PA2003

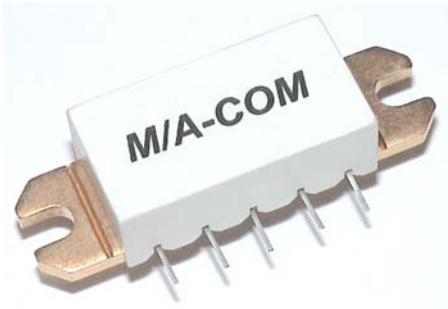
Ultra Linear Driver Amplifier
1800 to 2000 MHz

Rev. V4

Features

- LOW NOISE FIGURE: 2.7 dB (TYP.)
- GAIN: 21 dB (TYP.)
- HIGH P1dB: +32.5 dBm (TYP.)
- HIGH IP^3: +46 dBm (TYP.)
- BROADBAND RESPONSE: 1.5 GHz TO 2.2 GHz (TYP.)

Product Image



Description

The PA2003 is a discrete hybrid design, which uses thick film solder manufacturing processes for accurate performance and high reliability.
This 2 stage GaAS FET transistor design uses feedback loops for flat broadband linear performance, with low noise figure.
The model is particularly suited for power driver applications used in the base station & repeater infrastructure, and for commercial & military radios.

Ordering Information

Part Number	Package
PA2003	Flange Mount Carrier

Electrical Specifications: Z_0 = 50Ω, V_{CC} = +12 V_{DC}

Parameter	Units	Typical	Gurarnteed
		25ºC	0ºC to +70ºC
Frequency	MHz	1800-2000	1800-2000
Small Signal Gain (min)	dB	21.3	19.0
Gain Flatness (max)	dB	± 0.25	± 0.5
Noise Figure (max)	dB	2.7	3.3
Reverse Isolation	dB	37.0	
Power Output @ 1.0 dB Comp. (min.)	dBm	+32.5	+31.5
Output IP^3	dBm	+46.0	
VSWR Input / Output (max.)		1.6:1 / 1.8:1	2.0:1 / 2.0:1
DC Current @ +12 Volts (max.)	mA	495	520

Absolute Maximum Ratings

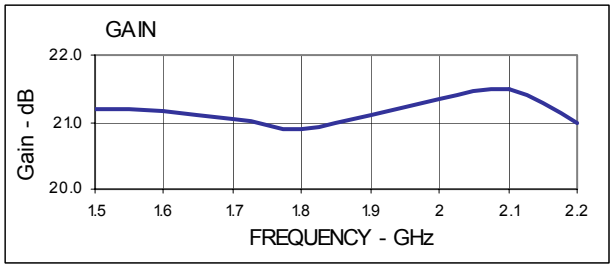
Parameter	Absolute Maximum
Storage Temperature	-40ºC to +85ºC
Operation Base Temperature	+70ºC
Max. DC Voltage	+15 Vdc
Max. Continuous RF Input Power	+15 dBm

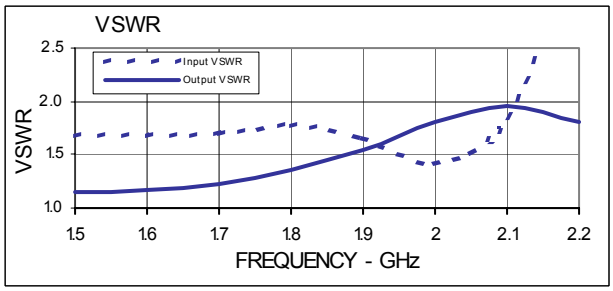
Thermal Data: V_{CC} = +12 V_{DC}

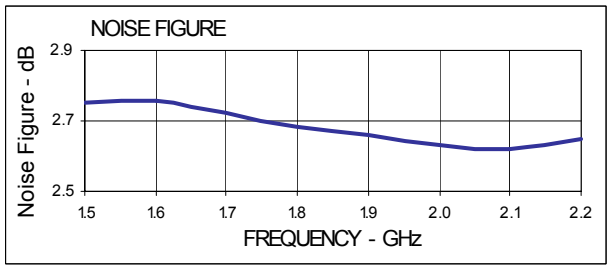
Parameter	Rating
Thermal Resistance θ_{jc}	22ºC/W
Junction Temperature Rise Above Case T_{jc}	51ºC

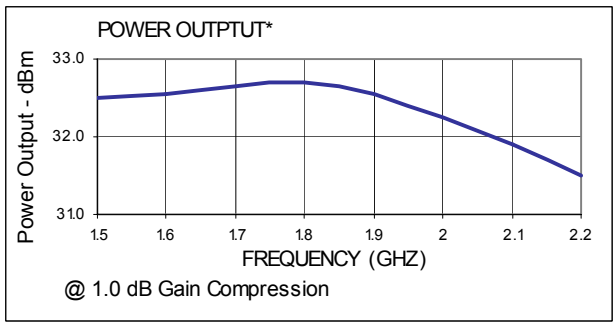
• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400
• **India** Tel: +91.80.4155721 • **China** Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.

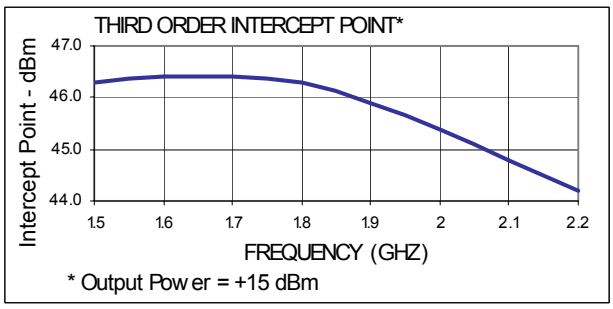
Typical Performance Curves at +25°C



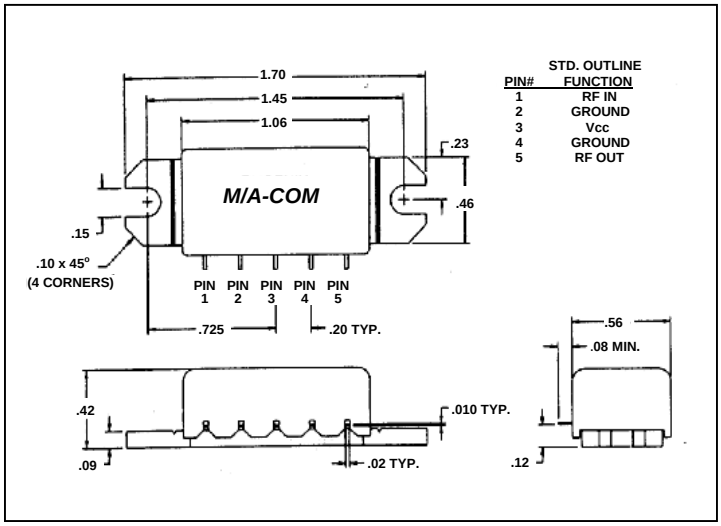








Outline Drawing: Flange Mount Carrier *



* Dimensions are inches ± 0.015 unless otherwise specified.

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