

# Low Noise Amplifier, 8 dB Gain 10 - 200 MHz

## AM-/AMC-/AMS-117

V2.00

### Features

- 1.3 dB Typical Midband Noise Figure
- +30 dBm Typical Midband Intercept
- Ideal for Broadband IF Applications
- Fully Hermetic Package (AMS-117)

### Guaranteed Specifications\*

(From -55°C to +85°C Case Temp)

<b>Frequency Range</b>	10-200 MHz
<b>Gain (+25°C) @ 60 MHz</b>	8.2 ± 0.5 dB
<b>Frequency Response</b>	± 0.3 dB Max
<b>Gain Variation with Temperature</b>	± 0.5 dB Max
<b>Output Power (1 dB Compression)</b>	
10-200 MHz	+ 7 dBm Min
10-100 MHz	+ 9 dBm Min
<b>Noise Figure</b>	
10-200 MHz	2.5 dB Max
10-100 MHz	2.0 dB Max
<b>Reverse Transmission</b>	
	- 9 dB Max
	- 11 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 (10-200 MHz)	+ 32 dBm Min
Second Order (10-100 MHz)	+ 35 dBm Min
Third Order (10-200 MHz)	+ 20 dBm Min
Third Order (10-100 MHz)	+ 23 dBm Min
<b>Bias Power</b>	+ 15 VDC @ 13 mA Max (11 mA, 165 mW Typical)

### Operating Characteristics

<b>Impedance</b>	50 Ohms Nominal
<b>Maximum Rating</b>	
RF Input	+ 20 dBm

### 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 3,891,934.

### Ordering Information

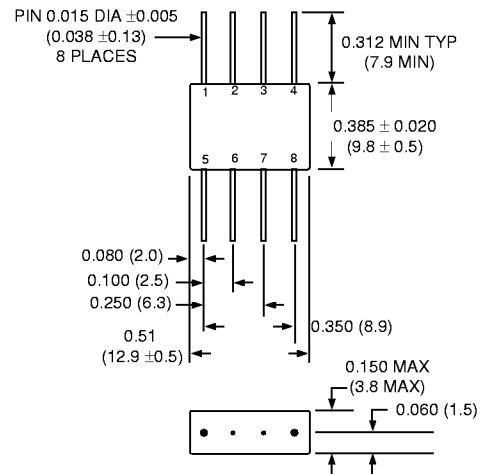
Model No.	Package
AM-117 PIN	Flatpack
AMC-117 SMA	Connectorized
AMS-117 PIN	Surface Mount

Specifications Subject to Change Without Notice.

### M/A-COM, Inc.

North America: Tel. (800) 366-2266 ■ Asia/Pacific: Tel. +81 (03) 3226-1671 ■ Europe: Tel. +44 (1344) 869 595  
Fax (800) 618-8883 Fax +81 (03) 3226-1451 Fax +44 (1344) 300 020

### FP-2



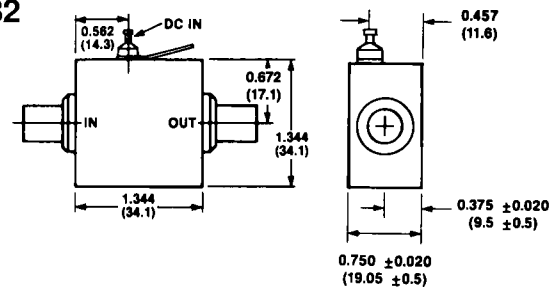
Dimensions in ( ) are in mm.

Unless otherwise noted: .xxx = ±0.010 (.xx = ±0.25)

.xx = ±0.025 (.x = ±0.5)

