

Electronics

Cascadable Thin Film Amplifier, 12 dB Gain, 10 - 1000 MHz

Features

- +22 dBm Typical High 1 dB Compression
- +38 dBm Typical High Third Order Intercept
- 1.2:1 Typical VSWR

Description

M/A-COM's AM-177 is a 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-177 is ideally suited for use where a high intercept, high reliability amplifier is required.



 Dimensions in O and in m

 Unless Differentise Notest XXX = ±0,00 (XX = ±0,25) .XX = ±0,02 (X = ±0,25)

 VEIGHT («ΥΥΡΙΟΝ) 0.10 DUNCES 2.0 (30445)

Electrical Specifications: ^{1,2} T_A = -55°C to +85°C Case Temperature

Parameter	Test Conditions	Frequency	Units	Min.	Тур.	Max.
Gain	@+25°C	500 MHz	dB	11.5	12.0	12.5
Frequency Response	—	10 - 1000 MHz	dB	—	—	±0.5
Gain Variation with Temperature		10 - 1000 MHz	dB	-	_	+0.8
1 dB Compression	Output Power	10 - 1000 MHz	dBm	+20	—	_
Noise Figure	_	10 - 1000 MHz	dB	_	_	8.5
Reverse Transmission	_	10 - 1000 MHz	dB	_	-16	-14
VSWR	_	10 - 1000 MHz	Ratio	—	—	2.0:1
Output IP ₂	Two-Tone inputs up to 0 dBm	10 - 1000 MHz	dBm	+42	_	_
Output IP ₃	Two-Tone inputs up to 0 dBm	10 - 1000 MHz	dBm	+30	_	_
Vbias	_	_	VDC	+14.5	+15.0	+15.5
Ibias	Vbias = +15.0 VDC	_	mA	—	105	115
Power Dissipation	@ +15 V Bias	_	mW	_	1575	_

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

2. Heat Sinking: Operation at case temperature above 95°C is not recommended. Heat sinking adequate to dissipate 1.75W must be provided in use.

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1

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AM-177 V3



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AM-177 V3

Typical Performance Curves







Intermodulation Intercept



Ordering Information

2

Part Number	Package		
AM-177 PIN ³	TO-8-1		

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



1 dB Compression



Absolute Maximum Ratings ⁴

Parameter	Absolute Maximum		
Max. Input Power	+20 dBm		
Vbias	+15.75 V		
Operating Temperature	-55°C to +85°C		
Storage Temperature	-65°C to +125°C		

4. Operation of this device above any one of these parameters may cause permanent damage.

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