

Cascadable Amplifier 10 to 1500 MHz

RA26/SMRA26

V2

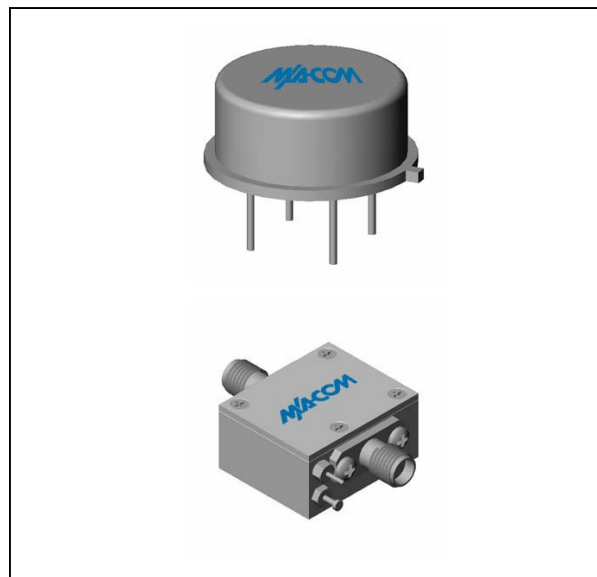
Features

- HIGH GAIN-THREE STAGES 27.5 dB (TYP.)
- MEDIUM OUTPUT LEVEL +14.5 dB (TYP.)
- HIGH THIRD-ORDER I.P. +27 dBm (TYP.)
- HIGH REVERSE ISOLATION >40 dB (TYP.)

Description

The RA26 RF amplifier is a discrete hybrid design, which uses thin film manufacturing processes for consistent performance and high reliability. This 3 stage bipolar transistor feedback amplifier design displays impressive performance over a broadband frequency range. An active DC biasing network insures temperature-stable performance. The TO-8B package is hermetically sealed, and MIL-STD-883 environmental screening is available. The device is also available in an SMA connectorized housing assembly, which can be purchased as a self assembly kit.

Product Image



Ordering Information

Part Number	Package
RA26	TO-8B
CRA26	SMA Connectorized

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*
Frequency	MHz	5-1550	10-1500	10-1500
Small Signal Gain (min)	dB	27.5	26.0	25.0
Gain Flatness (max)	dB	±0.4	±0.8	±1.2
Reverse Isolation	dB	42		
Noise Figure (max)	dB	5.5	6.0	6.5
Power Output @ 1 dB comp. (min)	dBm	14.5	13.5	12.5
IP3	dBm	+27		
IP2	dBm	+37		
Second Order Harmonic IP	dBm	+41		
VSWR Input / Output (max)		1.6:1 / 1.6:1	1.9:1 / 1.9:1	2.0:1 / 2.0:1
DC Current @ 15 Volts (max)	mA	82	85	87

Absolute Maximum Ratings

Parameter	Absolute Maximum
Storage Temperature	-62°C to +125°C
Case Temperature	125°C
DC Voltage	+17 V
Continuous Input Power	+6 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: $V_{CC} = +15 V_{DC}$

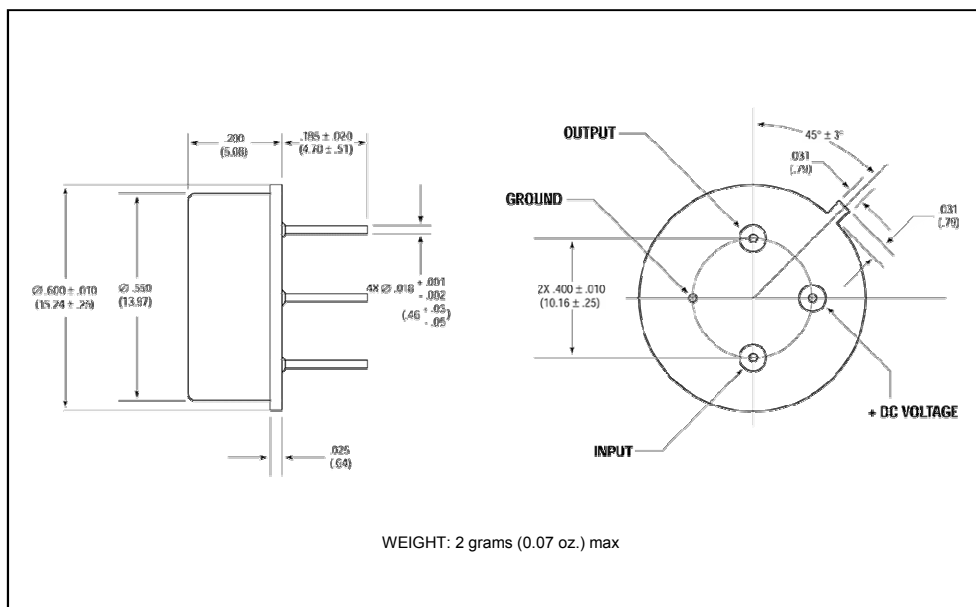
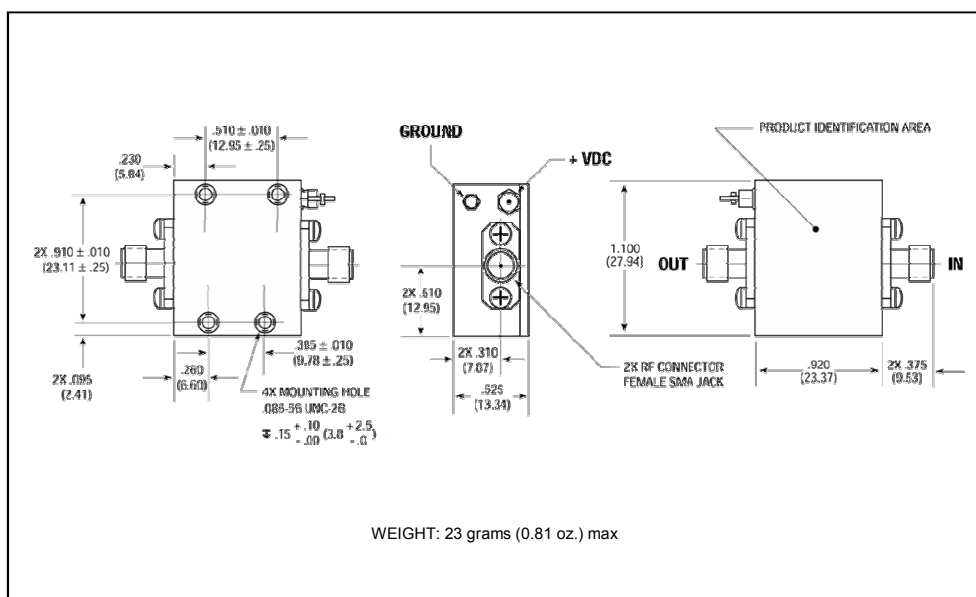
Parameter	Rating
Thermal Resistance θ_{jc}	45°C/W
Transistor Power Dissipation P_d	0.292 W
Junction Temperature Rise Above Case T_{jc}	13°C

* Over temperature performance limits for part number CRA26, guaranteed from 0°C to +50°C only.

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

Outline Drawing: TO-8B *

Outline Drawing: SMA Connectorized *


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