

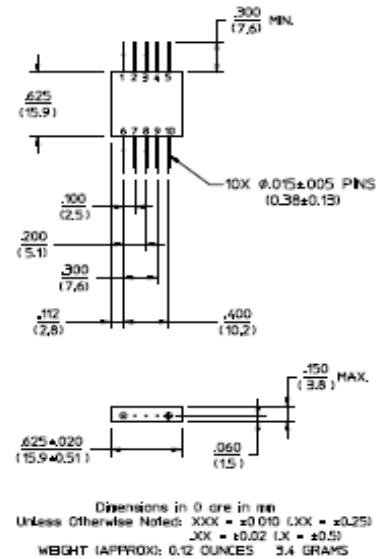
Features

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

FP-3

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.



Electrical Specifications: ^{1,2} T_A = -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 ₂	Two-Tone inputs up to +10 dBm	100 - 600 MHz	dBm	+38	—	—
Output IP ₃	Two-Tone inputs up to +10 dBm	100 - 600 MHz	dBm	+28	—	—
V _{bias}	—	—	VDC	+14.5	+15.0	+15.5
I _{bias}	V _{bias} = +15.0 VDC	—	mA	—	77	95
Power Dissipation	@ +15 V Bias	—	mW	—	1155	—

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 1.25W must be provided in use.

S-Parameter Data

Frequency (MHz)	S11 MAG/ANG	S21 MAG/ANG	S12 MAG/ANG	S22 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

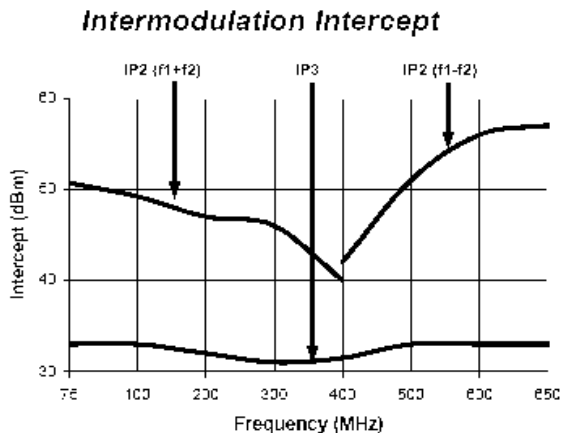
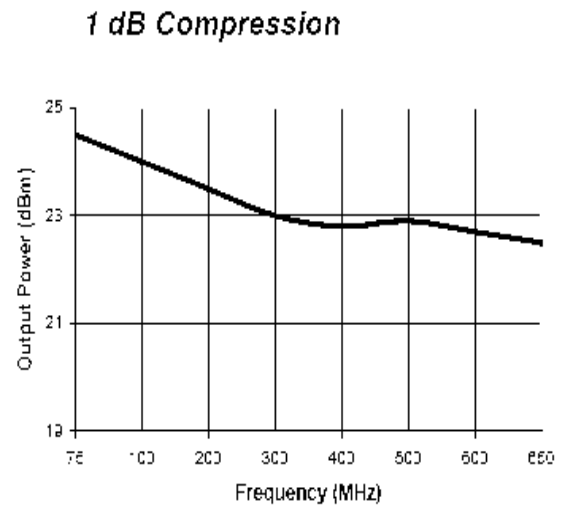
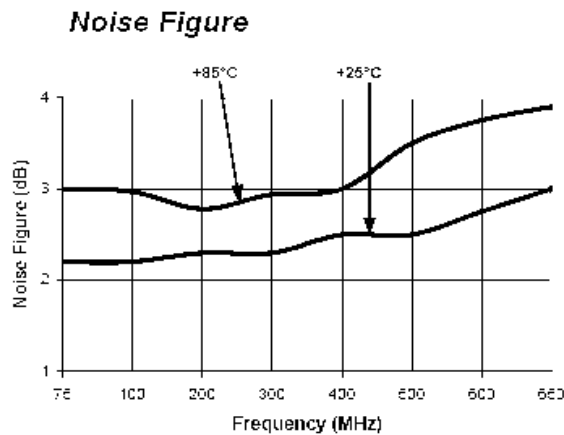
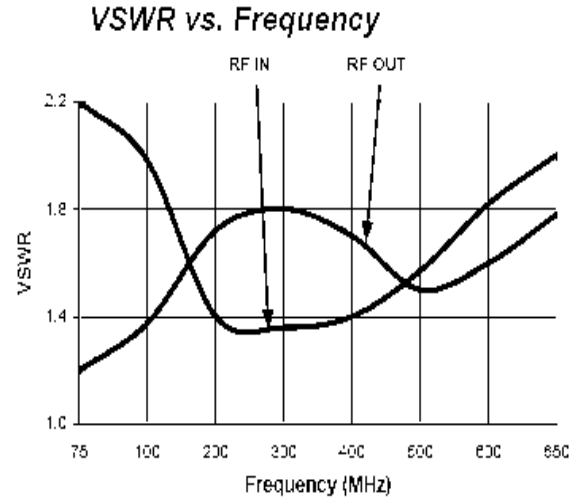
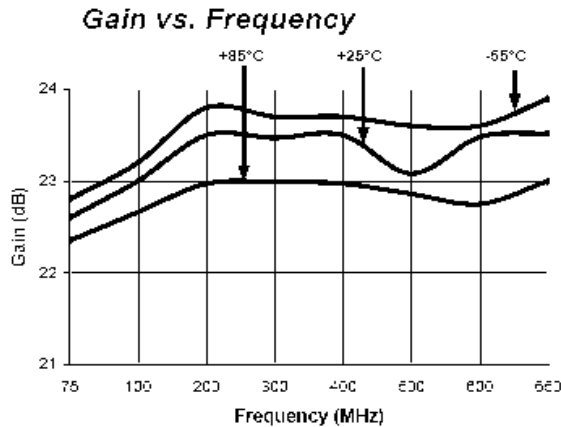
Pin No.	Function	Pin No.	Function
1	RF OUT	6	RF IN
2	GND	7	GND
3	GND	8	GND
4	GND	9	GND
5	VDC	10	GND

Absolute Maximum Ratings ³

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

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

Typical Performance Curves



Ordering Information

Part Number	Package
AM-191 PIN	Flatpack