



High Performance Isolation Amplifier, 12.54 dB Gain 20 - 400 MHz

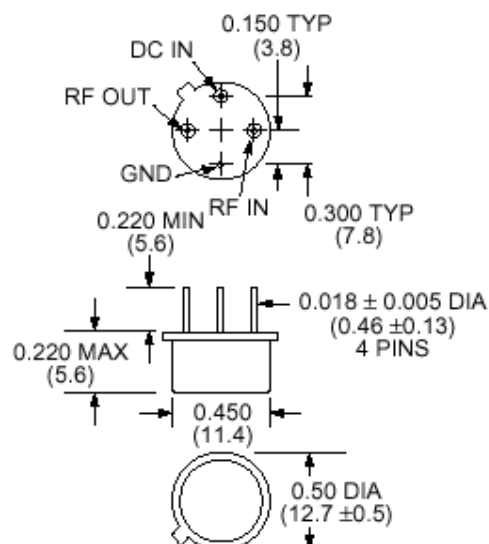
Features

- 35 dB Typical Reverse Isolation
- +42 dBm Typical Third Order Intercept
- +24 dBm Typical 1 dB Compression
- 1.2:1 Typical VSWR

Description

M/A-COM's AM-157 is a high performance isolation amplifier with high intercept and compression points. The use of coupler feedback minimizes current in a high intercept amplifier. This amplifier has been optimized for low VSWR to improve system performance. This amplifier is packaged in a TO-8-1 package, and is also available with SMA connectors. The ground plane on the PC board should be configured to remove heat from under the package. AM-157 is ideally suited for use where a high isolation, high intercept amplifier is required

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

Ordering Information

Part Number	Package
AM-157 PIN ¹	TO-8-1 package
AMC-157 SMA	Connectorized

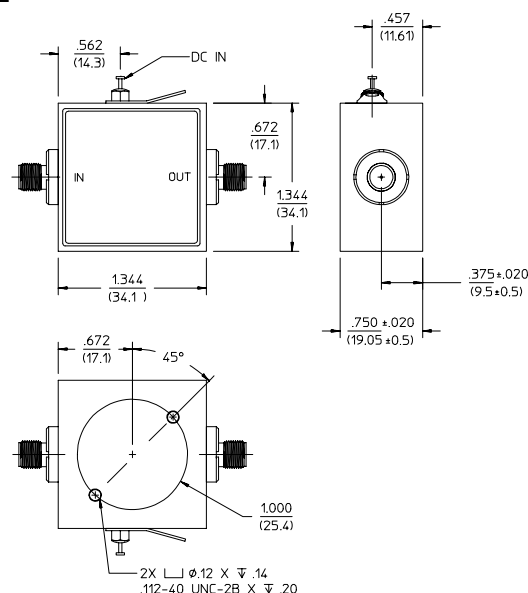
1. Mounting kit part number AU00071 required for PCB applications.

Absolute Maximum Ratings ²

Parameter	Absolute Maximum
Max. Input Power	+13 dBm
V _{bias}	+17.0 V
Operating Temperature	-55°C to +85°C
Storage Temperature	-65°C to +125°C

2. Operation of this device above any one of these parameters may cause permanent damage.

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.

■ **North America:** Tel. (800) 366-2266, Fax (800) 618-8883
 ■ **Asia/Pacific:** Tel. +81-44-844-8296, Fax +81-44-844-8298
 ■ **Europe:** Tel. +44 (1344) 869 595, Fax +44 (1344) 300 020

Visit www.macom.com for additional data sheets and product information.

