

Wide Band GaAs MMIC Amplifier

0.2 - 3.0 GHz

MAAM02350-A2

V 2.00

Features

- High Gain: 18 dB
- Output Power: +14 dBm
- Good Noise Figure: 4 dB
- Single Supply: +6 V
- Gain Flatness: ± 0.75 dB
- Small, Low Cost 8-Lead Ceramic Package

Description

M/A-COM's MAAM02350-A2 is a wide band, MMIC amplifier housed in a small 8-lead ceramic package. It includes two integrated gain stages and employs resistive feedback to obtain flat gain and a good, 50-ohm, input and output impedance match over a very wide bandwidth. The MAAM02350-A2 operates from a single +6 V supply. It is fully monolithic, requires no external components, and is provided in a low-cost, user-friendly, microwave package.

The MAAM02350-A2 functions well as a generic IF, driver or buffer amplifier where high gain, low noise figure, excellent linearity and low power consumption are important. Because of its wide bandwidth, the MAAM02350-A2 can be used in numerous commercial and government system applications, such as wireless communications, EW and radar.

The MAAM02350-A2 is manufactured in-house using a reliable, 0.5-micron, GaAs MESFET process. This product is 100% RF tested to ensure compliance to performance specifications.

Electrical Specifications

Test Conditions: $T_A = +25^\circ\text{C}$, $Z_0 = 50 \Omega$, $V_{DD} = +6 \text{ V}$, $P_{IN} = -30 \text{ dBm}$

Parameter	Units	Min.	Typ.	Max.
Gain	dB	16	18	
Noise Figure	dB		4.0	4.5
Gain Flatness	dB		± 0.5	
Input VSWR			1.7:1	
Output VSWR			1.3:1	
Output 1 dB Compression	dBm		+14	
Input IP_3	dBm		+6	
Reverse Isolation	dB		30	
Bias Current	mA		65	100

Specifications Subject to Change Without Notice.

11-24

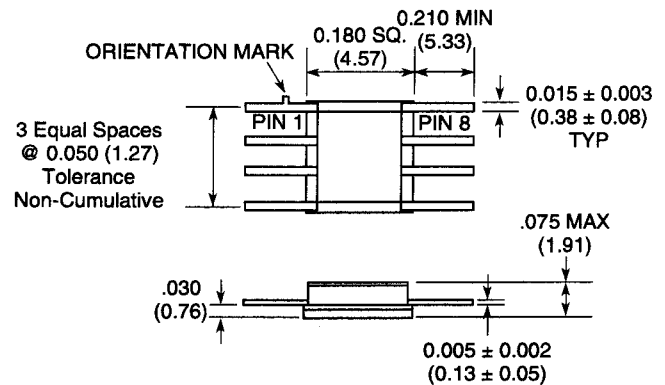
M/A-COM, Inc.

North America: Tel. (800) 366-2266
Fax (800) 618-8883

Asia/Pacific: Tel. +81 (03) 3226-1671
Fax +81 (03) 3226-1451

Europe: Tel. +44 (1344) 869 595
Fax +44 (1344) 300 020

CR-3



Bottom of case is AC ground.
Dimensions in () are in mm.
Unless Otherwise Noted: .xxx = ± 0.010 (.xx = ± 0.25)
.xx = ± 0.02 (.x = ± 0.5)

Ordering Information

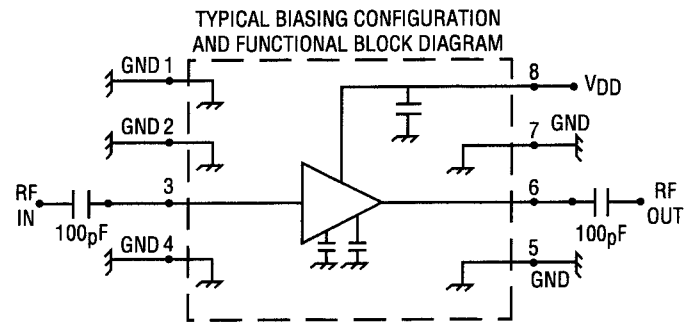
Part Number	Package
MAAM02350-A2	8-Lead Ceramic
MAAM02350-A2G	Gull Wing

Absolute Maximum Ratings¹

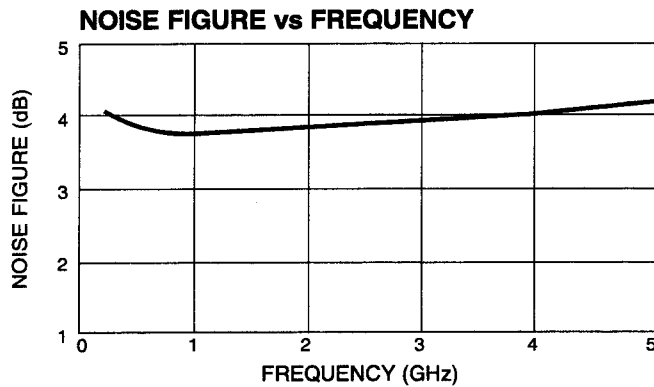
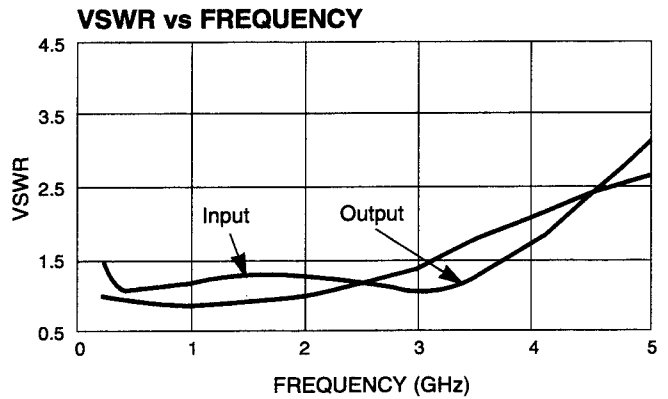
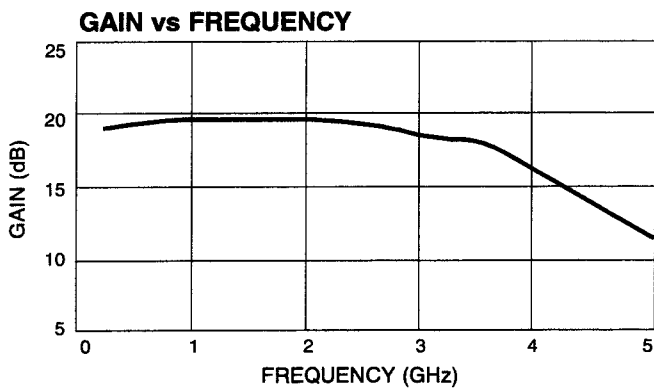
Parameter	Absolute Maximum
V _{DD}	+10 volts
Input Power	+20 dBm
Current	150 mA
Channel Temperature	+150°C
Operating Temperature ²	-55°C to +100°C
Storage Temperature	-65°C to +150°C

1. Operation of this device outside these limits may cause permanent damage.
2. Typical thermal resistance (θ_{jc}) = +80°C/W

Schematic



Typical Performance @ +25°C



Specifications Subject to Change Without Notice.

M/A-COM, Inc.

11-25

North America: Tel. (800) 366-2266
Fax (800) 618-8883

Asia/Pacific: Tel. +81 (03) 3226-1671
Fax +81 (03) 3226-1451

Europe: Tel. +44 (1344) 869 595
Fax +44 (1344) 300 020