

Features

- HIGH POWER OUTPUT: +21 dBm (TYP.)
- HIGH THIRD ORDER IP3: +35 dBm (TYP.)
- HIGH EFFICIENCY: 52 mA (TYP.) @ +15 Vdc

Description

M/A-COM's MAAM-009503-AM147A 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 TO-8-1 package. Due to the internal power dissipation, the thermal rise is minimized. The ground plane on the PC board should be configured to remove heat from under the package. The MAAM-009503-AM147A is ideally suited for use where a high intercept, high reliability amplifier is required.

Ordering Information

Part Number	Package
MAAM-009503-AM147A	TO-8-1

Product Image



Absolute Maximum Ratings *

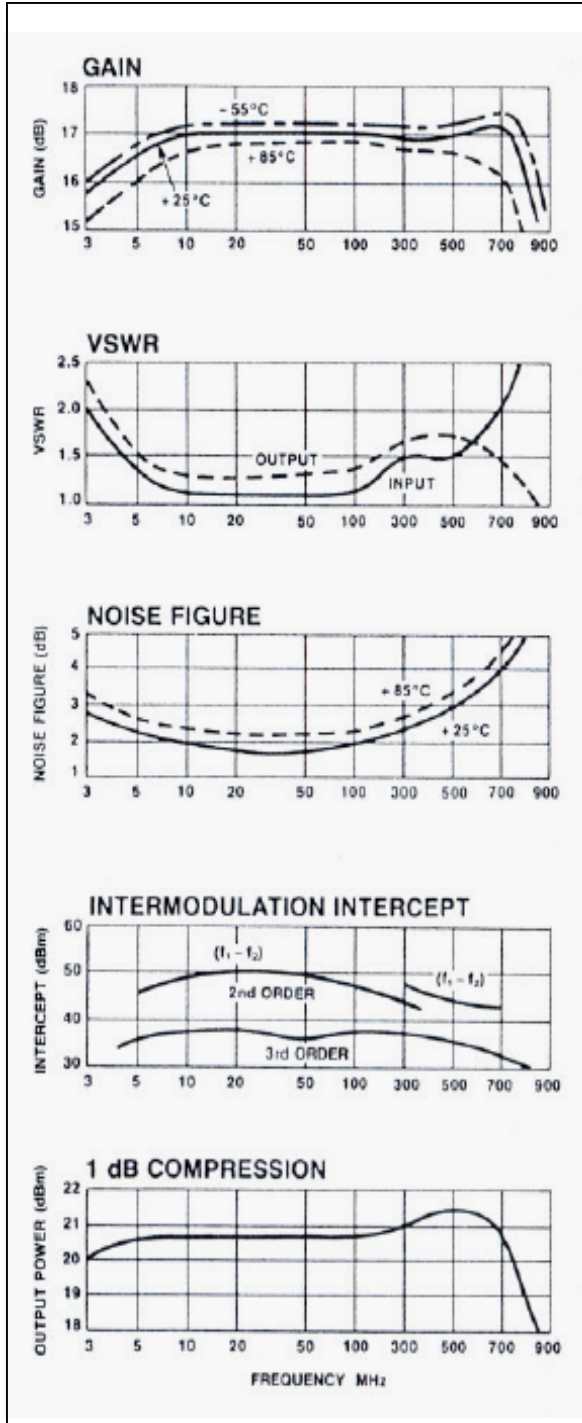
Parameter	Absolute Maximum
Max. Input Power	+10 dBm
Vbias	+15.75 V
Operating Temperature	-55°C to +85°C
Storage Temperature	-65°C to +125°C

*HEAT SINKING: Operation at case temperature above +95°C is not recommended. Heat sinking adequate to dissipate 0.75 watts must be provided in use.

