

RF Amplifier

- * Operating Frequency : 20-3000 MHz.
- * Gain : 22 dB.
- * High IP3 38 dBm.
- * No external components required

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

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	20		3000	MHz.
Gain	G	20	22	24	dB.
Gain Flatness	Δ G		±0.7	± 1.0	dB.
R. Isolation	S12	40			dB.
Noise Figure	N.F.		4	5	dB.
Output Power	P 1dB	23	24		dBm.
Two Tone Intercept @ 10dBm output per tone	IP3	35	38		dBm.
IP2 @ P Out = + 10dBm	IP2	44	50		dBm.
VSWR in/out	S11/S22		1.5/1.8:1	1.7/2.0:1	Ratio
Operating Voltage	Vdc		15		Volt
Operating Current	Id		400		mA.

MECHANICAL SPECIFICATION

Parameter	Description	Limits	Units
Dimension	SMA Housing		
Cooling	None		
Monitor Connector	None		

PROTECTION

		Max	
RF Input Power		13	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	0		50	°C
Storage Temperature	Tstg	- 55C		120°C	°C

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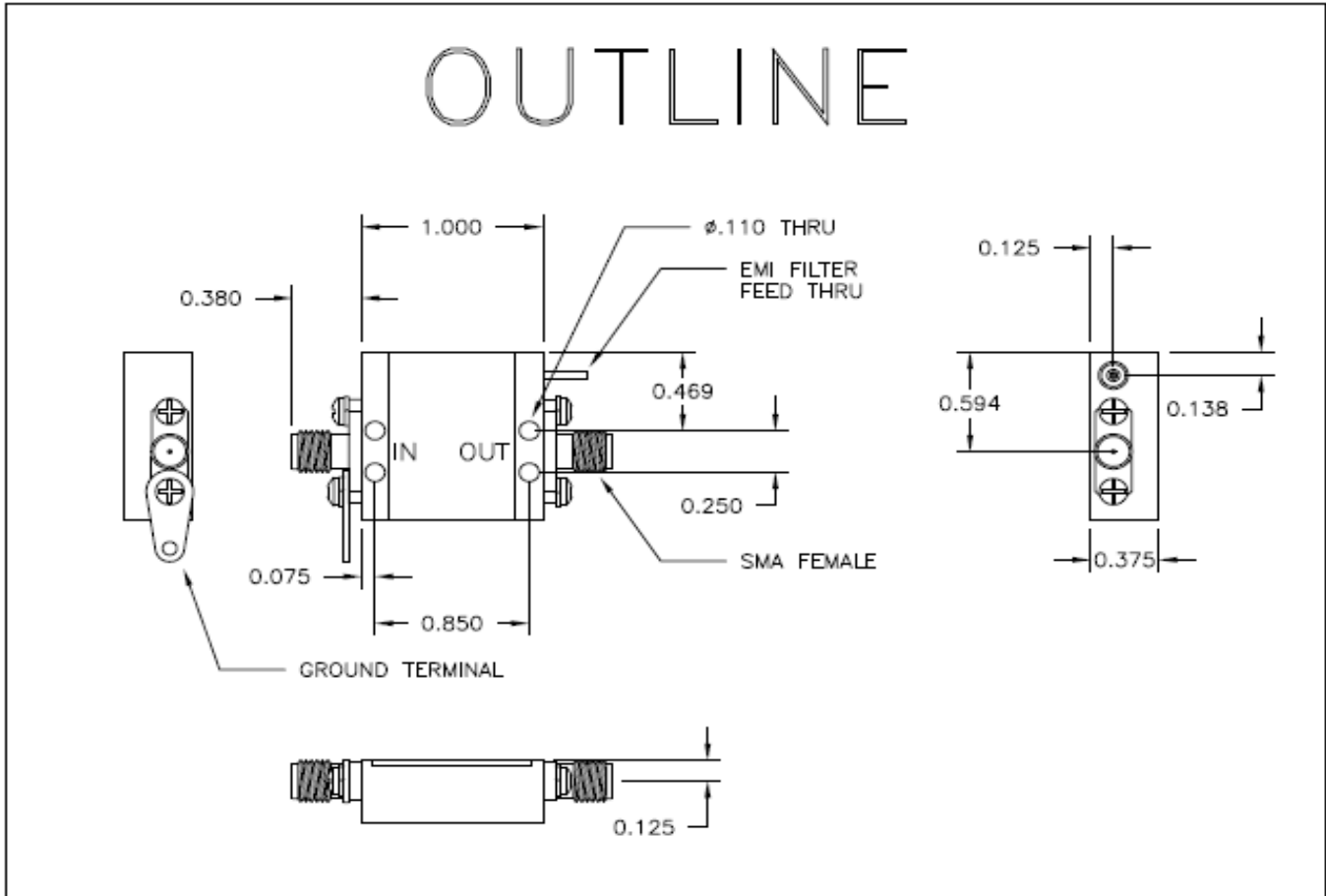
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DESCRIPTION: : ASC2306C

