

# ASC2976C

## 2000 - 6000 MHz Cascade Amplifier



### Features: (typical values)

- Bandwidth ..... 2000-6000 MHz.
- Power Out ..... 20 dBm.
- Gain ..... 24 dB.
- Noise Figure..... 3.5 dB.
- IP<sub>3</sub>..... 33 dBm.
- Internal Voltage Regulator
- No external components required

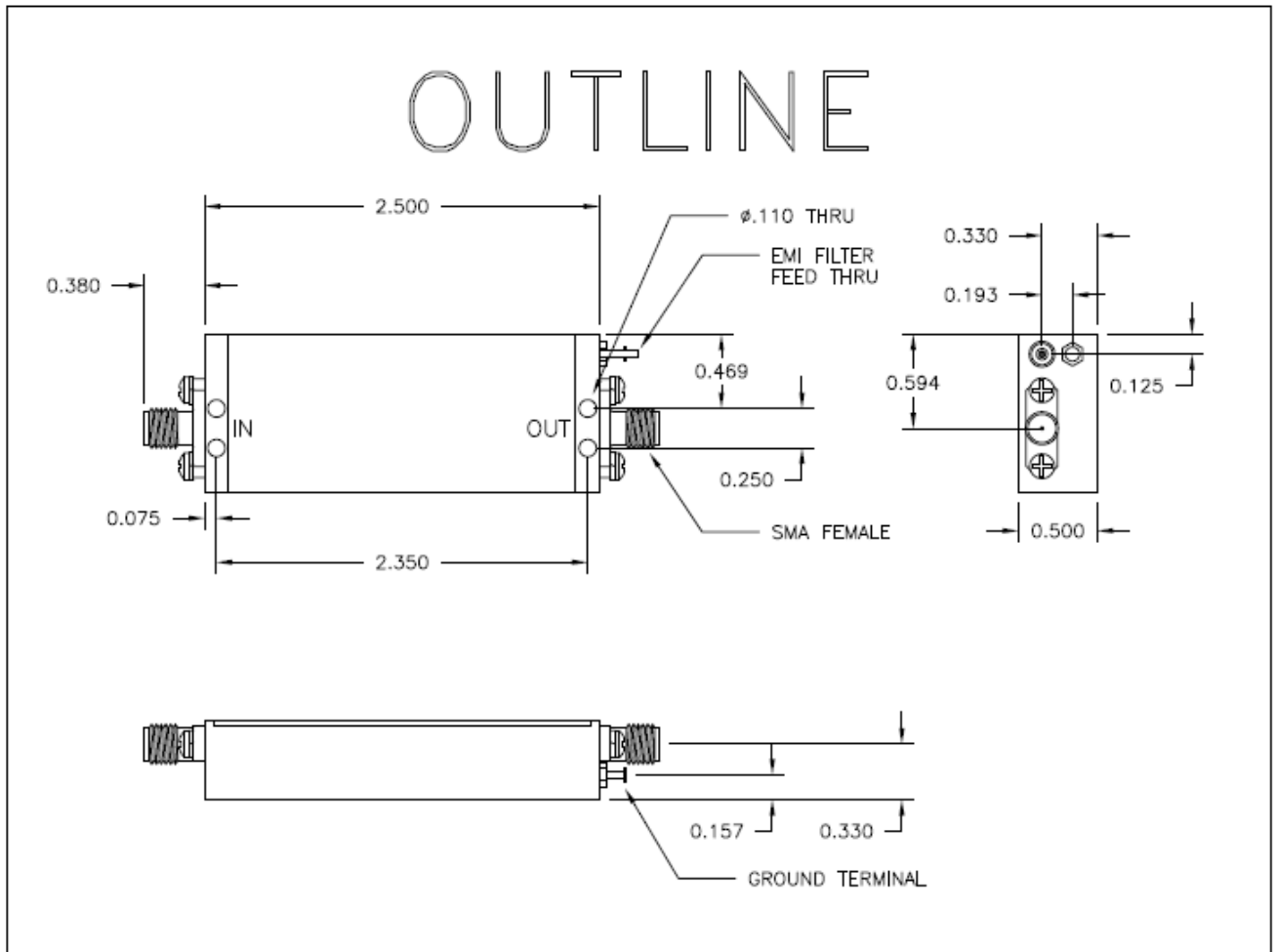
### Maximum Ratings

Storage Temperature ..... -62°C to +125°C  
 DC Voltage ..... +28 volts  
 RF Input Power ..... +10 dBm.  
 Case Temperature ..... +100°C

Specifications (Referenced to 50 ohms)

Parameter	Typical Conditions	Min Value	Max Value	Units
Frequency		2000	6000	MHz.
Gain	24	22		dB.
Gain Flatness	±0.75		±1.0	dB.
Gain Var. over temp	1.0			ΔdB.
Pout @ 1dB Comp	+20	+18		dBm.
Noise Figure	4.0		5.0	dB.
IP3	33	30		dBm.
VSWR In/Out	1.7:1		2.0:1	
Supply Required	+28/250		+28/270	v/mA.

