

# ASC2996C

**10 – 1000 MHz  
Low Distortion Amplifier**

**Features: (typical values)**

- P1dB ..... +34 dBm.
- IP3 ..... +50dBm.
- Gain ..... 33.2 dB.
- No external components required

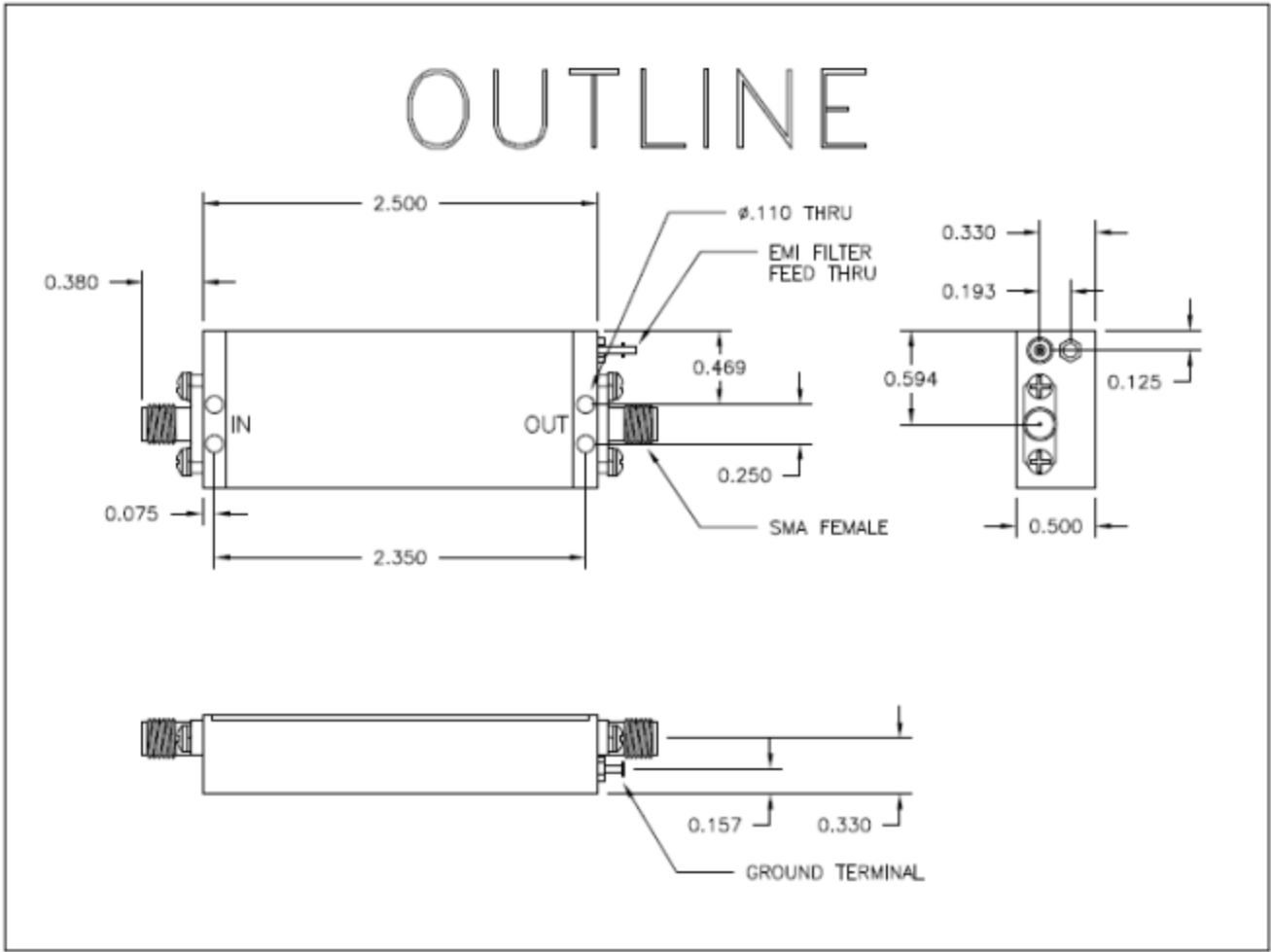


**Maximum Ratings**

Operating Temperature ..... 0°C to +85°C  
 Non-Operating Temperature ..... -40°C to +120°C  
 DC Voltage ..... +24volts  
 RF Input Power ..... 30 dBm.  
 Case Temperature ..... +100°C

