

# **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**

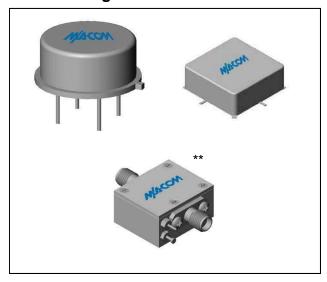
The A26 RF amplifier is a discrete hybrid design, which uses thin film manufacturing processes for consistent performance and high reliability.

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**



<sup>\*\*</sup> The connectorized version is not RoHs compliant.

# Electrical Specifications: $Z_0 = 50\Omega$ , $V_{CC} = +15 V_{DC}$

Danamatan		Typical	Guaranteed	
Parameter	Units	25°C	0º to 50ºC	-54º to +85ºC¹
Frequency	MHz	10-1600 <sup>2</sup>	10-1500 <sup>2</sup>	10-1500 <sup>2</sup>
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 $\theta_{jc}$	145°C/W
Transistor Power Dissipation P <sub>d</sub>	0.394 W
Junction Temperature Rise Above Case T <sub>jc</sub>	+57°C

- Over temperature performance limits for part number CA26, guaranteed from 0°C to +50°C only.
- Specifications apply across frequency range unless otherwise specified ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions

• India Tel: +91.80.4155721

• China Tel: +86.21.2407.1588

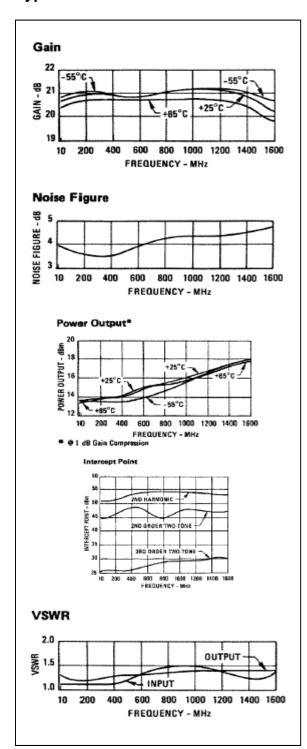
<sup>•</sup> North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400



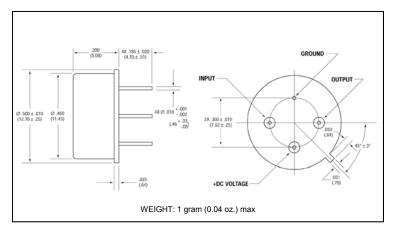
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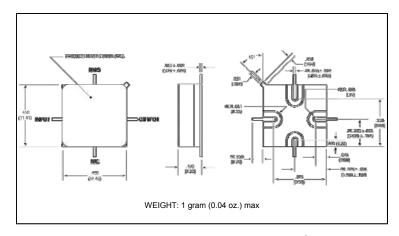
### Typical Performance Curves at +25℃



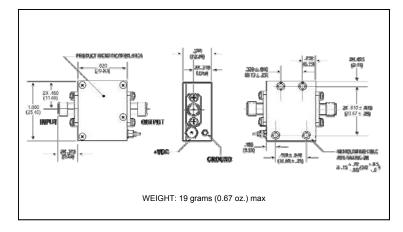
## Outline Drawing: TO-8 \*



## **Outline Drawing: Surface Mount**



# Outline Drawing: SMA Connectorized \*



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

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