



# Preliminary Specifications

## GaAs MMIC Power Amplifier 2 - 6 GHz

### MAAM26100-P1

V1.A

### Features

- +30 dBm Saturated Output Power
- 18 dB Typical Gain
- 30% Power Added Efficiency
- On-Chip Bias Network
- DC Decoupled RF Input and Output
- High Performance Ceramic Bolt Down Package

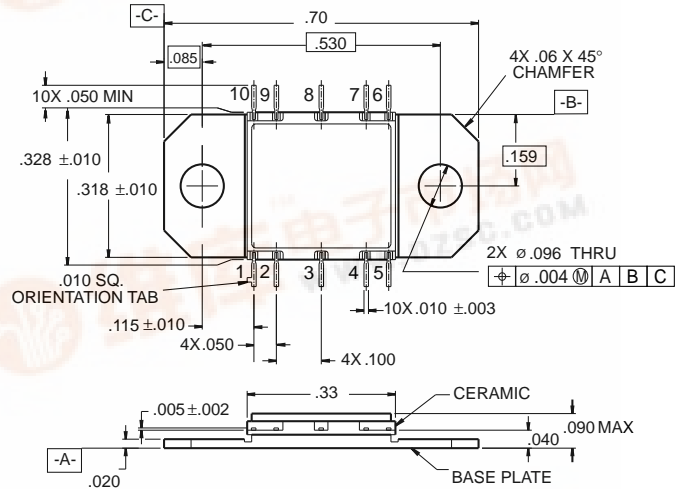
### Description

M/A-COM's MAAM26100-P1 is a GaAs MMIC two stage high efficiency power amplifier in a high performance bolt down ceramic package. The MAAM26100-P1 is a fully monolithic design for operation in 50-ohm systems, with an on-chip negative bias network which eliminates the need for external bias circuitry.

The MAAM26100-P1 is ideally suited for driver amplifiers and transmitter outputs in Electronic Warfare Jammers, Missile Subsystems and Phased Array Radars.

M/A-COM's MAAM26100-P1 is fabricated using a mature 0.5-micron gate length GaAs process. The process features full passivation for increased performance reliability.

### CR-15



- Notes: (unless otherwise specified)
1. Dimensions are inches.
  2. Tolerance: in .xxx = ±.010

### Ordering Information

Part Number	Package
MAAM26100-P1	Ceramic Bolt Down

### Typical Electrical Specifications, $T_A = +25^\circ\text{C}$ , $V_{DD} = +8\text{ V}$ , $V_{GG} = -5\text{ V}$

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Small Signal Gain	$P_{IN} \leq -10\text{ dBm}$ 2 - 6 GHz	dB		18	
Input VSWR	$P_{IN} \leq -10\text{ dBm}$ 2 - 6 GHz			2.0:1	
Output VSWR	$P_{IN} \leq -10\text{ dBm}$ 2 - 6 GHz			2.2:1	
Output Power	$P_{IN} = +15\text{ dBm}$ 2 - 6 GHz	dBm		+30	
Power Added Efficiency	$P_{IN} = +15\text{ dBm}$ 2 - 6 GHz	%		30	
Output $IP_3$	2, 5 & 6 GHz	dBm		40	

The Preliminary Specifications Data Sheet Contains Typical Electrical Specifications Which May Change Prior to Final Introduction.

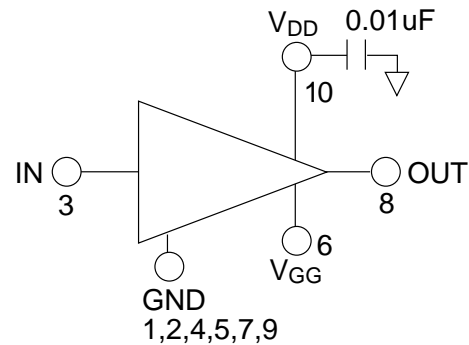


**Absolute Maximum Ratings<sup>1,2</sup>**

Parameter	Absolute Maximum
V <sub>DD</sub>	10 Volts
V <sub>GG</sub>	-10 Volts
Power Dissipation	8.4 W
RF Input Power	+23 dBm
Channel Temperature	150°C
Storage Temperature	-65°C to +150°C
Thermal Resistance (Channel to Case)	15°C/W

1. Exceeding these limits may cause permanent damage.
2. Case Temperature (T<sub>c</sub>) = +25°C

**Functional Diagram<sup>3,4</sup>**



3. Nominal bias is obtained by first connecting -5 volts to pin 6 (V<sub>GG</sub>), followed by connecting +9 volts to pin 10 (V<sub>DD</sub>). Note sequence.
4. RF ground and thermal interface is the flange (case bottom). Adequate heat sinking is required.

**Typical Performance @+25°C**

