tyco Electronics

MACOM

High Performance Amplifier, 8 dB Gain, 30 - 250 MHz

AM-119/AMC-119
V4

Features

- 2.3 dB Typical Midband Noise Figure
- +23 dBm Typical Midband Output Power
- +40 dBm Typical Midband Third Order Intercept

Description

M/A-COM's AM-119 is a coupler feedback amplifier with high intercept and compression points. The use of coupler feedback minimizes noise figure and current in a high intercept amplifier. This amplifier is packaged in a TO-8 package. Due to the internal power dissipation the thermal rise minimized. The ground plane on the PC board should be configured to remove heat from under the package. AM-119 is ideally suited for use where a high intercept, high reliability amplifier is required.

Ordering Information

Part Number	Package
AM-119 PIN [4]	TO-8-1
AMC-119 SMA	Connectorized

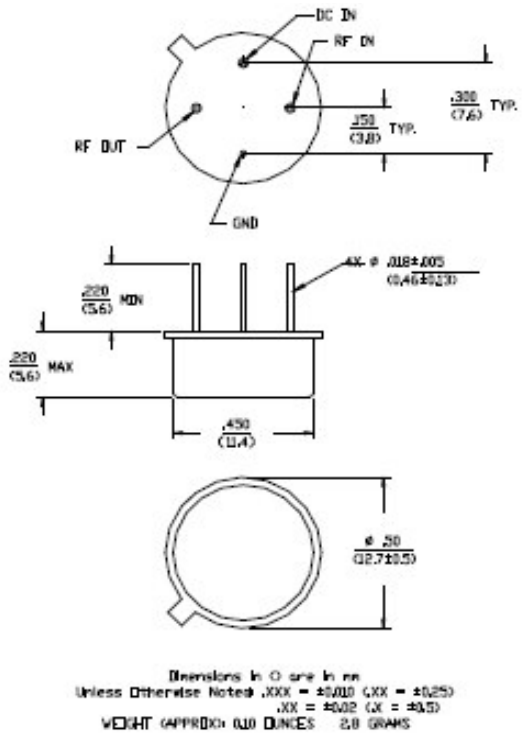
4. Mounting kit part number AU00071 required for PCB applications.

Absolute Maximum Ratings [1]

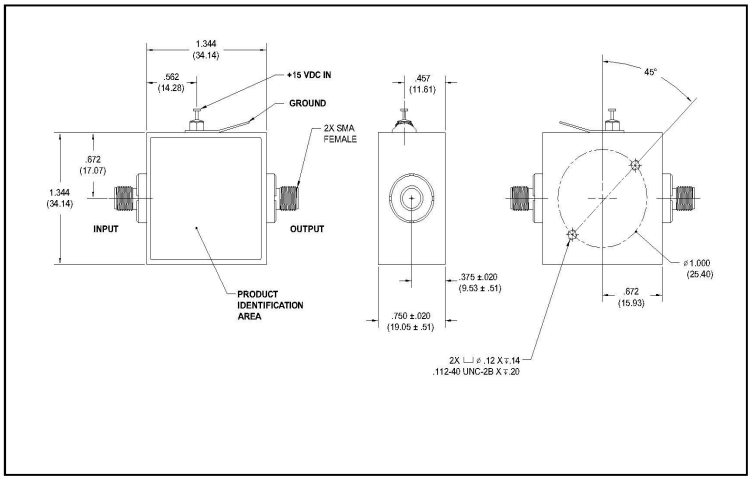
Parameter	Absolute Maximum
Max. Input Power	+13 dBm
Vbias	+15.75 V
Operating Temperature	-55°C to +85°C
Storage Temperature	-65°C to +125°C

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

TO-8-1



Outline Drawing: SMA Connectorized *



* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

- **North America** Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

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

Electrical Specifications: [2, 3] T_A = -55°C to +85°C Case Temperature

Parameter	Test Conditions	Frequency	Units	Min.	Typ.	Max.
Gain	@+25°C	250 MHz	dB	7.5	8.0	8.5
Frequency Response	—	30 - 250 MHz	dB	—	—	±0.75
Gain Variation with Temperature	—	30 - 250 MHz	dB	—	—	±1.0
1 dB Compression	Output Power	30 - 250 MHz	dBm	+20	—	—
Noise Figure	—	30 - 250 MHz	dB	—	—	3.5
Reverse Transmission	—	30 - 250 MHz	dB	—	-11.0	-9.5
VSWR	—	30 - 250 MHz	Ratio	—	—	2.3:1
Output IP_2	Two-Tone inputs up to +10 dBm	30 - 250 MHz	dBm	+39	—	—
Output IP_3	Two-Tone inputs up to +10 dBm	30 - 250 MHz	dBm	+34	—	—
Vbias	—	—	VDC	+14.5	+15.0	+15.5
Ibias	Vbias = +15.0 VDC	—	mA	—	50	60
Power Dissipation	@ +15 V Bias	—	mW	—	750	—

