

Cascadable Amplifier 10 to 1500 MHz

Rev. V5

Features

- HIGH GAIN - TWO STAGES: 20.5 dB (TYP.)
- HIGH OUTPUT LEVEL: +15 dBm (TYP.)
- LOW VSWR: <1.4:1 (TYP.)

Description

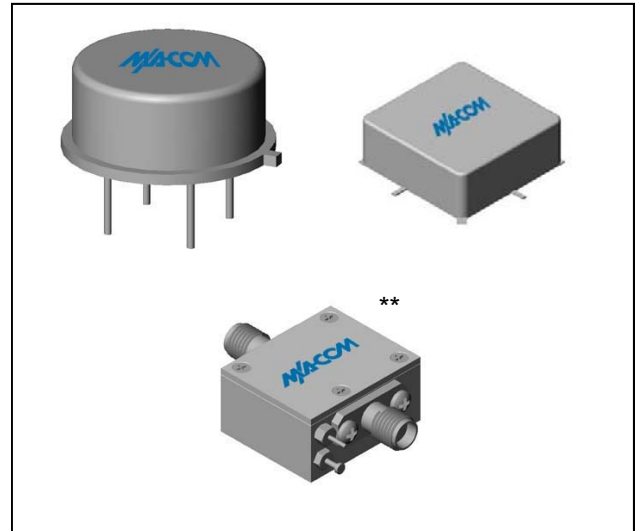
The A26 RF amplifier is a discrete hybrid design, which uses thin film manufacturing processes for consistent performance and high reliability.

This 2 stage bipolar transistor feedback amplifier design displays impressive performance over a broadband frequency range. An active DC biasing network insures temperature-stable performance. Both TO-8 and Surface Mount packages are hermetically sealed, and MIL-STD-883 environmental screening is available.

Ordering Information

Part Number	Package
A26	TO-8
SMA26	Surface Mount
CA26	SMA Connectorized **

Product Image



** The connectorized version is not RoHs compliant.

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 ¹
Frequency	MHz	10-1600 ²	10-1500 ²	10-1500 ²
Small Signal Gain (min)	dB	20.5	19.0	18.5
Gain Flatness (max)	dB	±0.4	±0.6	±0.8
Reverse Isolation	dB	28		
Noise Figure (max)	dB	5.0	5.5	6.0
Power Output 10-1000MHz @ 1 dB comp. (min)	dBm	14.0	+13.0	+12.50
Power Output 1000-1500MHz @ 1 dB comp. (min)	dBm	16.0	+15.0	+14.50
IP3	dBm	+27		
IP2	dBm	+45		
Second Order Harmonic IP	dBm	+51		
VSWR Input / Output (max)		1.4:1 / 1.4:1	1.7:1 / 1.7:1	2.0:1 / 2.3:1
DC Current @ 15 Volts (max)	mA	64	67	70

Absolute Maximum Ratings

Parameter	Absolute Maximum
Storage Temperature	-62°C to +125°C
Case Temperature	+125°C
DC Voltage	+17 V
Continuous Input Power	+10 dBm
Short Term Input power (1 minute max.)	100 mW
Peak Power (3 µsec max.)	0.5 W
"S" Series Burn-In Temperature (case)	+125°C

Thermal Data: $V_{CC} = +15 V_{DC}$

Parameter	Rating
Thermal Resistance θ_{jc}	145°C/W
Transistor Power Dissipation P_d	0.394 W
Junction Temperature Rise Above Case T_{jc}	+57°C

1. Over temperature performance limits for part number CA26, guaranteed from 0°C to +50°C only.
2. Specifications apply across frequency range unless otherwise specified

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

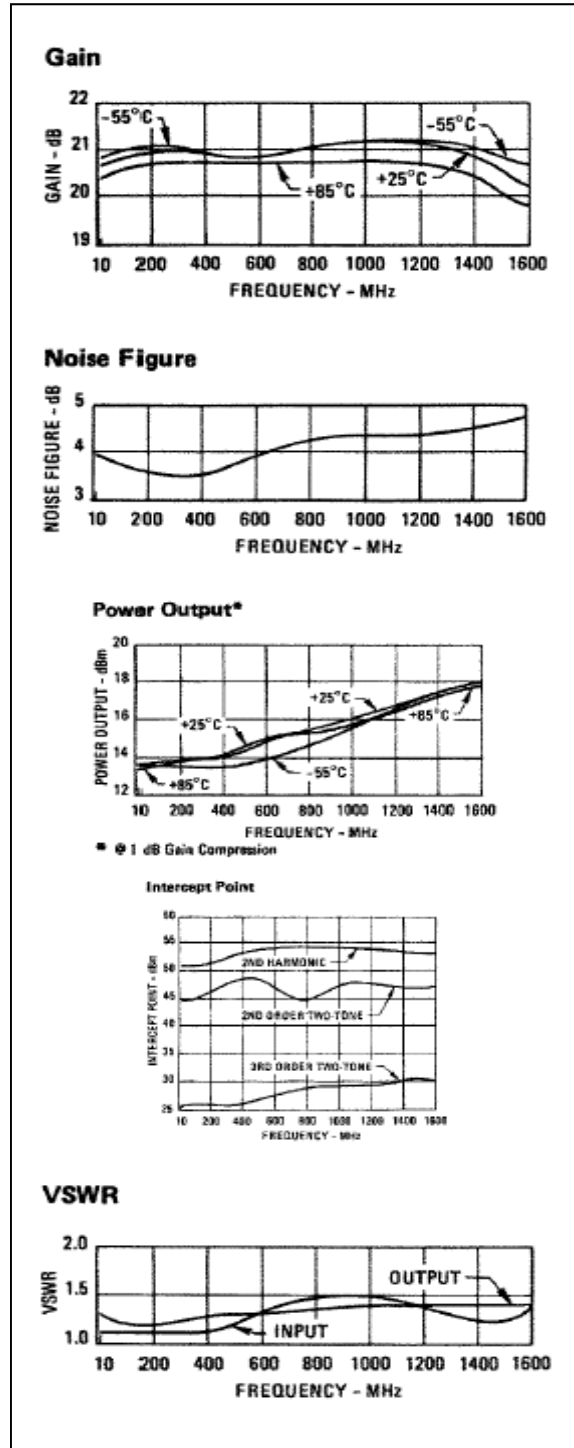
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 Visit www.macomtech.com for additional data sheets and product information.

