

## Features

- 2.5 dB Typical Midband Noise Figure
- +23 dBm Typical 1 dB Compression Point
- +32 dBm Typical Third Order Intercept

## Description

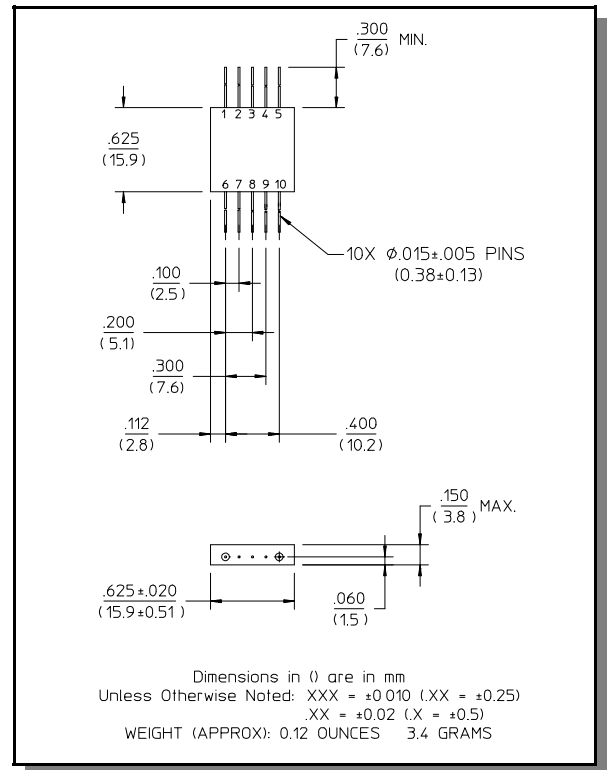
M/A-COM's AM-191 is a coupler feedback amplifier with high intercept and compression points. The use of coupler feedback minimizes noise figure and current in a high intercept amplifier. This amplifier is packaged in a flatpack. Due to the internal power dissipation the thermal rise minimized. The ground plane on the PC board should be configured to remove heat from under the package. AM-191 is ideally suited for use where a low noise, high reliability amplifier is required.

## Absolute Maximum Ratings <sup>1</sup>

Parameter	Absolute Maximum
Max. Input Power	+10 dBm
V <sub>bias</sub>	+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.

## FP-3



## Electrical Specifications <sup>2,3</sup> T<sub>A</sub> = -55°C to +85°C Case Temperature

Parameter	Test Conditions	Frequency	Units	Min.	Typ.	Max.
Gain	@ +25°C	250 MHz	dB	23.0	23.5	24.0
Frequency Response	—	100-600 MHz	dB	—	—	±1.0
Gain Variation with Temperature	—	100-600 MHz	dB	—	—	±1.0
1 dB Compression	Output Power	100-600 MHz	dBm	+20	—	—
Noise Figure	—	100-600 MHz	dB	—	—	4.5
Reverse Transmission	—	100-600 MHz	dB	—	-30	-28
VSWR	—	100-600 MHz 200-500 MHz	Ratio Ratio	—	—	2.5:1 2.0:1
Output IP <sub>2</sub>	Two-tone inputs up to +10 dBm	100-600 MHz	dBm	+38	—	—
Output IP <sub>3</sub>	Two-tone inputs up to +10 dBm	100-600 MHz	dBm	+28	—	—
V <sub>bias</sub>	—	—	VDC	+14.5	+15.0	+15.5
I <sub>bias</sub>	V <sub>bias</sub> = +15.0 VDC	—	mA	—	77	95
Power Dissipation	@ +15V Bias	—	mW	—	1155	—

2. All specifications apply when operated at +15 VDC, with 50 ohms source and load impedance.  
 3. Heat Sinking: Operation at case temperature above 95°C is not recommended. Heat sinking adequate to dissipate 1.25 W must be provided in use.

### S-Parameter Data

Frequency (MHz)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
100	0.33	-115.7	14.54	-143.3	0.02	-143.4	0.20	-171.1
150	0.25	-128.6	15.35	167.9	0.02	-168.5	0.25	121.6
200	0.17	-148.7	15.32	133.1	0.02	-130.5	0.27	8.5
250	0.16	-165.8	15.47	103.0	0.01	96.3	0.29	-43.6
300	0.16	177.3	15.07	76.5	0.01	63.3	0.29	-79.5
350	0.17	165.0	14.37	51.7	0.01	30.8	0.26	-109.7
400	0.18	157.2	14.16	27.6	0.01	0.9	0.24	-140.3
500	0.21	176.3	14.33	-17.6	0.02	-44.7	0.21	-4.6
600	0.30	-174.0	15.11	-68.9	0.02	-86.9	0.23	-59.4

