

## RF Amplifier

- \* Operating Frequency : 10-500 MHz.
- \* Gain : 16 dB.
- \* High IP3 37 dBm.
- \* High IP2 60 dBm.
- \* No external components required

### ELECTRICAL SPECIFICATION @ VDD= +12 VDC; Temp. = 25°C, 50Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	10		500	MHz.
Gain	G	15	16	18	dB.
Gain Flatness	Δ G		±0.3	±0.5	dB.
Noise Figure	N.F.		2.5	3	dB.
Output Power	P 1dB	25	23		dBm.
Two Tone Intercept @ 15dBm output per tone	IP3	35	37		dBm.
Two Tone Intercept @ 15dBm output per tone	IP2	56	60		dBm.
VSWR in/out	S11/S22		1.6:1	1.8:1	Ratio
Operating Voltage	Vdc		12		Volt
Operating Current	Id		200	220	mA.

### MECHANICAL SPECIFICATION

Parameter	Description	Limits	Units
Dimension	Flatpack		
Cooling	None		
Monitor Connector	None		

### PROTECTION

	Max	
RF Input Power	15	dBm.
Reverse Polarity Protection	N/A	
Load VSWR	Infinite up to 1W	
Stability	100% Tested	

### ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min.	Typ.	Max.	Units
Operating Case Temperature	Tc	- 40		70	°C
Storage Temperature	Tstg	- 55C		120°C	°C

3009 Old State Rd, Telford, PA 18969

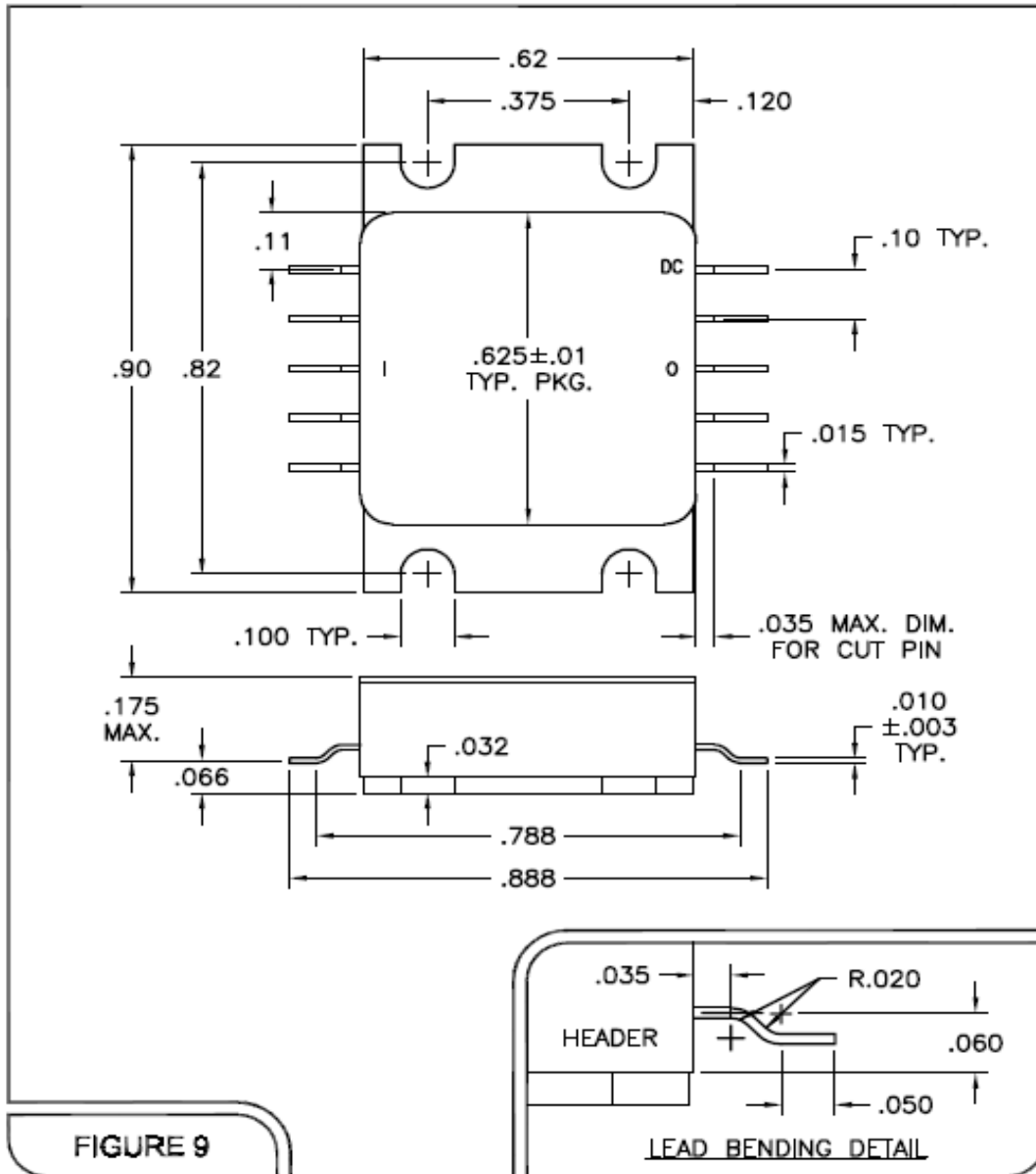
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<b>DESCRIPTION:</b>
<b>ASC2456      +25°C</b>