**FINAL ELECTRICAL TEST REPORT
RECORD DATA @ +25°C ONLY**

TEST Vdc +15V	LIMITS 10°C/+25°C/+70°C	ACTUAL DATA
Gain 20 MHz to 3000 MHz	20.0 dB min 24.0 dB typ.	23.2 24.2
Gain Flatness 20 MHz to 3000 MHz	± 1.0 dB max	±0.5
Spurious Response	Accept/Reject	AC
DC Current at +15 Vdc	400 mA max	304
Input VSWR 20 MHz to 3000 MHz	2.0 : 1 max	1.79
Output VSWR 20 MHz to 3000 MHz	2.0 : 1 max	1.94
Noise Figure 20 MHz to 3000 MHz	8.0 dB max	6.68
P 1.0 dB Compression 20 MHz to 3000 MHz	+23.0 dBm min	24.4
IP3 with Pout = +15.0 dBm each tone 1) F1/F2=20/21 MHz, Fc=19/22 MHz 2) F1/F2=1500/1501 MHz, Fc=1499/1502 MHz 3) F1/F2=2999/3000 MHz, Fc=2998/3001 MHz	35.0 dBm min	35.5 36.5 35.5
IP2 with Pout = +15.0 dBm each tone 1) F1/F2=20/21 MHz, Fc=41 MHz 2) F1/F2=1400/1600 MHz, Fc=3000 MHz	44.0 dBm min	51.0 47.0
Stability Test. For all frequency range where $ S_{21} > 0\text{dB}$	0 dB max	<0

Outline Drawing

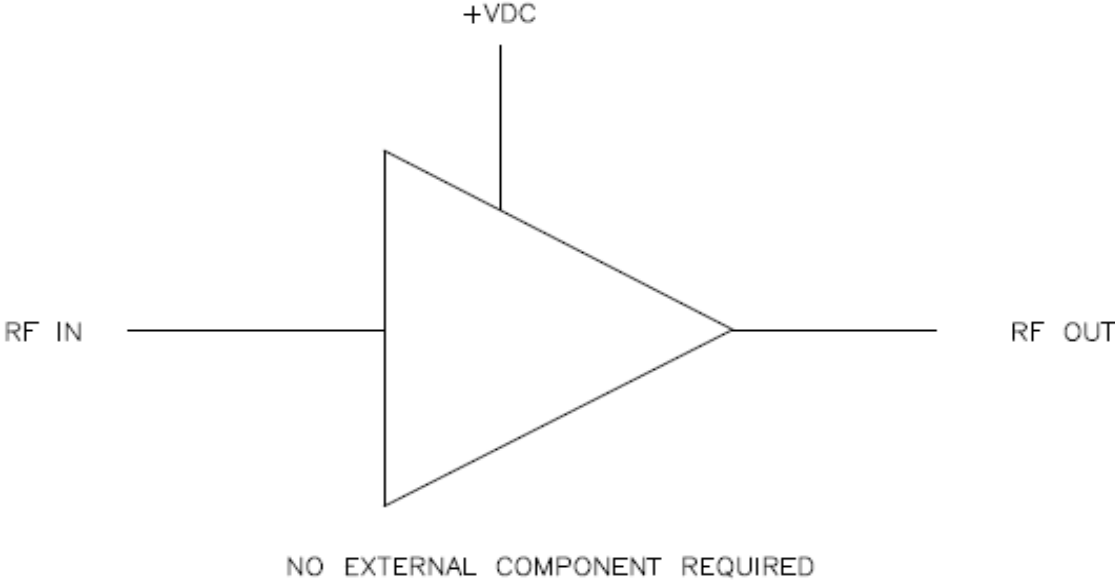


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FUNCTIONAL BLOCK DIAGRAM



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