

Cascadable Amplifier 5 to 500 MHz

Features

- NOISE FIGURE: 5 dB (TYP.)
- HIGH THIRD ORDER IP: +38 dBm (TYP.)
- P1dB: +21 dBm (TYP.)

Description

The AM-151 amplifier uses a coupler feedback design with high intercept and compression points. The use of coupler feedback minimized noise figure and DC current in a high intercept amplifier. This amplifier is packaged 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-151 is ideally suited for use where a high intercept high reliability amplifier is required.

Ordering Information

Part Number	Package
AM-151-PIN*	TO-8-1
AMC-151-SMA**	SMA Connectorized

*Mounting kit part number AU00071 required for PCB application

**SMA Connectorized part is not RoHS compliant.

Product Image



Absolute Maximum Ratings

Parameter	Absolute Maximum
Maximum Input Power	+20 dBm
DC Voltage	+15.75 V
Continuous Input Power	+18 dBm
Operating Temperature	-55° to +85°C
Storage Temperature	-65° to +125°C

Electrical Specifications: $Z_0 = 50\Omega$, $V_{CC} = +15 \text{ V}_{DC}$ **

Parameter	Test Conditions	Frequency	Units	Min.	Typ.	Max.
Gain	@ +25°C	50 MHz	MHz	11.5	12.0	12.5
Frequency Response	—	5-500 MHz	dB	—	—	±1.0
Gain Variation with Temperature	—	5-500 MHz	dB	—	—	±0.8
1 dB Compression	Output Power	5-500 MHz 10-500 MHz	dBm dBm	+19 +20	—	—
Noise Figure (max)	—	5-500 MHz	dB	—	—	7.0
Reverse Transmission	—	5-500 MHz	dB	—	-16.0	-13.0
VSWR	—	5-500 MHz	Ratio	—	—	2.0:1
Output IP ²	Two-tone inputs up to +10 dBm	5-500 MHz	dBm	+48	—	—
Output IP ³	Two-tone inputs up to +10 dBm	5-500 MHz	dBm	+34	—	—
V bias	—	—	dBm	+14.5	+15.0	+15.5
I bias	V bias = +15 Vdc	—	mA	—	85	100
Power Dissipation	@ +15 V Bias	—	mW	—	1275	—

***Heat Sinking: Operation at case temperature above +95°C is not recommended. Heat sinking adequate to dissipate 1.3 W must be provided in use.



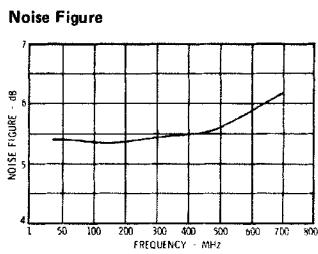
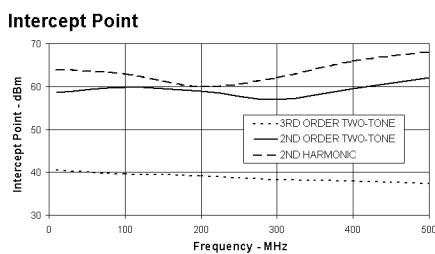
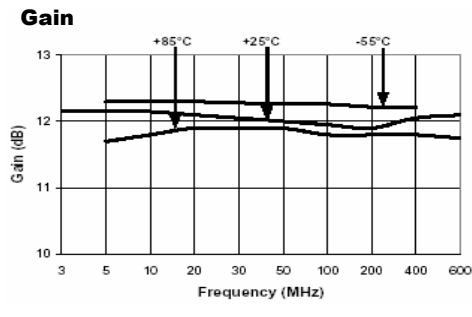
**Cascadable Amplifier
5 to 500 MHz**

AM-151/AMC-151

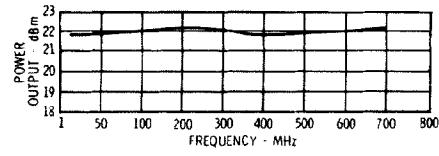
V5

Typical Performance Curves at +25°C

Outline Drawing: TO-8-1 *

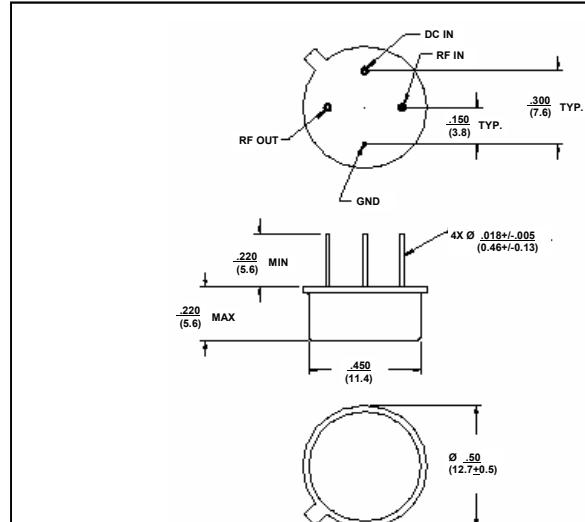
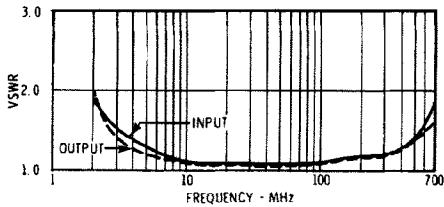


Power Output*

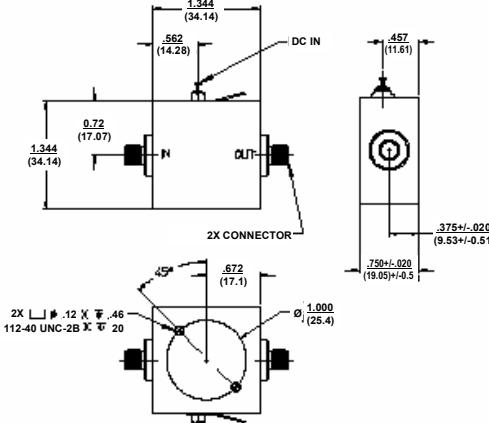


*at 1 dB Gain Compression

VSWR



Outline Drawing: SMA Connectorized *



* Dimensions in () are in mm.
Unless otherwise noted: .XXX = $\pm .010"$ (.XX = ± 0.25)
.XX = ± 0.02 (.X = ± 0.5)

- 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