Maccon High Performance Amplifier, 20 dB Gain, 10 - 200 MHz



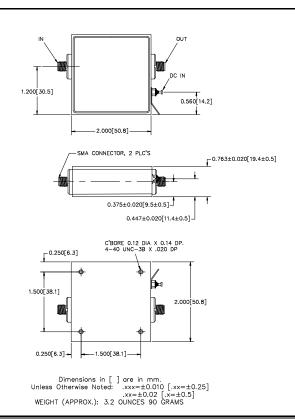
Features

- +49 dBm Typical Midband Third Order Intercept
- +29 dBm Typical Midband 1 dB Compression
- 4.8 dB Typical Midband Noise Figure

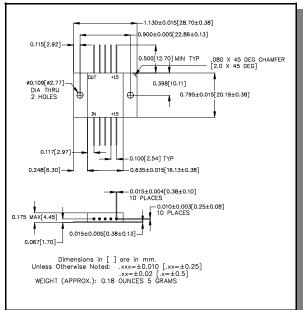
Description

M/A-COM's AM-136 is a coupler feedback amplifier with high intercept and compression points. The use of coupler feedback minimizes noise figure and current in a high intercept amplifier. This amplifier is packaged in a flatpack with flanges. 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-136 is ideally suited for use where a high intercept, high reliability amplifier is required.

C-25



FP-9



Absolute Maximum Ratings¹

Parameter	Absolute Maximum		
Max. Input Power	+15 dBm		
V_{bias}	+17.0 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 damange.

Pin Configuration

Pin #	Function	Pin #	Function
1	RF OUT	6	RF IN
2	GND	7	GND
3	GND	8	GND
4	GND	9	GND
5	Vbias ²	10	Vbias ²

2. Bias may be applied to either a single bias pin, or both bias pins. If bias is applied to both bias pins, it is important that potential ground loops be avoided, and that there is adequate filtering on the bias lines.

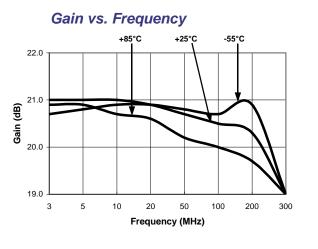
Electrical Specifications ^{3,4} $T_A = -55^{\circ}C$ to +85°C Case Temperature						
Parameter	Test Conditions	Frequency	Units	Min.	Тур.	Max.
Gain	50 MHz @ +25°C	50 MHz	dB	19.2	20.4	20.8
Frequency Response	—	10 - 200 MHz	dB	_	_	±0.8
Gain Variation with Temperature	—	10 - 200 MHz	dB		—	±1.0
1 dB Compression	Output Power	10 - 200 MHz 10 - 70 MHz	dBm dBm	+23 +25	_	_
Noise Figure	—	10 - 200 MHz	dB	—	—	7.0
Reverse Transmission	_	10 - 200 MHz	dB	—	-28	-26
VSWR	—	10 - 200 MHz 10 - 70 MHz	Ratio Ratio	—		2.5:1 1.7:1
Output IP ₂	Two-tone inputs up to +10 dBm	10 - 200 MHz 10 - 70 MHz	dBm dBm	+53 +57	—	_
Output IP ₃	Two-tone inputs up to +10 dBm	10 - 200 MHz 10 - 70 MHz	dBm dBm	+36 +44	_	_
Vbias	—	_	V	14.25	15	15.75
Ibias	Vbias = +15.0 VDC	_	mA	_	180	220
Power Dissipation	@ +15V Bias	—	W		2.7	_

Electrical Specifications^{3,4} T FEOC to 1950C Case Ton

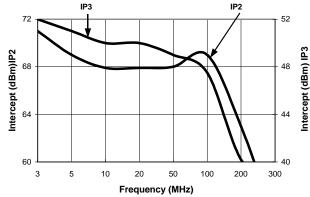
3. All specifications apply when operated at +15 VDC, with 50 ohms source and load impedance.

4. Heat Sinking: Operation at case temperature above 95°C is not recommended. Heat sinking adequate to dissipate 3.5W must be provided in use. The flange should be screwed down to the heat sink, which should be RF ground.

Typical Performance Curves



Intermodulation Intercept



Specifications subject to change without notice.

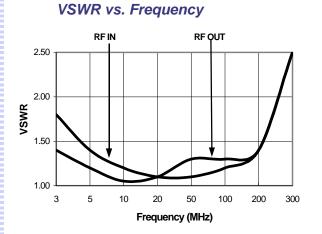
- North America: Tel. (800) 366-2266
- Asia/Pacific: Tel.+81-44-844-8296, Fax +81-44-844-8298
- Europe: Tel. +44 (1344) 869 595, Fax+44 (1344) 300 020

Visit www.macom.com for additional data sheets and product information.

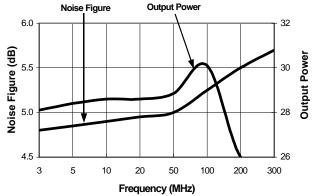


V 5.00

Typical Performance Curves



Noise Figure and 1 dB Compression



Ordering Information

Part Number	Package
AM-136 PIN	FP-9
AMC-136 SMA	C-25

Specifications subject to change without notice.

- North America: Tel. (800) 366-2266
- Asia/Pacific: Tel.+81-44-844-8296, Fax +81-44-844-8298
- Europe: Tel. +44 (1344) 869 595, Fax+44 (1344) 300 020

Visit www.macom.com for additional data sheets and product information.