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



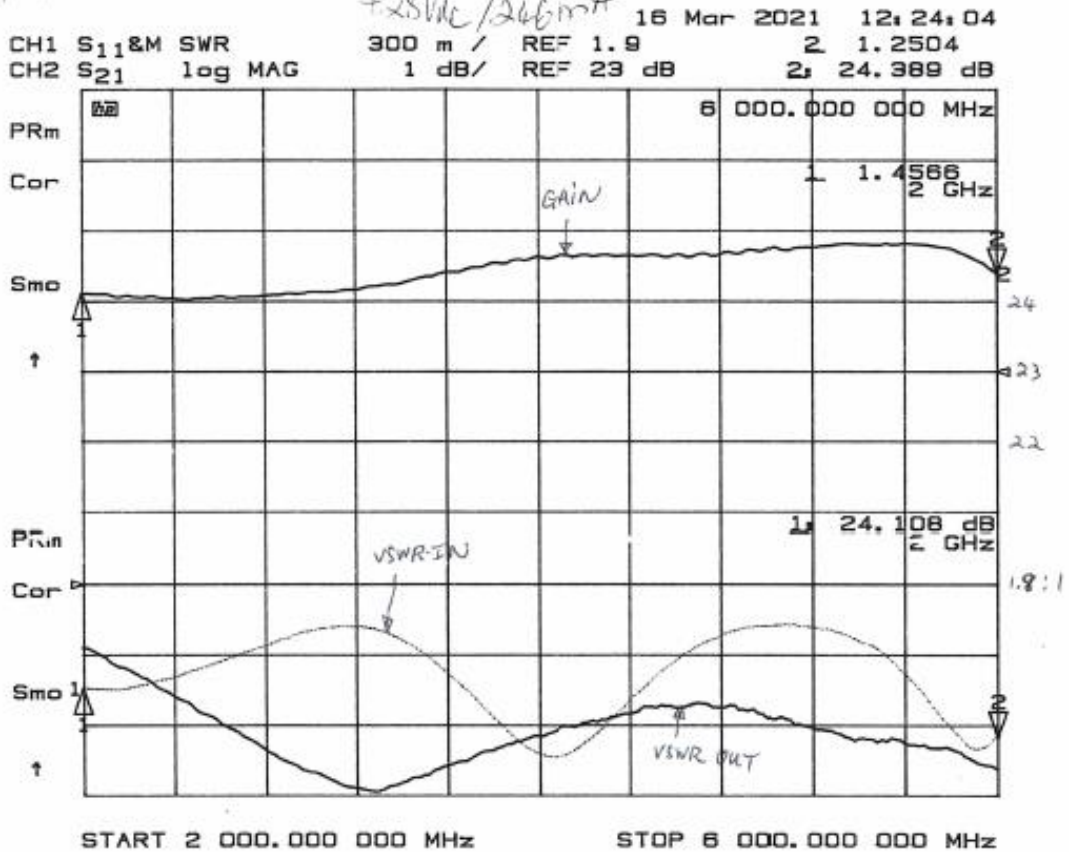
**FINAL ELECTRICAL TEST REPORT**
**RECORD DATA @ +25°C ONLY**

TEST Vdc +28V	LIMITS -20°C/+25°C/+75°C	DATA S/N 0100	DATA S/N 0101	DATA S/N
Gain 2000 MHz to 6000 MHz	22.0 dB min 24.0 dB typ ± 1.0 dB max	23.9 24.5	24.1 24.8	
Gain Flatness 2000 MHz to 6000 MHz	± 1.0 dB max	±0.3	±0.35	
Spurious Response	Accept/Reject	AC	AC	
DC Current at +28 ± 0.5 Vdc	270 mA max	241	246	
Input VSWR	2.0 : 1 max	1.75	1.69	
Output VSWR	2.0 : 1 max	1.64	1.62	
Noise Figure	5.0 dB max	2.98	3.05	