Specifications (Referenced to 50 ohms)

Parameter	Typical Conditions	Min Value	Max Value	Units
Frequency		10	1000	MHz.
Gain	33.2	32	35	dB.
Gain Flatness Full Band	±0.2		±0.5	dB.
Pout @ P1dB	+34	+32		dBm.
Noise Figure	3.96		5.0	dB.
IP3 @ +20dbm per tone	+52	+48		dBm.
IP2 @ +20dbm per tone	+73	+70		dBm.
VSWR In/Out	1.6:1		2.0:1	Ratio
Impedance, Input/Output	50 Ohm			
Supply Required	+24/525		+24/550	v/mA.



AMPLIFIER SOLUTIONS CORP.

DESCRIPTION: ASC2996C	CAGE CODE 32BZ0	SALES ORDER NO.	LOT NO.	
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### FINAL ELECTRICAL TEST REPORT RECORD DATA @ +25°C ONLY

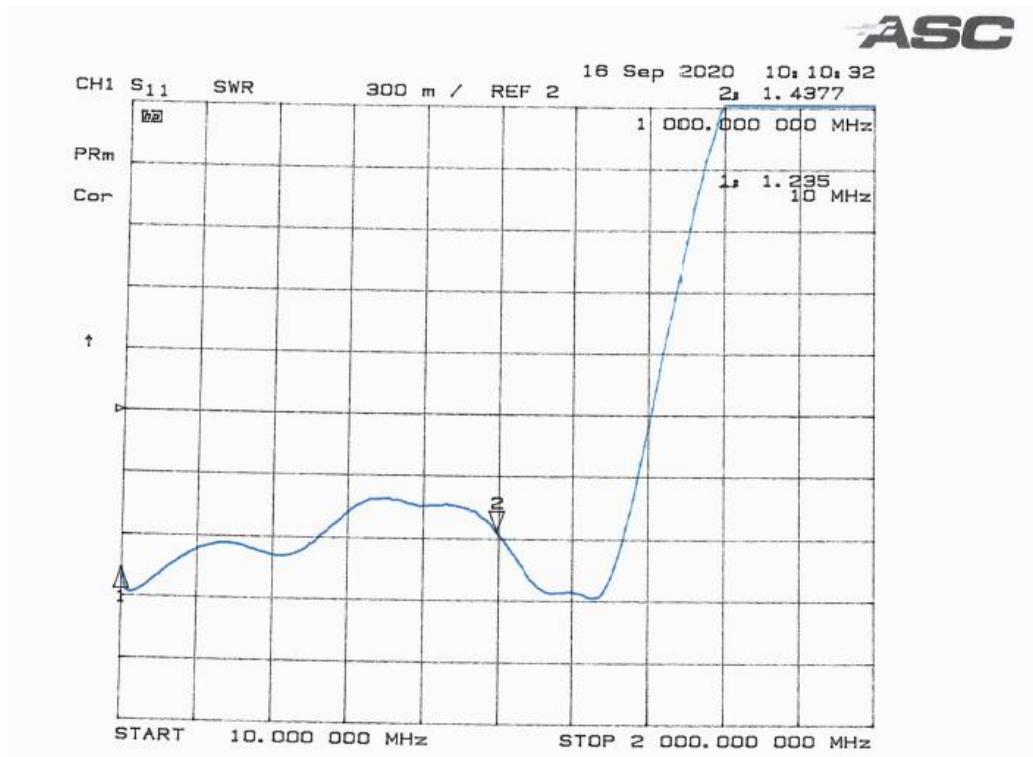
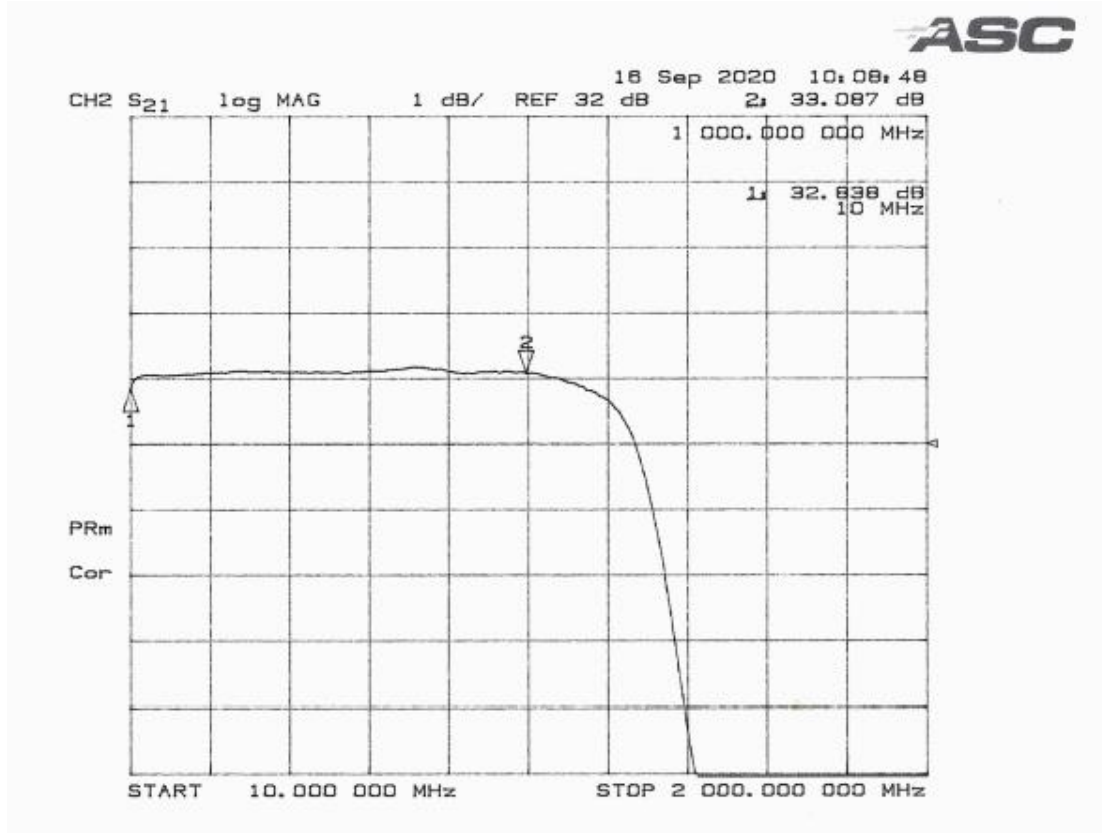
