

# ASC2698C

**1000 - 2000 MHz  
Cascade Amplifier**



**Features: (typical values)**

- Bandwidth ..... 1000-2000 MHz.
- Power Out ..... 29 dBm.
- Gain ..... 31 dB.
- Noise Figure..... 2.5 dB.
- IP<sub>3</sub> ..... 40 dBm.
- No external components required

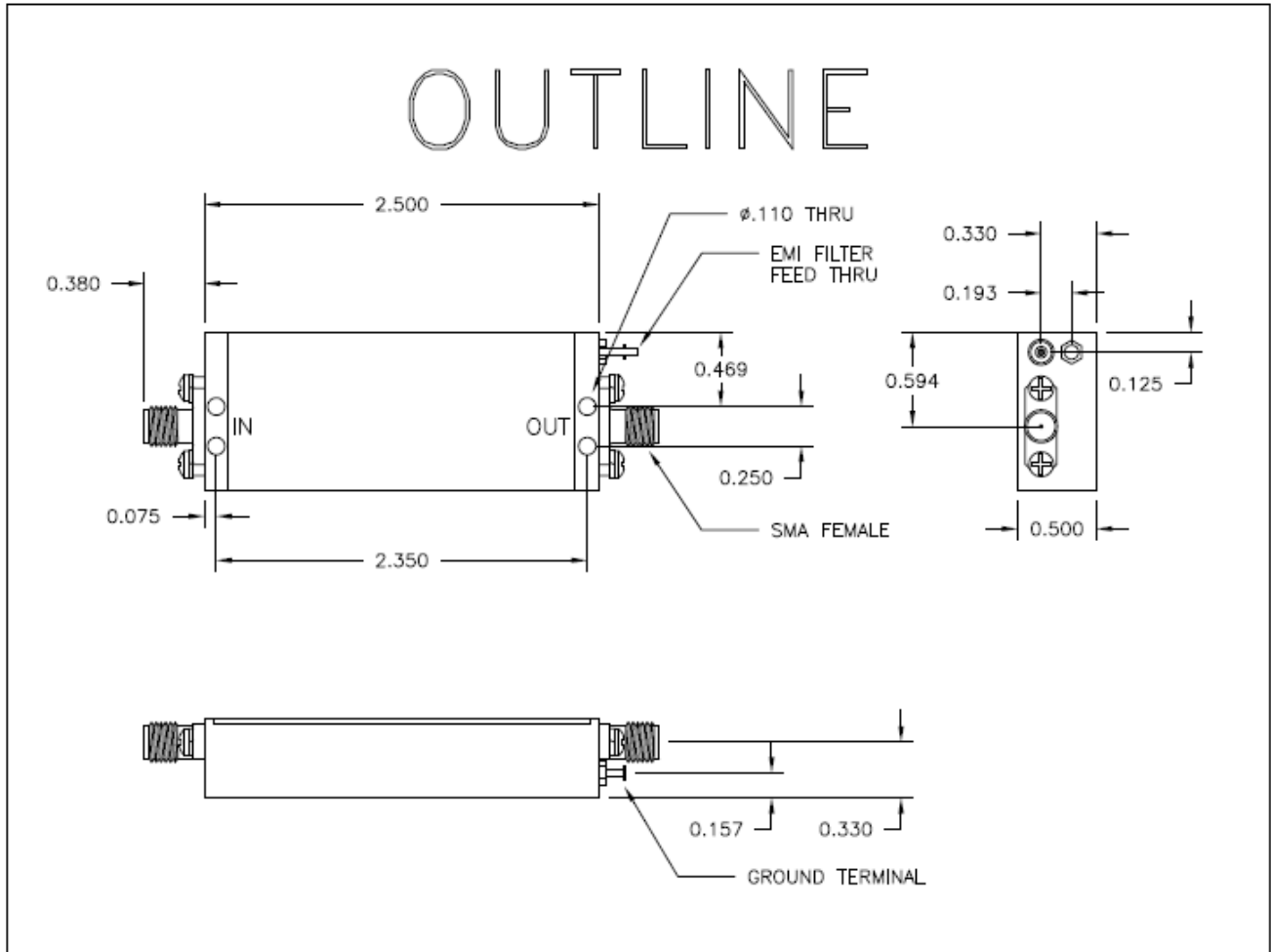
**Maximum Ratings**

Storage Temperature ..... -62°C to +125°C  
 DC Voltage ..... +17 volts  
 RF Input Power ..... +30 dBm.  
 Case Temperature ..... +100°C

