



Cascadable Amplifier 5 to 1500 MHz

A25 / SMA25

V2

Features

- MEDIUM OUTPUT LEVEL: +9 dBm (TYP.)
- WIDE POWER SUPPLY RANGE: +8 TO +15 VOLTS

Description

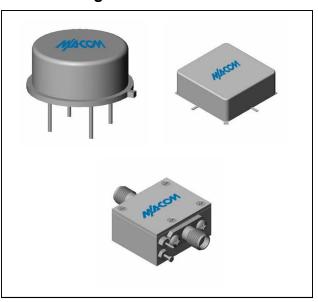
The A25 RF amplifier is a discrete hybrid design, which uses thin film manufacturing processes for accurate performance and high reliability.

This single stage bipolar transistor feedback amplifier design displays impressive performance over a broadband frequency range. Both TO-8 and Surface Mount packages are Hermetically sealed, and MIL-STD-883 environmental screening is available.



Part Number	Package		
A25	TO-8		
SMA25	Surface Mount		
CA25	SMA Connectorized		

Product Image



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

Parameter	Units	Typical	Guaranteed	
Parameter		25°C	0° to 50°C	-54° to +85°C*
Frequency	MHz	1-1600	5-1500	5-1500
Small Signal Gain (min)	dB	10.0	9.0	8.0
Gain Flatness (max)	dB	±0.3	±0.6	±1.0
Reverse Isolation	dB	20		
Noise Figure (max)	dB	6.0	7.5	8.0
Power Output @ 1 dB comp. (min)	dBm	9.0	7.0	6.5
IP3	dBm	+21		
IP2	dBm	+33		
Second Order Harmonic IP	dBm	+38		
VSWR Input / Output (max)		1.5:1 / 1.5:1	2.0:1 / 2.0:1	2.1:1 / 2.1:1
DC Current @ 15 Volts (max)	mA	24	27	29

Absolute Maximum Ratings

Parameter	Absolute Maximum	
Storage Temperature	-62°C to +125°C	
Case Temperature	+125°C	
DC Voltage	+17 V	
Continuous Input Power	+13 dBm	
Short Term Input power (1 minute max.)	50 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	0.183 W	
Junction Temperature Rise Above Case T _{jc}	+8°C	

^{*} Over temperature performance limits for part number CA25, guaranteed from 0°C to +50°C only.

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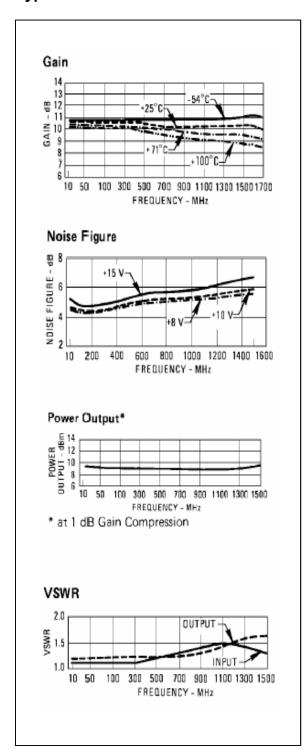


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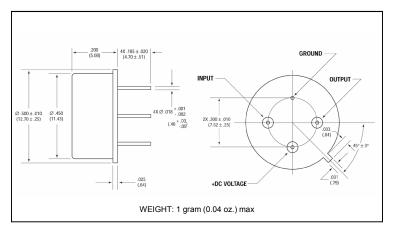
A25 / SMA25

V2

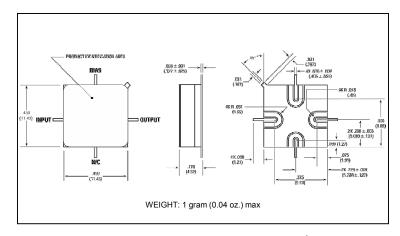
Typical Performance Curves at +25°C



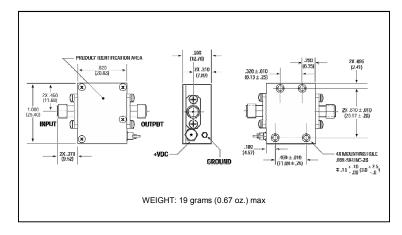
Outline Drawing: TO-8 *



Outline Drawing: Surface Mount



Outline Drawing: SMA Connectorized *



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