

## RF Amplifier

- \* Operating Frequency :1-50 MHz.
- \* Linear Power : +29 dBm.
- \* Saturated Power : +32 dBm.
- \* Noise Figure : 3.5 dB.
- \* Gain : 19 dB.
- \* No external components required



**Description:** Designed for linear application in the 1-50MHz range. This amplifier utilizes bi-polar transistors that provide high gain, wide dynamic range and excellent 2nd & 3rd OIP.  
**Suggested applications:** Multicarrier, Pulse, AM&FM modulation

### ELECTRICAL SPECIFICATION @ VDD= +15 VDC; Temp. = 25°C, 50Ω System

Parameter	Symbol	Min	Type	Max	Unit
Operating Frequency	BW	1		50	MHz.
Gain	G	17	19		dB.
Gain Flatness	Δ G		±0.25	± 0.5	dB.
Noise Figure	NF		3.5	5	dB.
Power Output P1dB	P1dB	28	29		dBm.
Output 3rd Order Intercept Point	OIP3	43	46		dBm.
Output 2nd Order Intercept Point	OIP2	85	90		dBm.
VSWR in/out	S11/S22		1.4 :1	1.6 :1	Ratio
Operating Voltage	Vdc		15		Volt
Operating Current	Id		220	240	mA.

### MECHANICAL SPECIFICATION

Parameter	Description	Limits	Units
Dimension	1.0 x 1.0 x 0.375		In.
RF Connectors IN/OUT	SMA-F Field Replaceable		
DC Connector	Filtered Solder Feed Thru		
Cooling	none		

### PROTECTIONS

RF Input Power	18 dBm.	Max	
Reverse Polarity Protection	Option		
Load VSWR	Infinite up to 1W		
Stability	100% Tested		

### ENVIROMENTAL CHARACTERISTICS

Parameter	Symbol	Min.	Type.	Max.	Units
Operating Case Temperature	Tc	0°C		70°C	°C
Storage Temperature	Tstg	- 40C		120°C	°C

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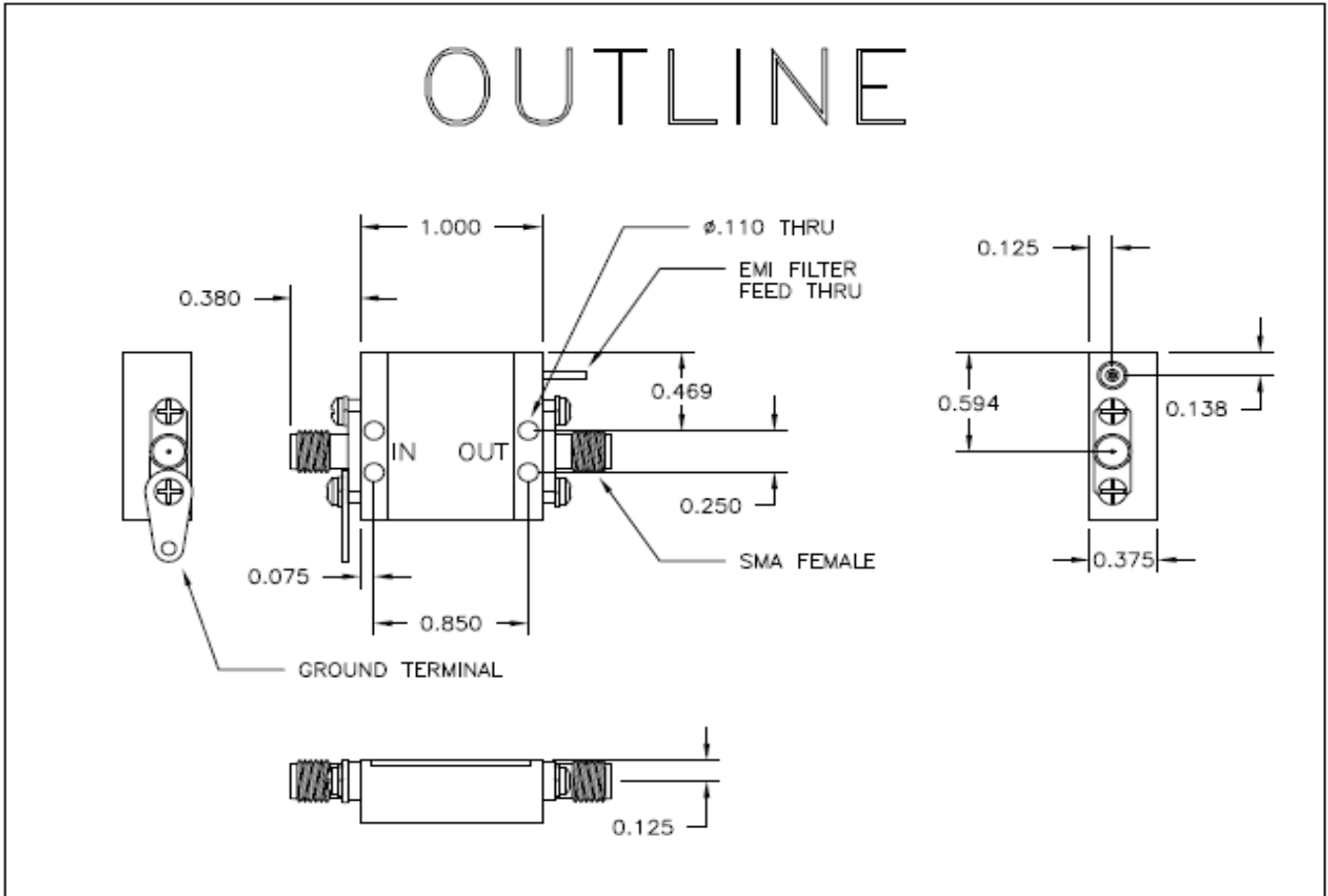
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<b>DESCRIPTION: ASC424C</b>
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### FINAL ELECTRICAL TEST REQUIREMENTS