Specifications (Referenced to 50 ohms)

Parameter	Typical Conditions	Min Value	Max Value	Units
Frequency		1000	2000	MHz.
Gain	31	30	32	dB.
Gain Flatness	±0.5		±1.0	dB.
Gain Var. over temp	1.0			ΔdB.
Pout @ 1dB Comp	+29	+28		dBm.
Noise Figure	2.5		3.5	dB.
IP3	40	38		dBm.
IP2	50	48		dBm.
VSWR In/Out	1.6:1		1.8:1	
Supply Required	+15/500		+15/600	v/mA.

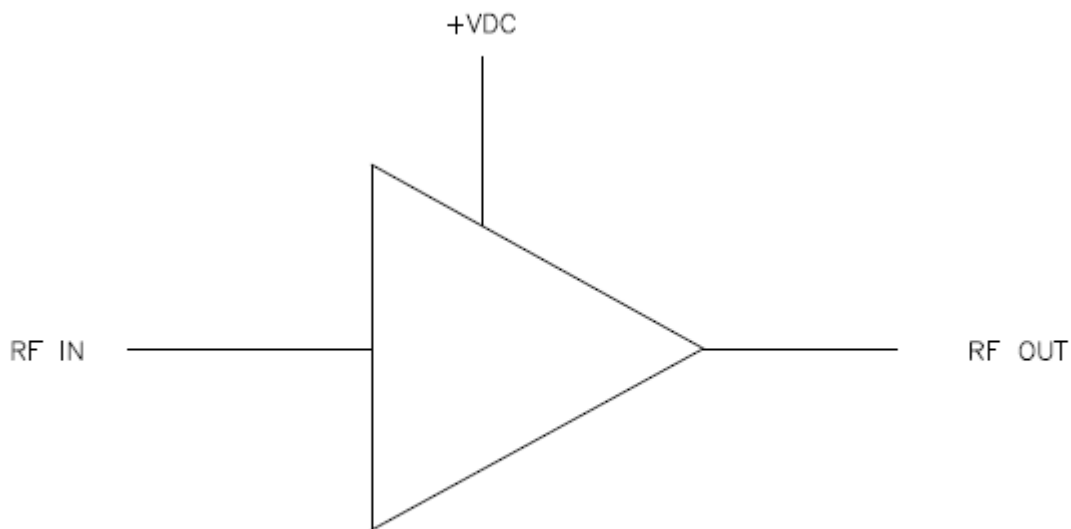
Min. and max. Values are from -20°C to +75°C  
 Limiter is required



**FINAL ELECTRICAL TEST REPORT**  
**RECORD DATA @ +75°C ONLY**

<b>TEST</b> Vdc +15V	<b>LIMITS</b> -20°C/+25°C/+75°C	<b>ACTUAL</b> <b>DATA</b>
Gain 1000 MHz to 2000 MHz	30.0 dB min 32.0 dB max	30.1 31.0
Gain Flatness 1000 MHz to 2000 MHz	± 1.0 dB max	±0.45
Spurious Response	Accept/Reject	AC
DC Current at +15 Vdc	600 mA max	556
Input VSWR 1000 MHz to 2000 MHz	1.8 : 1 max	1.49
Output VSWR 1000 MHz to 2000 MHz	1.8 : 1 max	1.7
Noise Figure 1000 MHz to 2000 MHz	3.5 dB max	3.0
P 1.0 dB Compression 1000 MHz to 2000 MHz	28.0 dBm min	28.9
IP3 with Pout = +15.0 dBm each tone 1) F1/F2=1000/1001 MHz, Fc=999/1002 MHz 2) F1/F2=2000/2001 MHz, Fc=1999/2002 MHz	38.0 dBm Min	39.0
IP2 with Pout = +15.0 dBm each tone 1) F1/F2=1000+1001 MHz, Fc=2001 MHz 2) F1/F2=2000 - 1001 MHz, Fc=999 MHz	48.0 dBm Min	65.0
Stability Test. For all frequency range where  S21  > 0dB	0 dB max	<0
RF Input Power +30dbm @ 1.5ghz	No change in NF	NC

FUNCTIONAL BLOCK DIAGRAM



NO EXTERNAL COMPONENT REQUIRED