### Pin Configuration

Pin No.	Function	Pin No.	Function
1	RF OUT	6	RF IN
2	GND	7	GND
3	GND	8	GND
4	GND	9	GND
5	VDC	10	GND

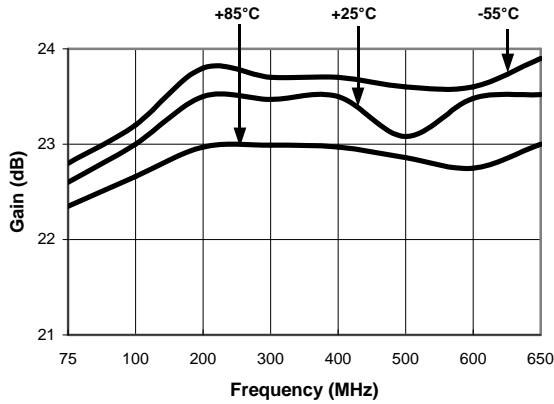
Specifications subject to change without notice.

- 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

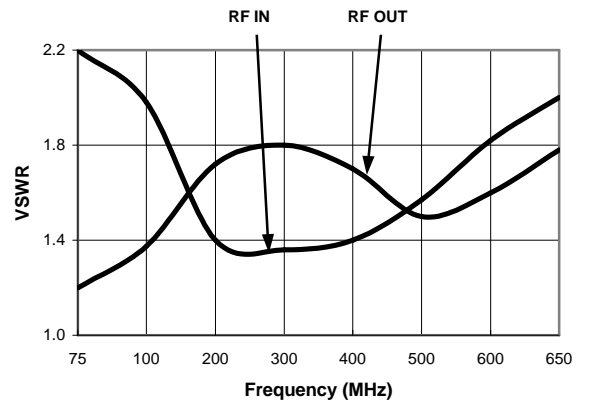
Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.

Typical Performance Curves

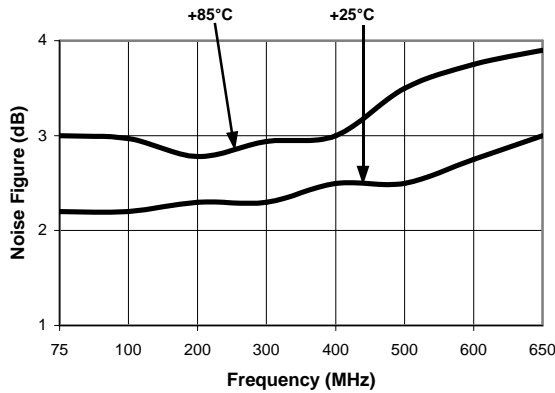
Gain vs. Frequency



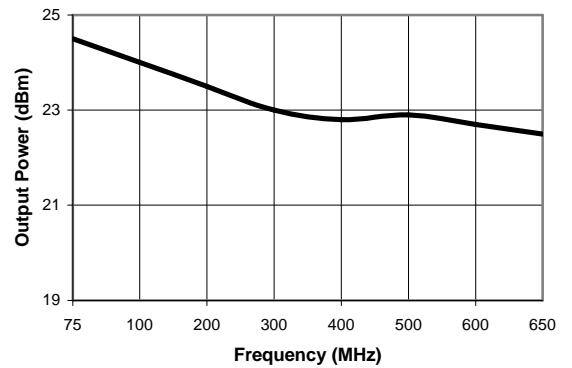
VSWR vs. Frequency



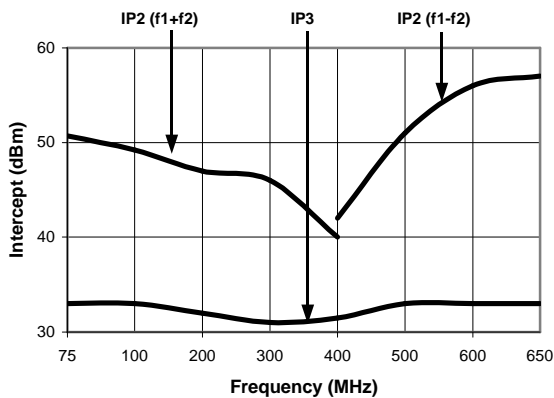
Noise Figure



1 dB Compression



Intermodulation Intercept



Ordering Information

Part Number	Package
AM-191 PIN	Flatpack

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](http://www.macom.com) for additional data sheets and product information.