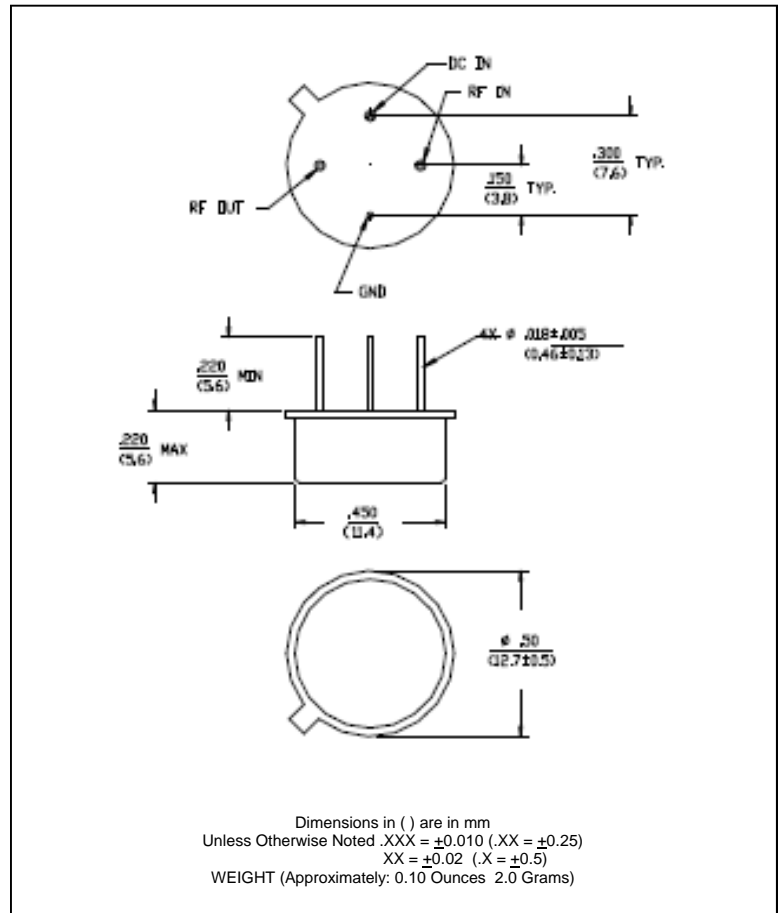
Electrical Specifications: $Z_0 = 50\Omega$, $V_{CC} = +15 V_{DC}$

Parameter	Units	Typical	Guaranteed	
		25°C	0° to 50°C	-54° to +85°C*
Frequency	MHz	3-500	5-500	5-500
Small Signal Gain (min)	dB	17.0	16.0	15.5
Gain Flatness (max)	dB	±0.4	±0.8	±1.0
Reverse Isolation	dB	20.0	16.0	
Noise Figure (max)	dB	3.5	4.0	4.5
Power Output @ 1 dB comp. (min)	dBm	21.0	20.0	19.0
IP3	dBm	+35		
IP2	dBm	+45		
VSWR Input / Output (max)		1.5:1 / 1.5:1	1.9:1 / 1.9:1	2.0:1 / 2.0:1
DC Current @ 15 Volts (max)	mA	52	56	60

Typical Performance Curves at +25°C



Outline Drawing: TO-8-1



Typical S-Parameter Data @ +25°C

FREQUENCY	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
5.0	0.19	-68.2	6.75	-153.1	0.09	-152.0	0.20	-21.0
10.0	0.11	-78.1	7.05	-167.3	0.09	-168.0	0.12	-22.9
20.0	0.07	-83.8	7.17	-176.4	0.10	-177.7	0.10	-13.5
50.0	0.06	-95.0	7.15	171.4	0.10	170.1	0.09	-1.9
100.0	0.07	-100.1	7.14	159.2	0.10	156.7	0.10	2.6
200.0	0.11	-122.1	7.17	136.3	0.11	130.3	0.13	3.8
300.0	0.14	-141.7	7.08	114.7	0.11	108.4	0.14	-5.5
400.0	0.15	-166.3	7.16	91.0	0.11	86.6	0.17	-19.9
500.0	0.17	164.6	7.24	67.9	0.12	66.5	0.19	-38.9