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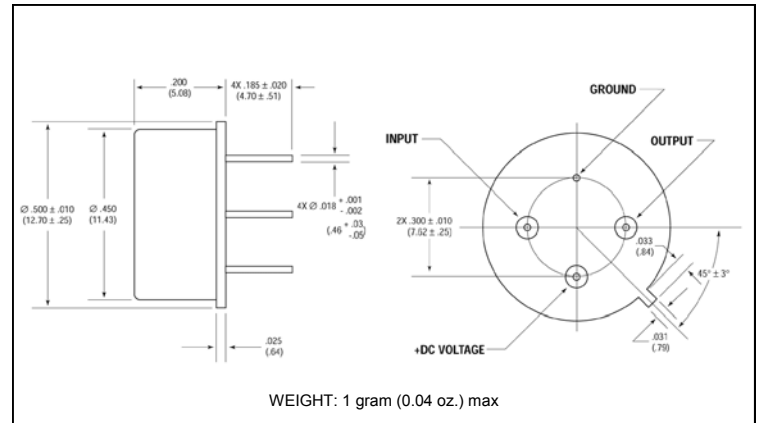
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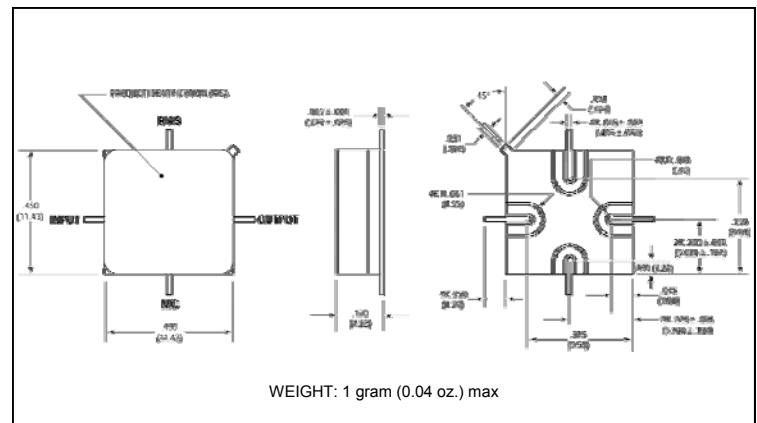
Typical Performance Curves at +25°C



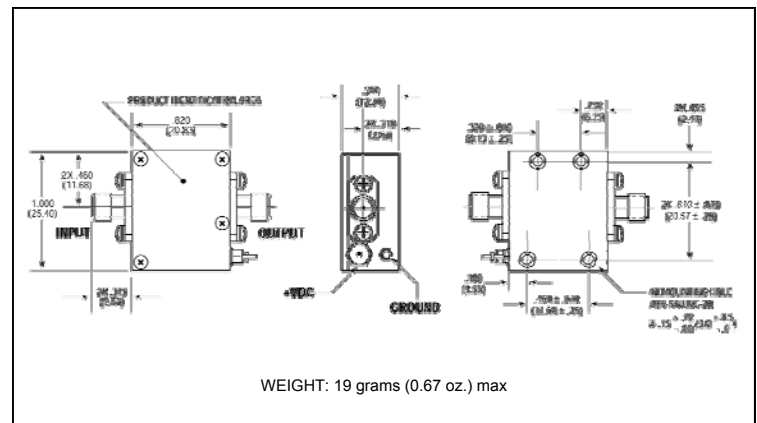
Outline Drawing: TO-8 *



Outline Drawing: Surface Mount *



Outline Drawing: SMA Connectorized *



* Dimensions are inches (millimeters) ± 0.015 (0.38) unless otherwise specified.