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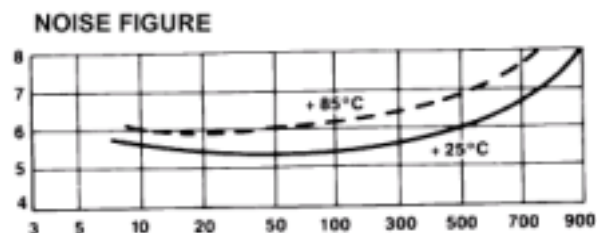
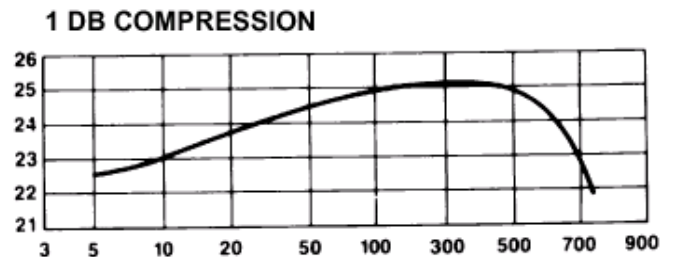
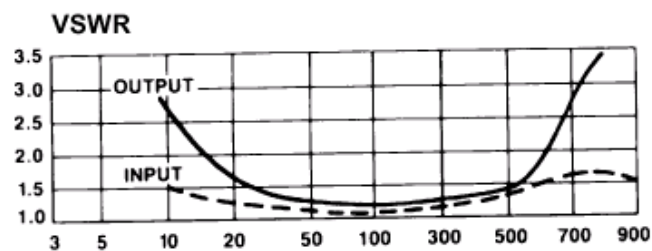
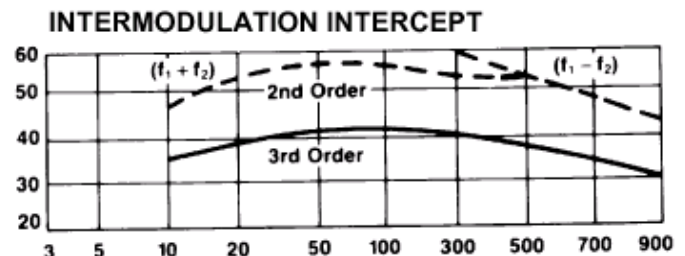
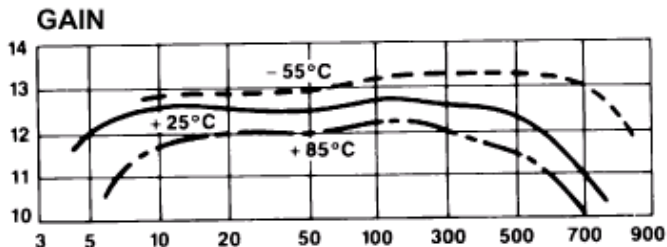
Electrical Specifications^{4,5} $T_A = -55^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ Case Temperature

Parameter	Test Conditions	Frequency	Units	Min	Typical	Max
Gain	50 MHz @ $+25^{\circ}\text{C}$	50 MHz	dB	11.7	12.5	13.3
Frequency Response	—	20 - 400 MHz	dB	—	—	± 0.5
Gain Variation with Temperature	—	20 - 400 MHz	dB	—	—	± 1.0
1 dB Compression	Output Power	20 - 400 MHz	dBm	+21	—	—
Noise Figure	—	20 - 400 MHz	dB	—	—	7.5
Reverse Transmission	—	20 - 400 MHz	dB	—	-27	-20
VSWR	—	20 - 100 MHz 100 - 400 MHz	Ratio Ratio	— —	— —	1.5:1 2.0:1
Output IP_2	Two-tone inputs up to +10 dBm	20 - 400 MHz	dBm	+40	—	—
Output IP_3	Two-tone inputs up to +10 dBm	20 - 400 MHz	dBm	+30	—	—
Vbias	@ 90 mA max	—	V	—	—	15.00
Ibias	1.2W Typical	—	mA	—	80	—

4. All specifications apply when operated at +15 VDC, with 50 ohms source and load impedance.

5. Heat Sinking: Operation at case temperature above 95°C is not recommended. Heat sinking adequate to dissipate 2.7W must be provided in use. The flange should be screwed down to the heat sink, which should be RF ground.

Typical Performance



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