TEST	LIMITS / SN	ACTUAL DATA
GAIN 10 MHz TO 500 MHz	15.0 dB min	16.1
	18.0 dB max	16.3
GAIN FLATNESS 10 MHz TO 500 MHz	± 0.5 dB max	±0.1
DC CURRENT AT +12 Vdc	220.0 mA max	200
Out Of Band Gain. Not To Exceed In Band Gain	2.0 dB max	0
INPUT VSWR 10 MHz TO 500 MHz	1.8 : 1 max	1.51
OUTPUT VSWR 10 MHz TO 500 MHz	1.8 : 1 max	1.49
NOISE FIGURE 10 MHz TO 500 MHz	3.0 dB max	2.33
P1.0 dB COMPRESSION 10 MHz TO 500 MHz	25.0 dBm min	25.8
IP2 WITH POUT=15.0 dBm EACH TONE 1) F1-F2=500MHz-480MHz, Fc=20MHz 2) F1+F2=20MHz+480MHz, Fc=500MHz	56.0 dBm min	64.0
IP3 WITH POUT=15.0 dBm EACH TONE 1) F1/F2=11/12 MHz, Fc=10/13 MHz 2) F1/F2=250/251 MHz, Fc=249/252 MHz 3) F1/F2=498/499 MHz; Fc=497/500 MHz	35.0 dBm min	39.0
Maximum Input power: no significant change in NF after +15 dBm @500 MHz applied to RF input	NO CHANGE	NC
SPURIOUS RESPONSE	ACCEPT/REJECT	AC
STABILITY TEST FOR ALL FREQUENCY RANGE WHERE [S21] > 0 dB	0 dB max	<0

Outline Drawing

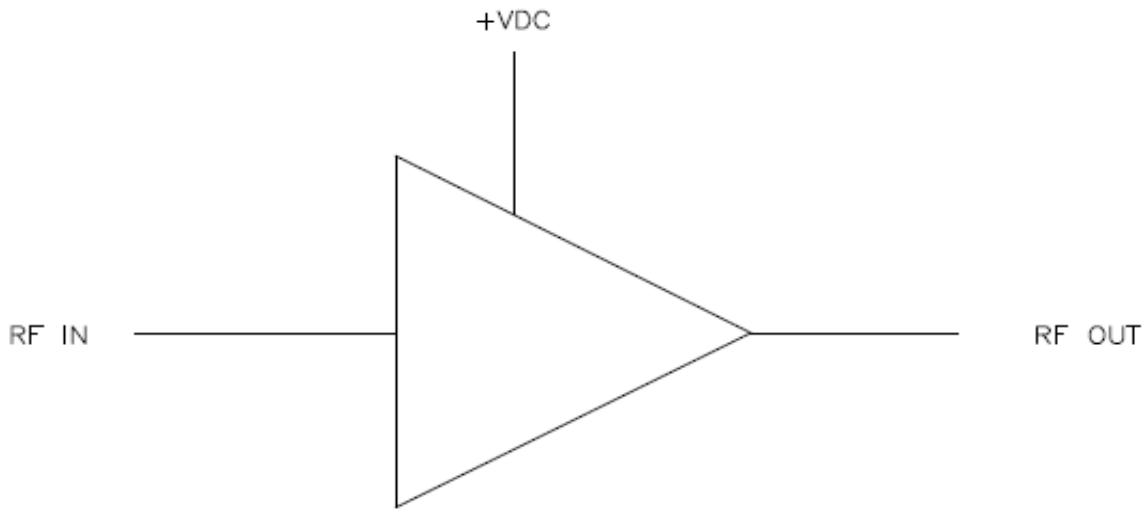


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FUNCTIONAL BLOCK DIAGRAM



NO EXTERNAL COMPONENT REQUIRED