P 1.0 dB Compression	18 dBm min	22	22	
IP3 with Pout = 12 & 2 dBm each tone 1) F(1,2)=2001,2002 MHz Fc=2001.5 MHz 2) F(1,2)=4001,4002 MHz Fc=4001.5MHz 3) F(1,2)=5998,5999 MHz Fc=5998.5 MHz	30 dBm min	36.0 35.5 35.0	36.0 35.0 34.5	
Stability Test. For all frequency range where  S21  > 0dB	0 dB max	<0	<0	
Max Input Power: no significant change in NF after +10 dBm @4000 MHz applied to RF input	No change	N C	N C	

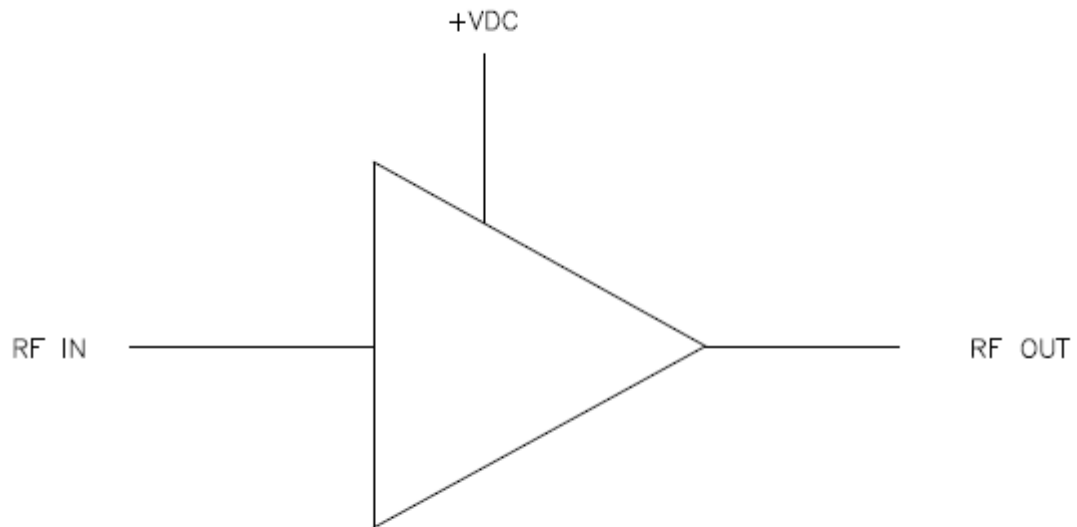
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ASC 2476C  
+28Vdc / 246mA

**ASC**



FUNCTIONAL BLOCK DIAGRAM



NO EXTERNAL COMPONENT REQUIRED