AM-153

Low Noise Amplifier, 12 dB Gain, 300 - 1800 MHz

Rev. V3

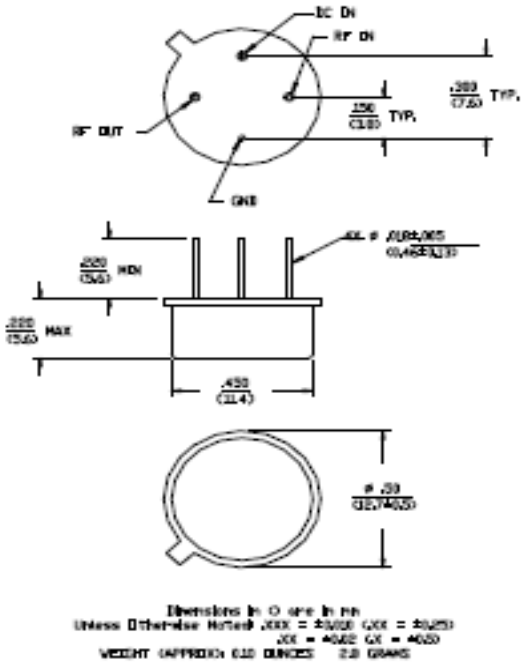
Features

- 1.9 dB Typical Midband Noise Figure
- +7.5 dBm Typical Midband Output Power
- +19 dBm Typical Midband Third Order Intercept

Description

M/A-COM's AM-153 is a coupler feedback amplifier with low noise figure. The use of coupler feedback minimizes noise figure and current in a high intercept amplifier. This amplifier is packaged in a TO-8 package. This unique design features low noise figure over a wide bandwidth. AM-153 is ideally suited for use where a low noise, wideband, high reliability amplifier is required.

TO-8-1



Absolute Maximum Ratings [1]

Parameter	Absolute Maximum
Max. Input Power	+10 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] T_A = -55°C to +85°C Case Temperature

Parameter	Test Conditions	Frequency	Units	Min.	Typ.	Max.
Gain	@+25°C	600 MHz	dB	11.9	12.4	12.9
Frequency Response	—	300 - 1800 MHz	dB	—	—	±1.2
Gain Variation with Temperature	—	300 - 1800 MHz	dB	—	—	+0.5, -0.7
1 dB Compression	Output Power	300 - 1800 MHz	dBm	+6	—	—
Noise Figure	—	300 - 1800 MHz 1500 - 1800 MHz	dB dB	— —	— —	3.0 3.5
Reverse Transmission	—	300 - 1800 MHz	dB	—	-14	-12
VSWR Input	—	300 - 1800 MHz 1500 - 1800 MHz	Ratio Ratio	— —	— —	2.5:1 3.3:1
VSWR Output	—	300 - 400 MHz 400 - 1500 MHz 1500 - 1800 MHz	Ratio Ratio Ratio	— — —	— — —	3.5:1 3.0:1 2.5:1
Output IP_2	Two-Tone inputs up to –5 dBm	300 - 1800 MHz	dBm	+22	—	—
Output IP_3	Two-Tone inputs up to –5 dBm	300 - 1000 MHz 1000 - 1800 MHz	dBm dBm	+17 +15	— —	— —
Vbias	—	—	VDC	+14.5	+15.0	+15.5
Ibias	Vbias = +15.0 VDC	—	mA	—	13	15
Power Dissipation	@ +15 V Bias	—	mW	—	200	—

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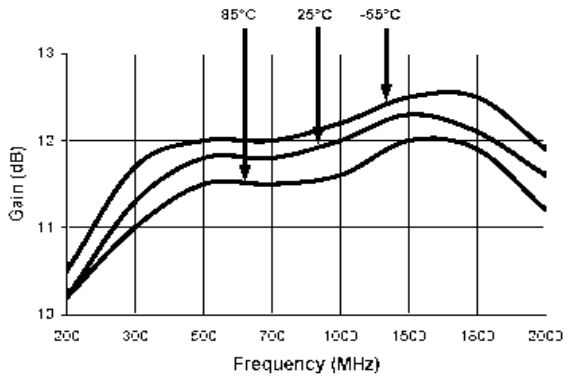
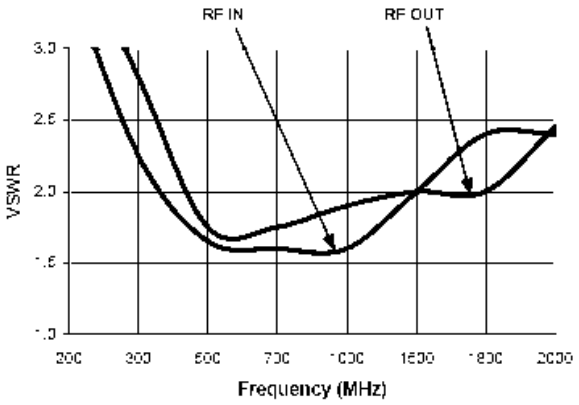
2. All specifications apply when operated at +15 VDC, with 50 ohms source and load impedance.

Typical Performance Curves

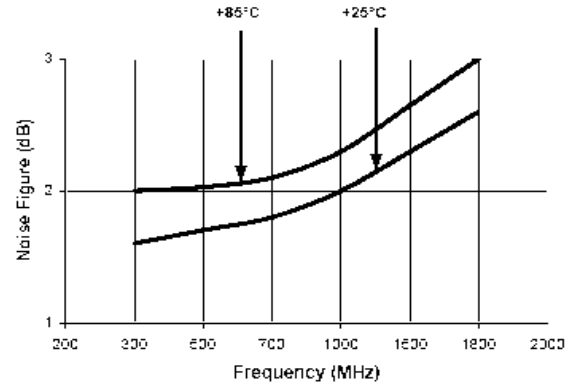
Gain vs. Frequency



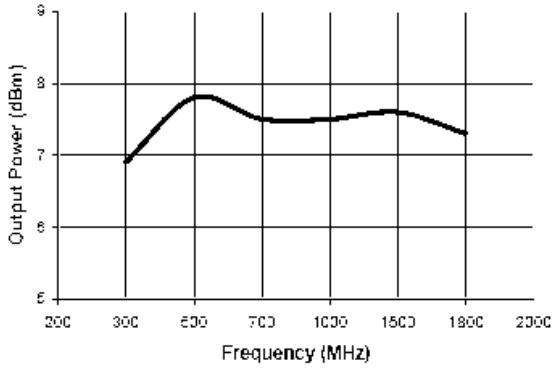
VSWR vs. Frequency



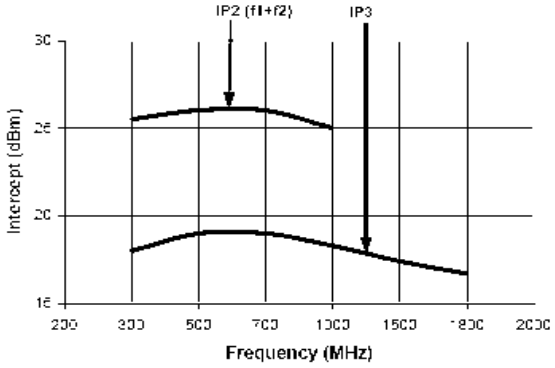
Noise Figure



1 dB Compression



Intermodulation Intercept



Ordering Information

Part Number	Package
AM-153 PIN [3]	TO-8-1

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