

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 IP³: +46 dBm (TYP.)
- BROADBAND RESPONSE: 1.5 GHz TO 2.2 GHz (TYP.)

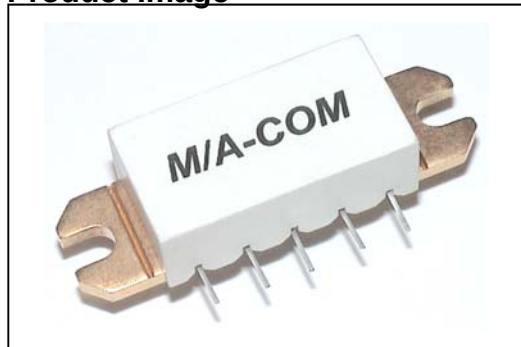
Description

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.

Product Image



Ordering Information

Part Number	Package
PA2003	Flange Mount Carrier

Electrical Specifications: Z₀ = 50Ω, V_{CC} = +12 V_{DC}

Parameter	Units	Typical	Guaranteed
		25°C	0°C to +70°C
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	-40°C to +85°C
Operation Base Temperature	+70°C
Max. DC Voltage	+15 Vdc
Max. Continuous RF Input Power	+15 dBm

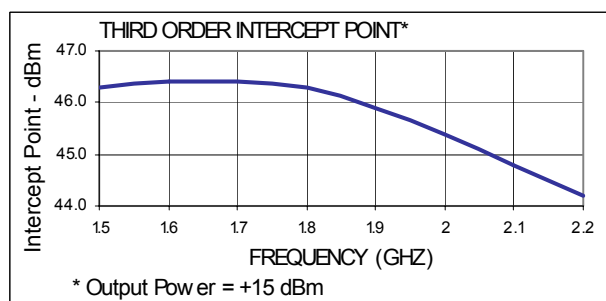
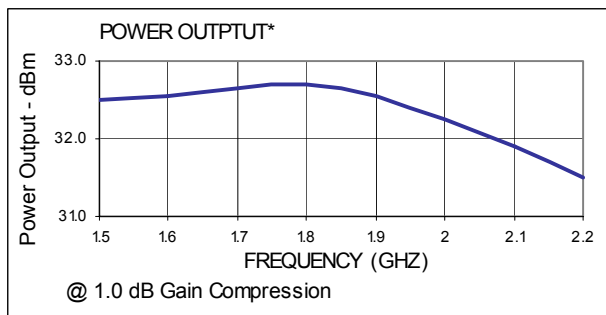
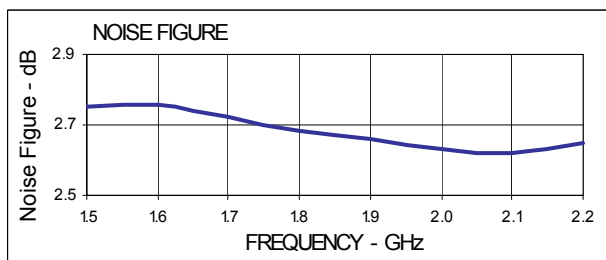
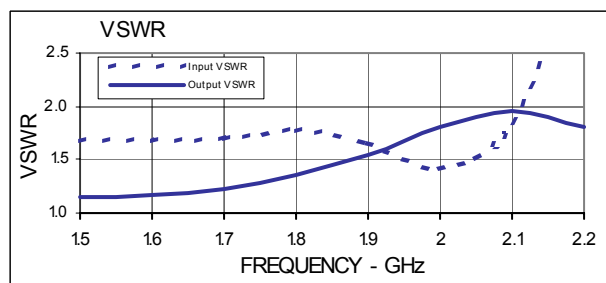
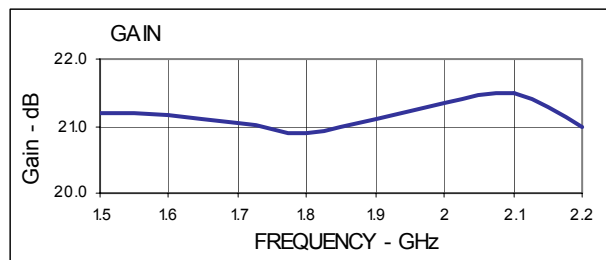
Thermal Data: V_{CC} = +12 V_{DC}

Parameter	Rating
Thermal Resistance θ _{JC}	22°C/W
Junction Temperature Rise Above Case T _{JC}	51°C

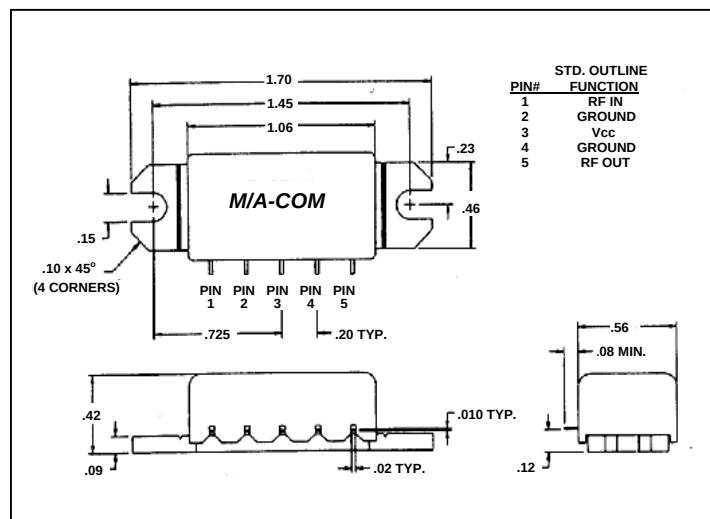
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Typical Performance Curves at +25°C



Outline Drawing: Flange Mount Carrier *



* Dimensions are inches ± 0.015 unless otherwise specified.