

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

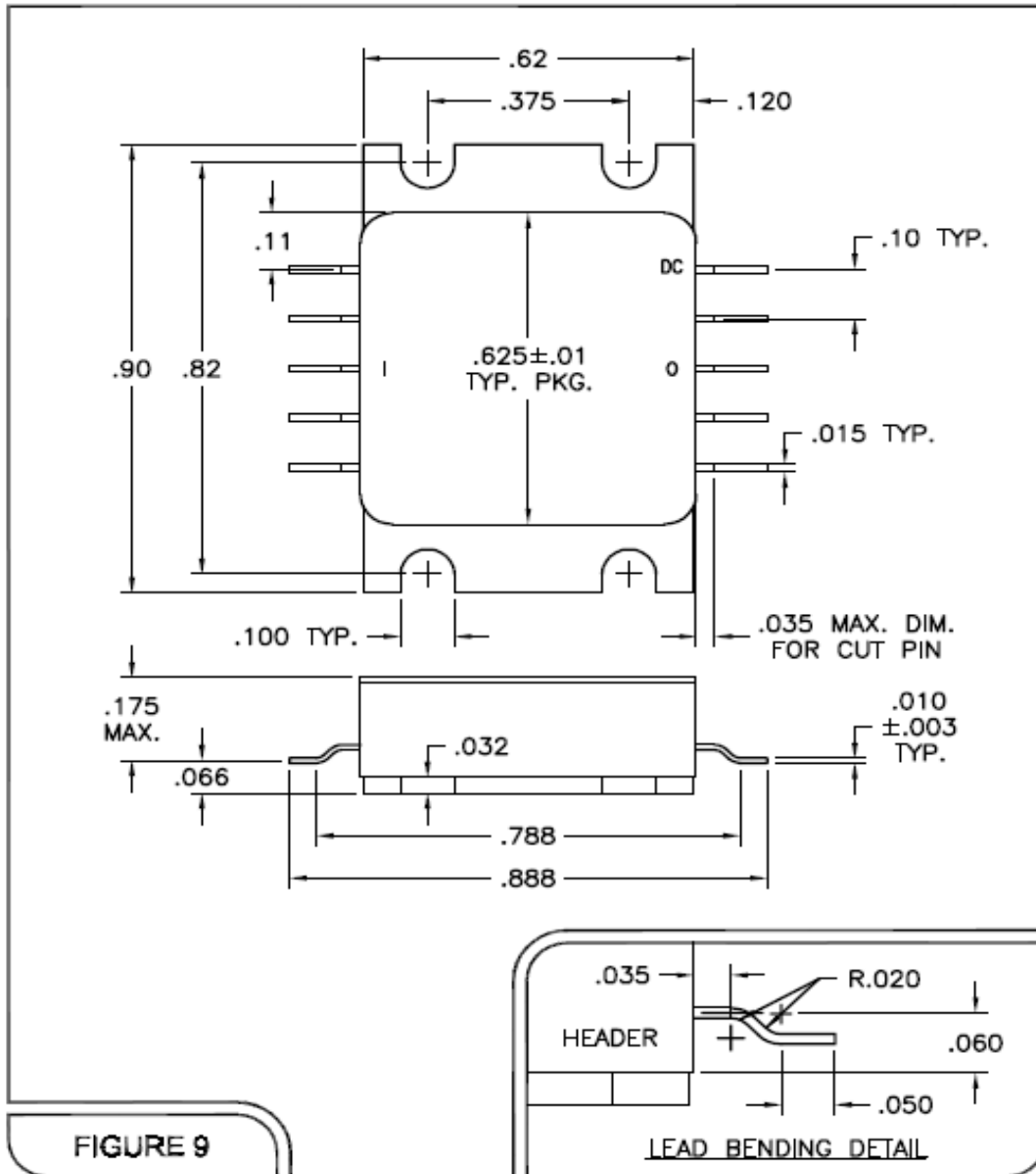
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DESCRIPTION: ASC2456 +25°C
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TEST	LIMITS / SN	ACTUAL DATA
GAIN 10 MHz TO 500 MHz	15.0 dB min	16.1
	18.0 dB max	16.3
GAIN FLATNESS 10 MHz TO 500 MHz	± 0.5 dB max	±0.1
DC CURRENT AT +12 Vdc	220.0 mA 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

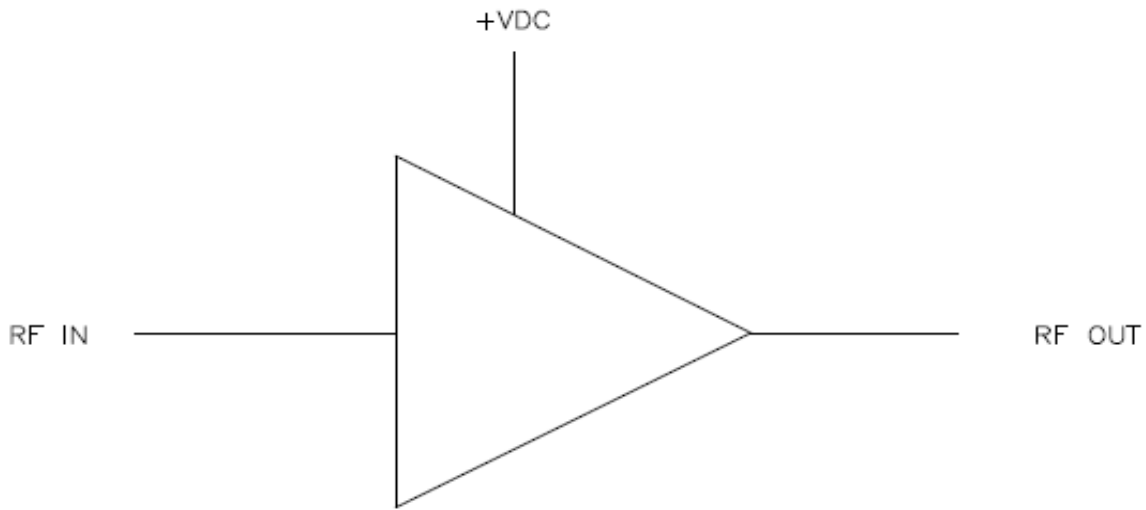


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FUNCTIONAL BLOCK DIAGRAM



NO EXTERNAL COMPONENT REQUIRED