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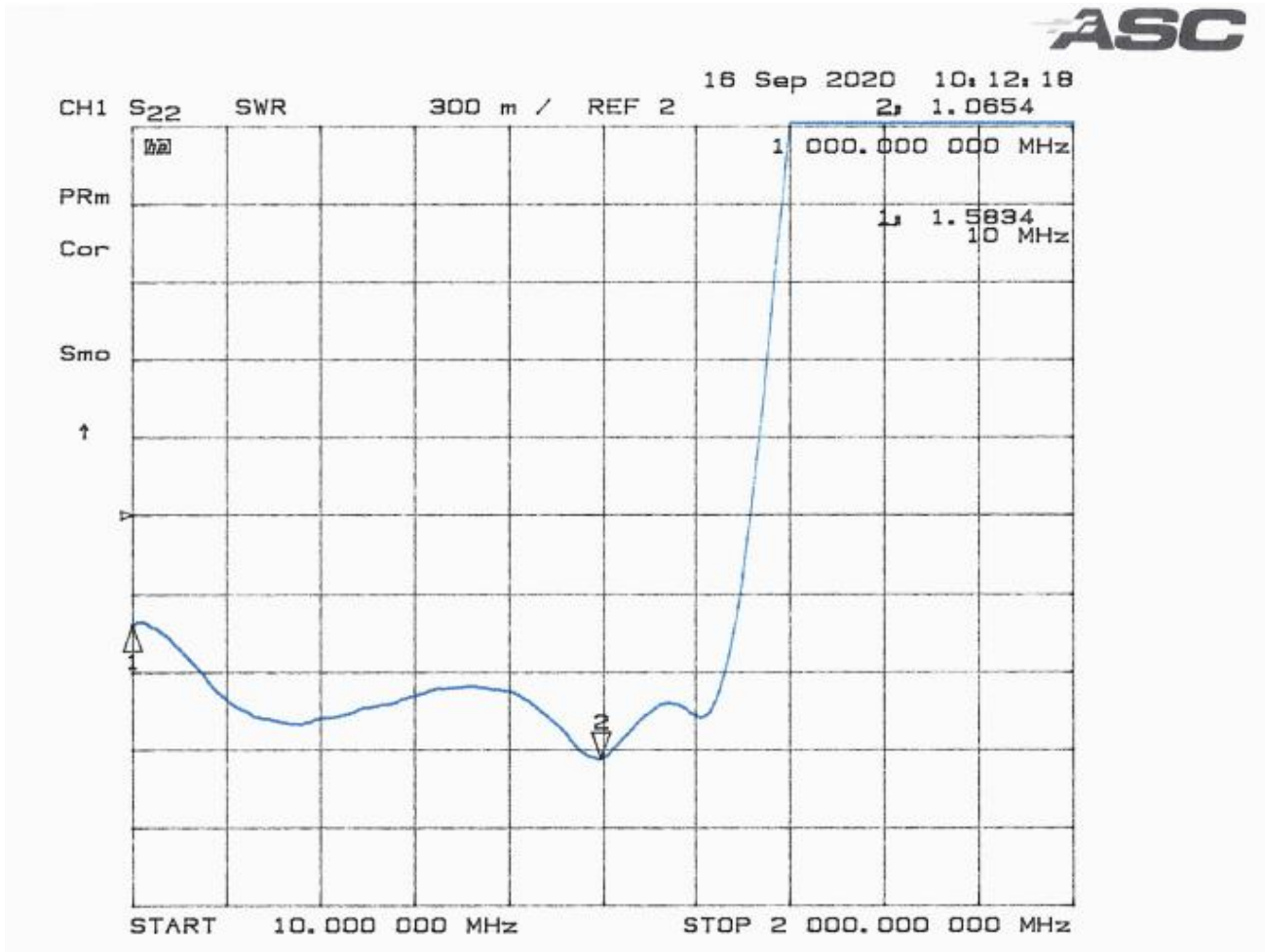
TEST Vdc +24V	LIMITS 0°C/+25°C/+85°C	DATA S/N	DATA S/N	DAT A S/N
Gain 10 MHz to 1000 MHz	32.0 dB min 35.0 dB max	32.8 33.2		
Gain Flatness 10 MHz to 1000 MHz	±0.5max	±0.2		
Spurious Response	Accept/Reject	AC		
DC Current at +24 Vdc	550 mA max	525		
Input VSWR                    10 MHz to 1000 MHz	2.0: 1 max	1.6		
Output VSWR                   10 MHz to 1000 MHz	2.0: 1 max	1.6		
Noise Figure                    10 MHz to 1000 MHz	5.0 dB Max	3.96		
P 1.0 dB Compression        10 MHz to 1000 MHz	+ 32.0 dBm min	34.0		
IP3 with Pout = +22 & +12 dBm each tone		+22   +12		
1) F1/F2=10/11 MHz,        Fc=9/12 MHz	+48.0 dBm min	49.0   51.0		
1) F1/F2=50/51 MHz,        Fc=49/52 MHz		50.0   54.0		
1) F1/F2=500/501 MHz,      Fc=499/502 MHz		52.0   54.0		
2) F1/F2=750/751 MHz,      Fc=749/752 MHz		53.0   54.0		
3) F1/F2=999/1000 MHz,    Fc=998/1001 MHz		55.0   53.0		
IP2 with Pout = +22 & +12 dBm each tone				
1) F1+F2=20MHz + 980MHz,    Fc= 1000MHz	+70.0 dBm min	73.0   72.0		
2) F1-F2=1000MHz- 980MHz,    Fc=20MHz		71.0   71.0		
1) F1+F2=500MHz + 501MHz,    Fc= 1001MHz		72.0   75.0		
2) F1-F2=1000MHz- 499MHz,    Fc=501MHz		72.0   74.0		
Stability Test. For all frequency range where $ S_{21}  > 0\text{dB}$	Pass/Fail	Pass		
Maximum Input power: no significant change in NF after +30 dBm @750 MHz applied to RF input	No change	N C		

