167.5	0.10	166.3	0.25	-28.0
100.0	0.14	-101.0	6.06	153.3	0.10	150.5	0.26	-49.3
200.0	0.21	-130.6	6.00	126.7	0.10	119.8	0.26	-82.3
300.0	0.23	-149.2	6.01	100.9	0.10	93.6	0.24	-104.5
400.0	0.20	-155.5	6.09	70.7	0.10	67.4	0.22	-100.5
500.0	0.22	-142.9	6.11	36.8	0.10	43.3	0.20	-79.8

Frequency in MHz