

# ASC2697C

## 500 - 1000 MHz Cascade Amplifier



### Features: (typical values)

- Bandwidth ..... 500-1000 MHz.
- Power Out ..... 31.0 dBm.
- Gain ..... 27 dB.
- Noise Figure..... 2.5 dB.
- IP<sub>3</sub> ..... 43 dBm.
- No external components required

### Maximum Ratings

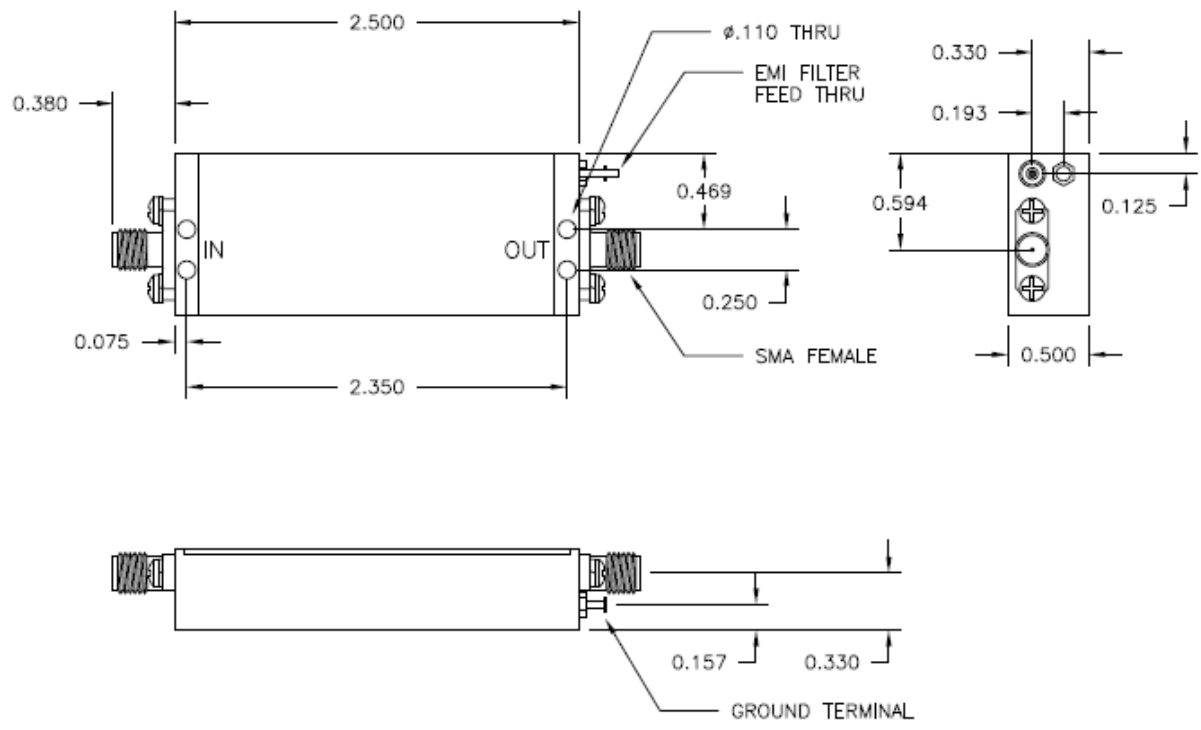
Storage Temperature ..... -62°C to +125°C  
 DC Voltage ..... +17 volts  
 RF Input Power ..... +30 dBm.  
 Case Temperature ..... +100°C

Specifications (Referenced to 50 ohms)

Parameter	Typical Conditions	Min Value	Max Value	Units
Frequency		500	1000	MHz.
Gain	27	26	28	dB.
Gain Flatness	±0.5		±1.0	dB.
Gain Var. over temp	1.0			ΔdB.
Pout @ 1dB Comp	+31	+30		dBm.
Noise Figure	2.5		3.5	dB.
IP3	43	40		dBm.
IP2	63	60		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.

# OUTLINE



**FINAL TEST REPORT +25°C  
ASC2697C**

TEST	LIMITS / SN	ACTUAL DATA
GAIN 500 MHz TO 1000 MHz	26.0 dB min	26.9
	28.0 dB max	27.3
GAIN FLATNESS 500 MHz TO 1000 MHz	±1.0 dB max	±0.2
SPURIOUS RESPONSE	ACCEPT/REJECT	AC
DC CURRENT AT +15 Vdc	600 mA max	432
INPUT VSWR 500 MHz TO 1000 MHz	1.8 : 1 max	1.6
OUTPUT VSWR 500 MHz TO 1000 MHz	1.8 : 1 max	1.49
NOISE FIGURE 500 MHz TO 1000 MHz	3.5 dB max	2.45
P1.0 dB COMPRESSION 500 MHz TO 1000 MHz	+30.0 dBm min	31.0
IP2 WITH POUT=15 dBm EACH TONE 1) F1+F2=500MHz +501MHz, Fc=1001MHz 2) F1-F2=1000MHz-501Mhz, Fc=499MHz	60.0 dBm min	70.0
IP3 WITH POUT=15 dBm EACH TONE 1) F1/F2=500/501MHz, Fc=499/502 MHz 2) F1/F2=1000/1001 MHz, Fc=999/1002 MHz	40.0 dBm min	44.5
STABILITY TEST FOR ALL FREQUENCY RANGE WHERE [S21] > 0 dB	0 dB max	<0

FUNCTIONAL BLOCK DIAGRAM

