

Cascadable Thin Film Amplifier, 28 dB Gain, 5 - 1000 MHz

Rev. V4

Features

- 28.5 dB Typical Gain
- 2.7 dB Typical Low Noise

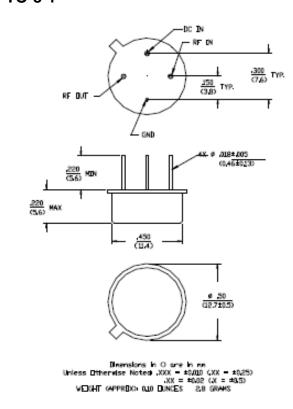
Description

M/A-COM's AM-182 is a high gain feedback amplifier with high intercept and compression points. This amplifier is packaged in a TO-8 package. Due to the internal power dissipation the thermal rise should be minimized. The ground plane on the PC board should be configured to remove heat from under the package. AM-182 is ideally suited for use where a high intercept, high reliability amplifier is required.

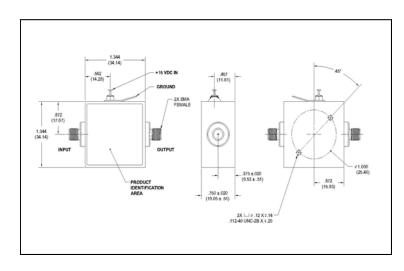
Ordering Information

Part Number	Package			
AM-182 PIN	TO-8-1			
AMC-182 SMA	Connectorized			

TO-8-1



Outline Drawing: SMA Connectorized



1. Operation of this device above any one of these parameters

Absolute Maximum

+13 dBm

+15.75 V

-55°C to +85°C -65°C to +125°C

may cause permanent damage.

Absolute Maximum Ratings ¹

Parameter Max. Input Power

Vbias

Operating Temperature

Storage Temperature

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

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• India Tel: +91.80.4155721

• China Tel: +86.21.2407.1588 Visit www.macomtech.com for additional data sheets and product information.

AM-182 / AMC-182



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Electrical Specifications: ^{2,3} T_A = -55°C to +85°C Case Temperature

Parameter	Test Conditions	Frequency	Units	Min.	Тур.	Max.
Gain	@+25°C	300 MHz	dB	27.2	28.2	29.2
Frequency Response	_	5 - 1000 MHz	dB	_	_	±1.2
Gain Variation with Temperature	_	5 - 1000 MHz	dB	_	_	±1.2
1 dB Compression	Output Power	5 - 1000 MHz	dBm	+9	_	_
Noise Figure	_	5 - 1000 MHz	dB	_	_	4.5
Reverse Transmission	_	5 - 1000 MHz	dB	_	-36	-32
VSWR	_	5 - 1000 MHz	Ratio	_	_	2.0:1
Output IP ₂	Two-Tone inputs up to 0 dBm	5 - 1000 MHz	dBm	+28	_	_
Output IP ₃	Two-Tone inputs up to 0 dBm	5 - 1000 MHz	dBm	+18	_	_
Vbias	_	_	VDC	+14.5	+15.0	+15.5
Ibias	Vbias = +15.0 VDC	_	mA	_	44	50
Power Dissipation	@ +15 V Bias	_	mW	_	660	_

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

Solutions has under development. Performance is based on engineering tests. Specifications are

typical. Mechanical outline has been fixed. Engineering samples

Commitment to produce in volume is not du

^{3.} Heat Sinking: Operation at case temperature above 95°C is not recommended. Heat sinking adequate to dissipate 800 mW must be provided in use.

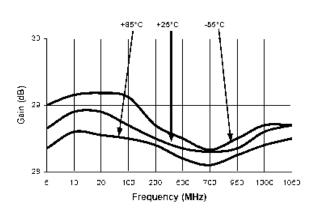


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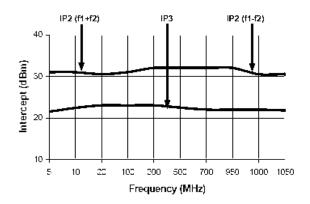
Typical Performance Curves

Gain vs. Frequency

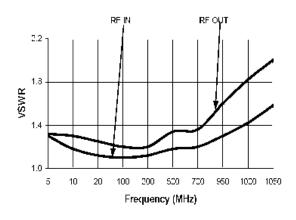


Noise Figure +85°C 3.5 Noise Figure (dB) 200 500 700 1000 1050 Frequency (MHz)

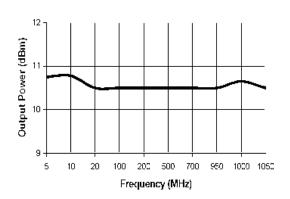
Intermodulation Intercept



VSWR vs. Frequency



1 dB Compression



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