

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

V 3.00

AM-/AMC-119

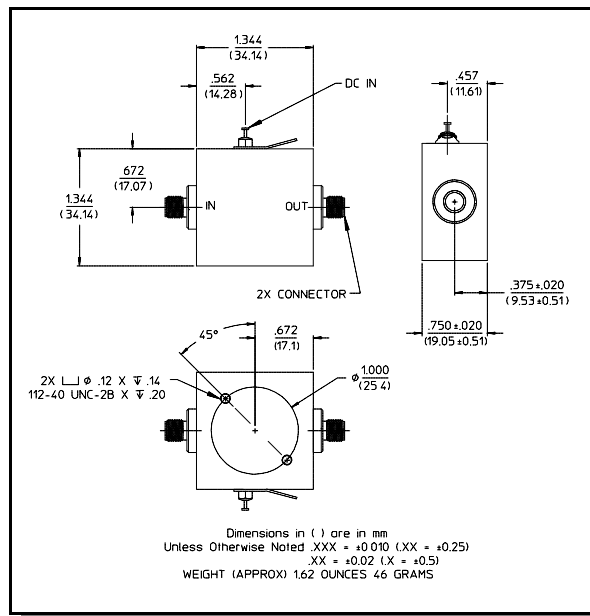
Features

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

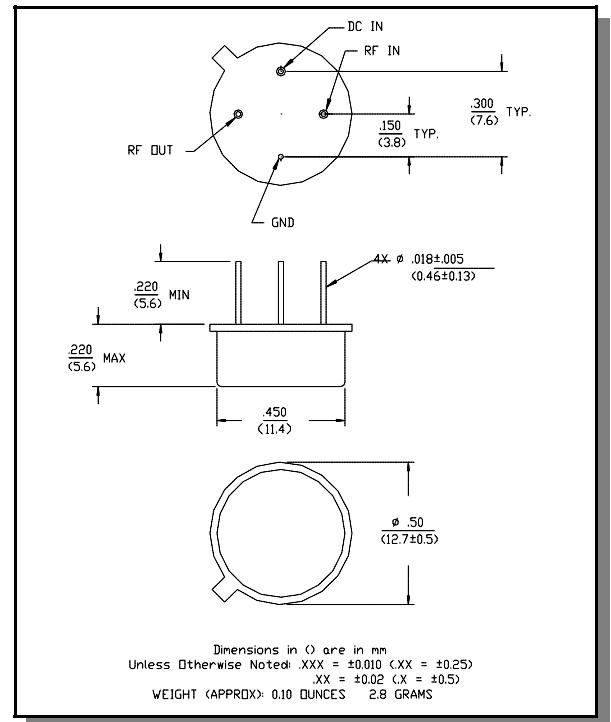
Description

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 is 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.

C-32



TO-8-1



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.

Electrical Specifications ^{2,3} $T_A = -55^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ Case Temperature

Parameter	Test Conditions	Frequency	Units	Min.	Typ.	Max.
Gain	@ $+25^{\circ}\text{C}$	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	@ +15V 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.

Specifications subject to change without notice.

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

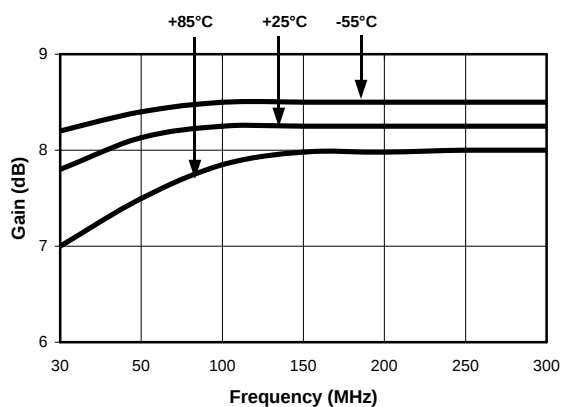
Visit www.macom.com for additional data sheets and product information.

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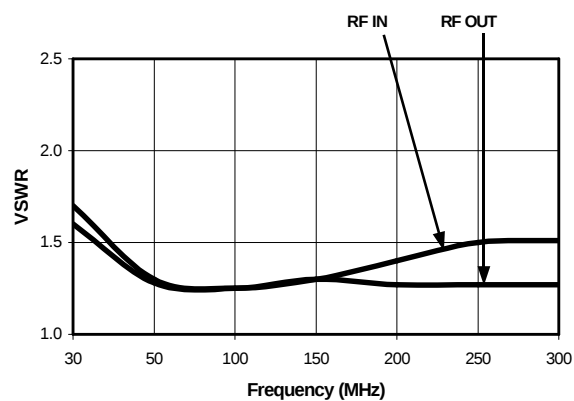
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Typical Performance Curves

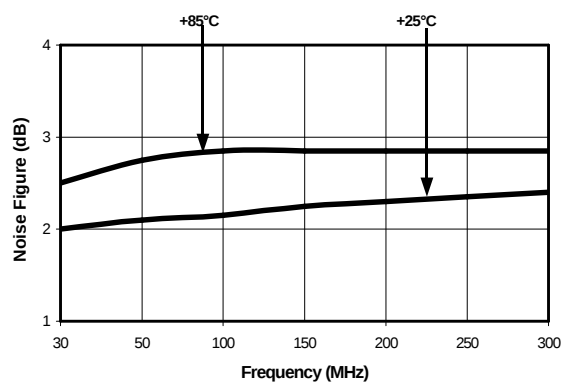
Gain vs. Frequency



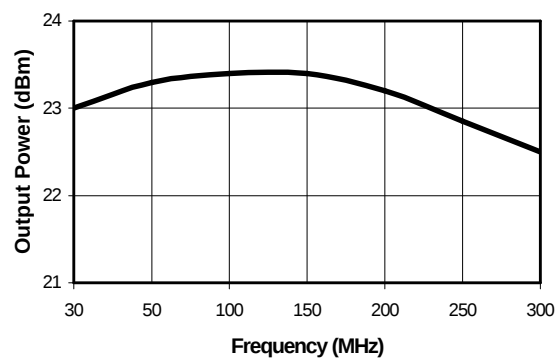
VSWR vs. Frequency



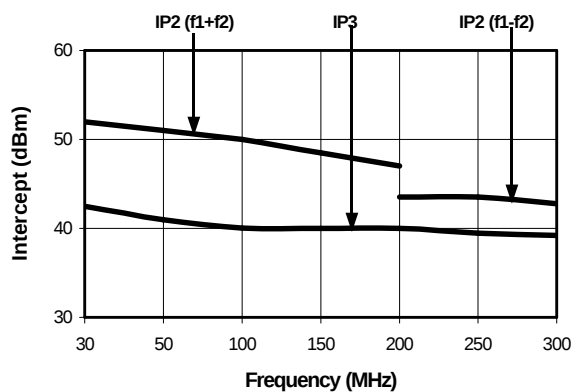
Noise Figure



1 dB Compression



Intermodulation Intercept



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.

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