WEIGHT (APPROX.): 0.09 OUNCES 2.5 GRAMS

### C-32



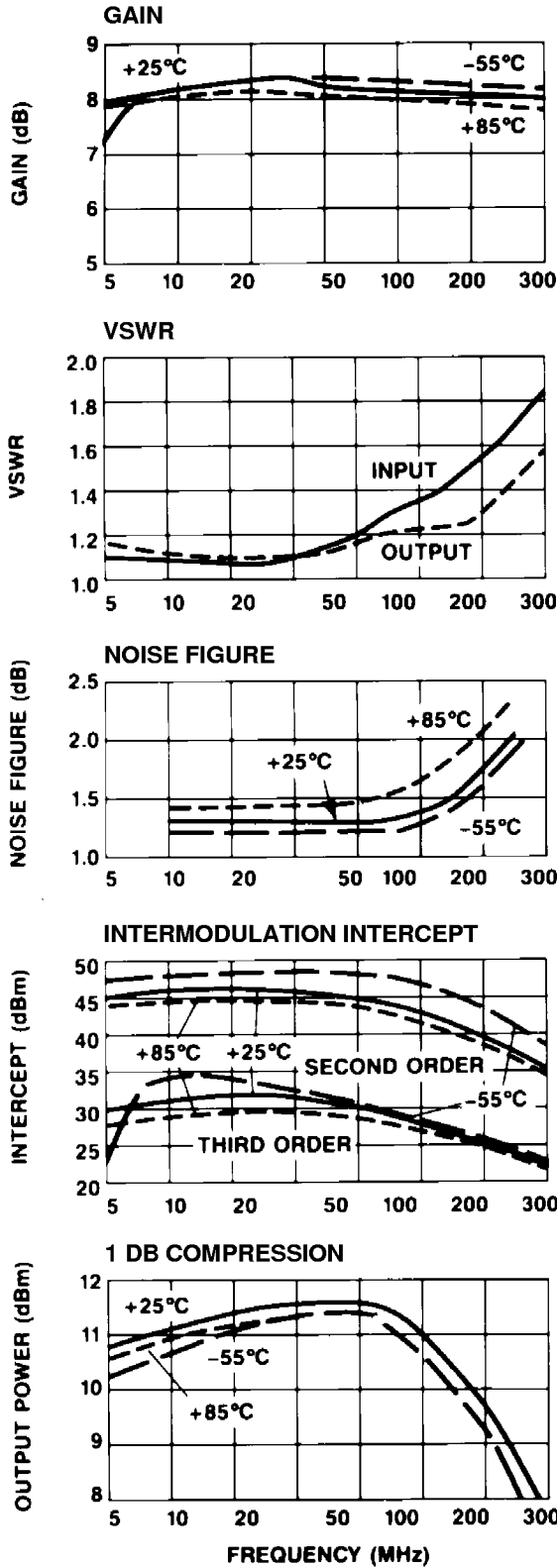
Dimensions in ( ) are in mm.

Unless otherwise noted: .xxx = ±0.010 (.xx = ±0.25)

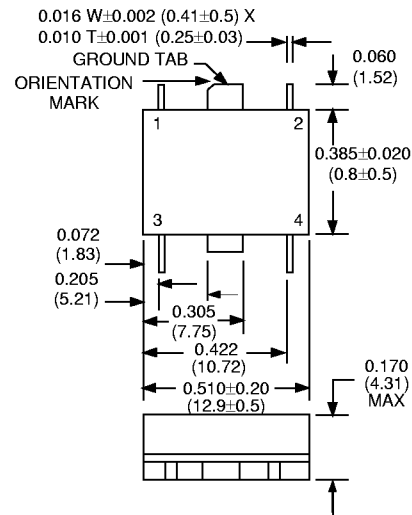
.xx = ±0.025 (.x = ±0.5)

WEIGHT (APPROX.): 1.62 OUNCES 46 GRAMS

Typical Performance



SF-1



Dimensions in ( ) are in mm.  
 Unless otherwise noted: .xxx = ±0.010 (.xx = ±0.25)  
 WEIGHT (APPROX.): 0.07 OUNCES 2 GRAMS

Pin Configuration

AMC-117

Pin Number	Description
1	Output
2	Ground
3	Ground
4	DC Input
5	Input
6	Ground
7	Ground
8	Ground

AMS-117

Pin Number	Description
1	Output
2	DC Input
3	Input
4	Ground

Typical S-Parameter Data

AM-117	S11		S21		S12		S22	
FREQUENCY	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
10.0	0.04	-166.2	2.59	3.7	0.29	4.1	0.04	-172.2
20.0	0.03	-151.6	2.60	-1.5	0.29	-1.0	0.04	-170.2
50.0	0.03	-133.5	2.61	-9.6	0.29	-8.3	0.03	-163.4
75.0	0.04	-128.7	2.60	-15.2	0.29	-13.4	0.03	-164.6
100.0	0.06	-124.3	2.59	-20.9	0.29	-18.1	0.05	-167.0
125.0	0.08	-124.1	2.59	-26.3	0.29	-22.7	0.06	-168.0
150.0	0.11	-121.6	2.60	-31.4	0.29	-27.5	0.06	-169.3
175.0	0.13	-123.3	2.60	-36.8	0.29	-32.2	0.07	-170.0
200.0	0.14	-124.6	2.59	-42.2	0.28	-37.0	0.07	-171.1

Frequency in MHz

Specifications Subject to Change Without Notice.