RECORD SERIAL NUMBERS THAT PASS: \_\_\_\_\_

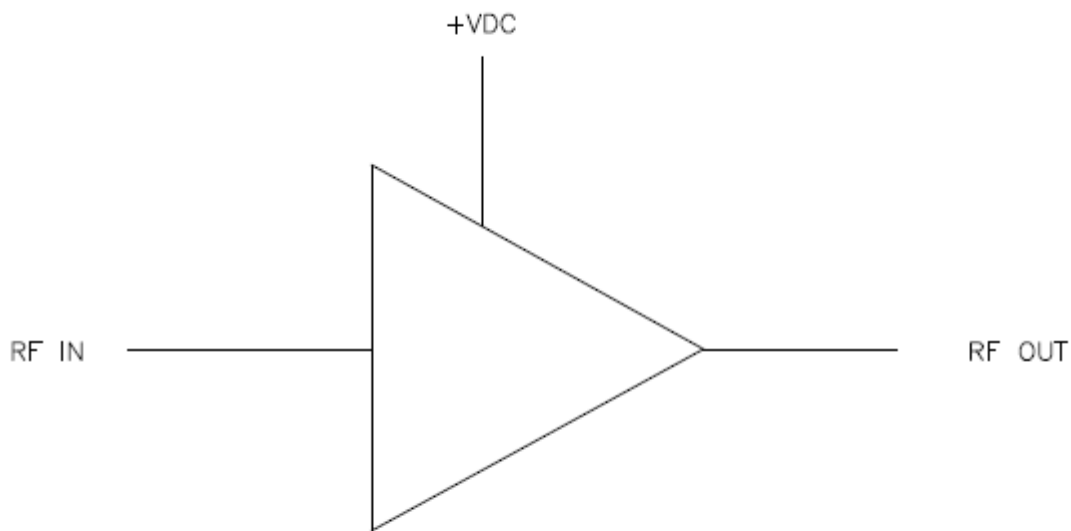
QTY TESTED:	QTY PASSED:	DATE:	OPERATOR:
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Fc	P1dB	NF
10 MHz	34	3.96
50MHz	34	3.16
250MHz	34.8	3.18
500 MHz	35.0	3.16
750 MHz	35.1	3.36
1000 MHz	34.2	3.52





FUNCTIONAL BLOCK DIAGRAM



NO EXTERNAL COMPONENT REQUIRED