2. All specifications apply when operated at +15 VDC, with 50 ohms source and load impedance.
3. Heat Sinking: Operation at case temperature above 95°C is not recommended. Heat sinking adequate to dissipate 1W must be provided in use.

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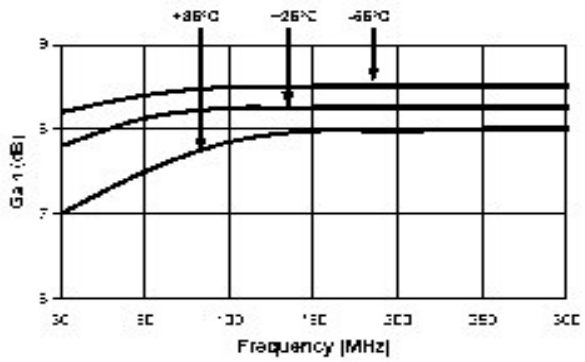
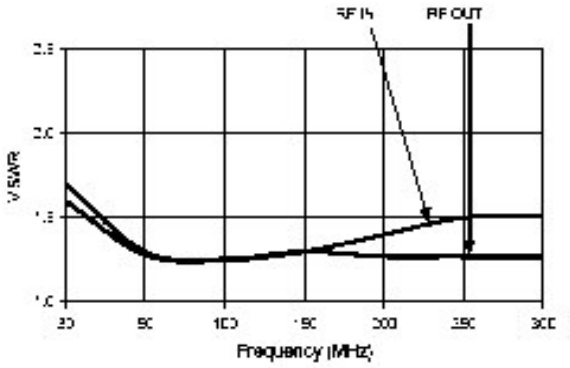
Typical Performance Curves

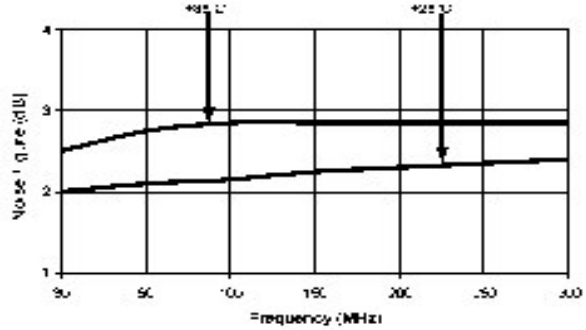
Gain vs. Frequency



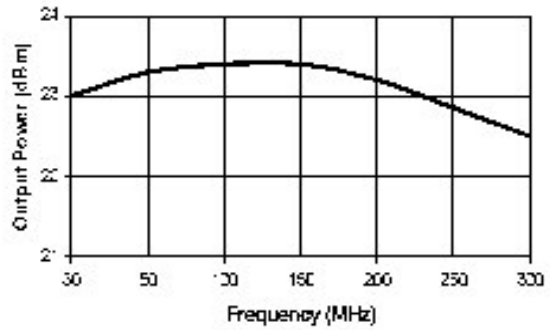
VSWR vs. Frequency



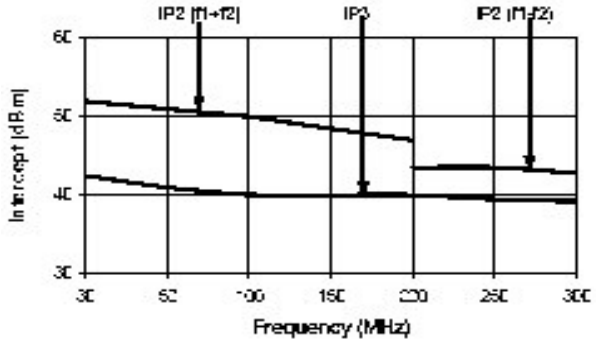
Noise Figure



1 dB Compression



Intermodulation Intercept



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