

# High Performance Amplifier, 17 dB Gain

## 5 - 500 MHz

# AM-/AMC-147

V2.00

### Features

- 2 dB Typical Midband Noise Figure
- +20 dBm Typical Midband Output Power
- +38 dBm Typical Midband Third Order Intercept

### Guaranteed Specifications\*

(From -55°C to +85°C Case Temp)

<b>Frequency Range</b>	5 - 500 MHz
<b>Gain (+25°C) @ 50 MHz</b>	17 ± 0.6 dB
<b>Frequency Response</b>	± 1.0 dB
<b>Gain Variation with Temperature</b>	-1.2, +5dB
<b>Output Power (1 dB Compression)</b>	+19 dBm Min
<b>Noise Figure</b>	
5-500 MHz	4.5 dB Max
5-300 MHz	3.5 dB Max
<b>Reverse Transmission</b>	-16 dB Max -20 dB Typ
<b>VSWR</b>	2.0:1 Max
<b>Intermodulation Intercept Point (for two-tone output power up to +5 dBm)</b>	
Second Order	+38 dBm Min
Third Order	+28 dBm Min
<b>Bias Power</b>	+15 VDC @ 60 mA Max (50 mA, 750 mW Typical)

### Operating Characteristics

<b>Impedance</b>	50 Ohms Nominal
<b>Maximum Rating</b>	
RF Input	+10 dBm
<b>Environmental</b>	
MIL-STD-883 screening available	

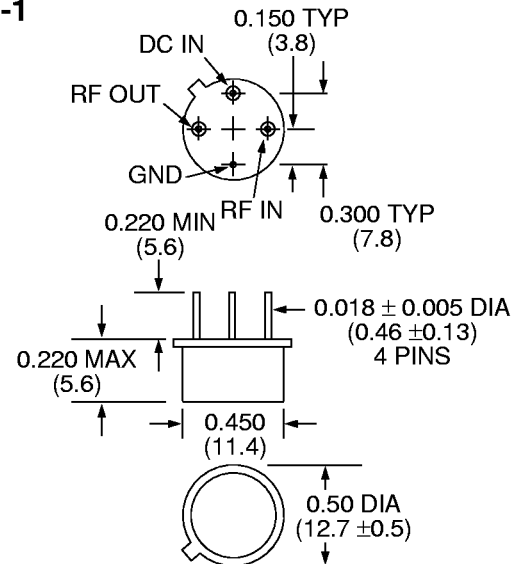
\*All specifications apply when operated at +15 VDC with 50 ohm source and load impedance. This product contains elements protected by United States Patent Number 3,624,536.  
Heat Sinking: Operation at case temperature above 95°C is not recommended. Heat sinking adequate to dissipate 2 W. Must be provided in use.

### Ordering Characteristics

Model No.	Package
AM-147 * PIN	TO-8-1
AMC-147 SMA	Connectorized

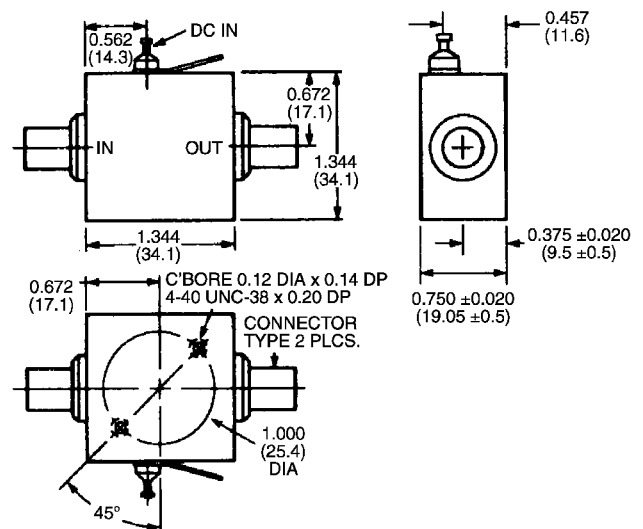
\*Mounting kit part number AU00071 required for PCB applications.

### 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



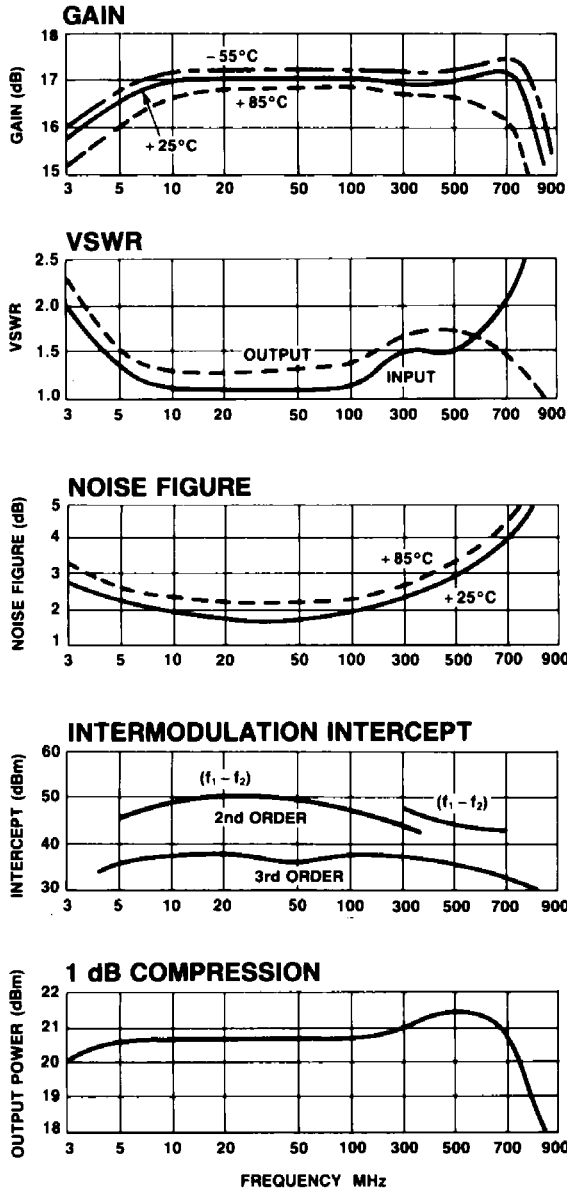
Dimensions in ( ) are in mm.  
Unless Otherwise Noted: .xxx = ±0.010 (.xx = ±0.25)  
.xx = ±0.02 (.x = ±0.5)  
WEIGHT (APPROX.): 1.62 OUNCES 46 GRAMS

Specifications Subject to Change Without Notice.

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Typical Performance



Typical S-Parameter Data

AM-147	S11		S21		S12		S22	
FREQUENCY	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
5.0	0.19	-68.2	6.75	-153.1	0.09	-152.0	0.20	-21.0
10.0	0.11	-78.1	7.05	-167.3	0.09	-168.0	0.12	-22.9
20.0	0.07	-83.8	7.17	-176.4	0.10	-177.7	0.10	-13.5
50.0	0.06	-95.0	7.15	171.4	0.10	170.1	0.09	-1.9
100.0	0.07	-100.1	7.14	159.2	0.10	156.7	0.10	2.6
200.0	0.11	-122.1	7.17	136.3	0.11	130.3	0.13	3.8
300.0	0.14	-141.7	7.08	114.7	0.11	108.4	0.14	-5.5
400.0	0.15	-166.3	7.16	91.0	0.11	86.6	0.17	-19.9
500.0	0.17	164.6	7.24	67.9	0.12	66.5	0.19	-38.9

Frequency in MHz