TEST Vdc +15V	LIMITS Tc = 25 <sup>0</sup> C	ACTUAL DATA
Gain 1 to 50 MHz	17.0 dB min	18.4
Gain Flatness 1 to 50 MHz	± 0.5 dB max	±0.05
Gain Variation Over Temp. 1 to 50 MHz	0.7 dB typ	0.5
DC Current at +15 Vdc	240 mA max	210
Input VSWR 1 to 50 MHz	1.6 : 1 max	1.2
Output VSWR 1 to 50 MHz	1.6 : 1 max	1.37
Noise Figure 1 to 50 MHz	5.0 dB max	3.5
P 1.0 dB Compression 1 & 50 MHz	28 dBm min	28.2
IP3 with Pout = +15.0 dBm each tone 1) F1/F2 = 3 / 4 MHz      Fc = 2 & 5 MHz 2) F1/F2 = 49 / 50 MHz    Fc = 48 & 51 MHz	43.0 dBm min	43.5
IP2 with Pout = +15.0 dBm each tone 1) F1-F2 = 50-48    Fc = 2 MHz 2) F1+F2 = 5+45    Fc = 50 MHz	85.0 dBm min	87.0
Stability Test : For all frequencies Where   S21   > 0dB	0 dB max	<0

# Outline Drawing

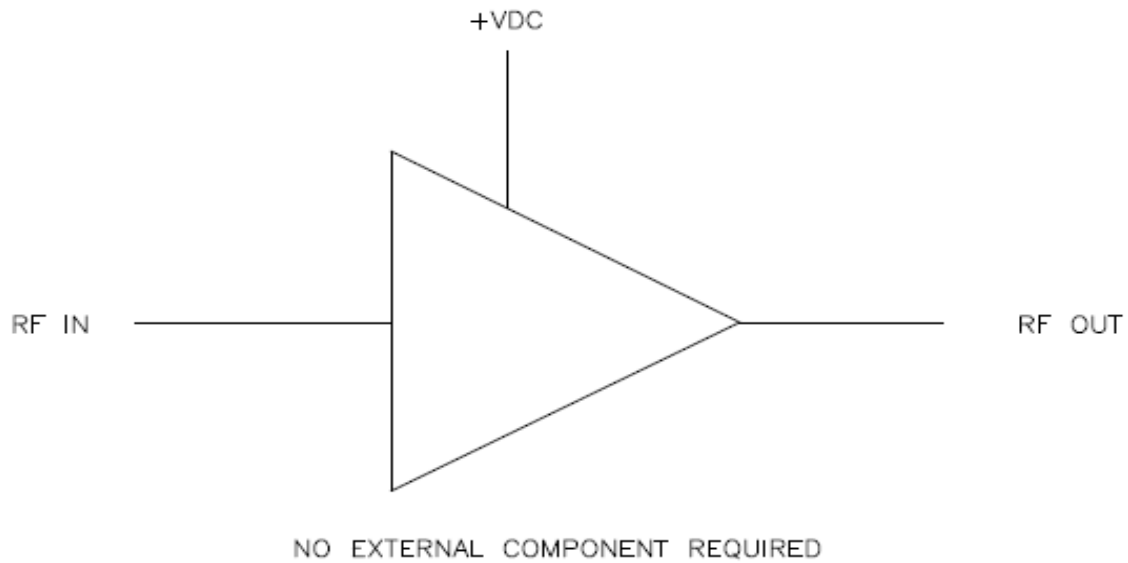


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FUNCTIONAL BLOCK DIAGRAM



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