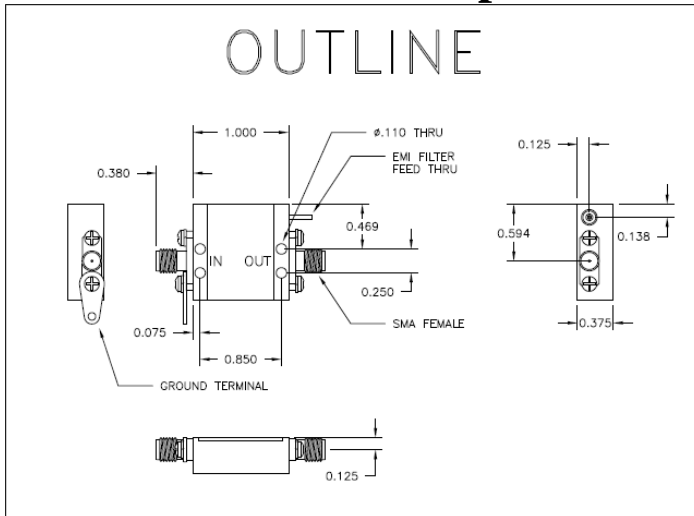


**ASC220C 10-2000 MHz. Wideband Amplifier**



**Features: (typical values)**

- Very high IP<sub>3</sub> ..... + 35 dBm.
- High P<sub>1dB</sub> ..... +21.0 dBm.
- Medium Gain ..... 15.0 dB.
- Super low cost
- No external components required

**Specifications (Referenced to 50 ohms)**

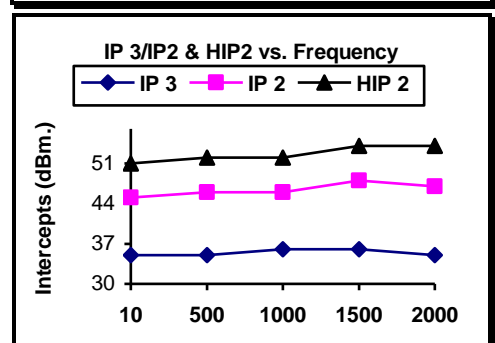
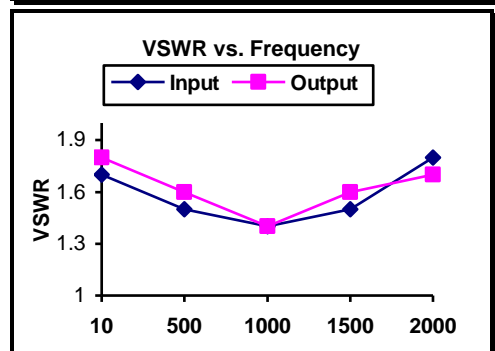
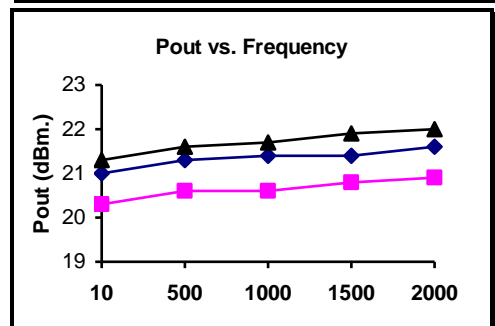
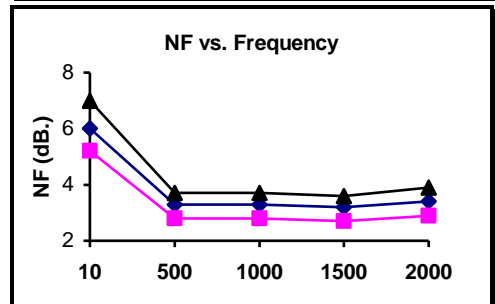
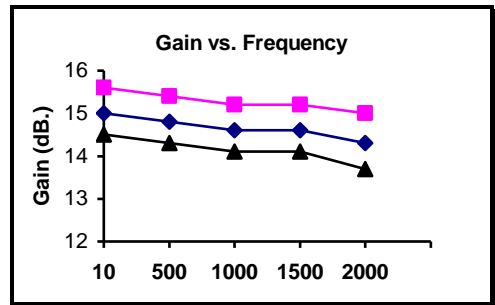
Parameter	Typical Value	Min. Value	Max. Value	Units
Frequency		10	2000	MHz.
Gain	14.5	13.0		dB.
Gain Flatness	±0.5		±1.0	dB.
Gain Var. over temp.	0.7			ΔdB.
Pout @ 1dB Comp.	+21.0	+18.0		dBm.
NF	7.0		8.0	dB.
Reverse Isolation	19.0			dB.
IP <sub>3</sub> /IP <sub>2</sub> (two-tone)	35/46	30/40		dBm.
HIP <sub>2</sub> (2 <sup>nd</sup> harm.)	52.0			dBm.
VSWR In/Out	1.7:1		2.0:1	
Supply Req'd	+15/120		+15/137	v/mA.

Min. and max. values are from -55°C to +85°C

**Maximum Ratings**

- Storage Temperature ..... -62°C to +125°C
- DC Voltage ..... +17 volts
- RF Input Power ..... +13.0 dBm.
- Case Temperature ..... +95°C

**Typical Performance Curves**  
 - ■ -55°C - ◆ +25°C - ▲ +85°C

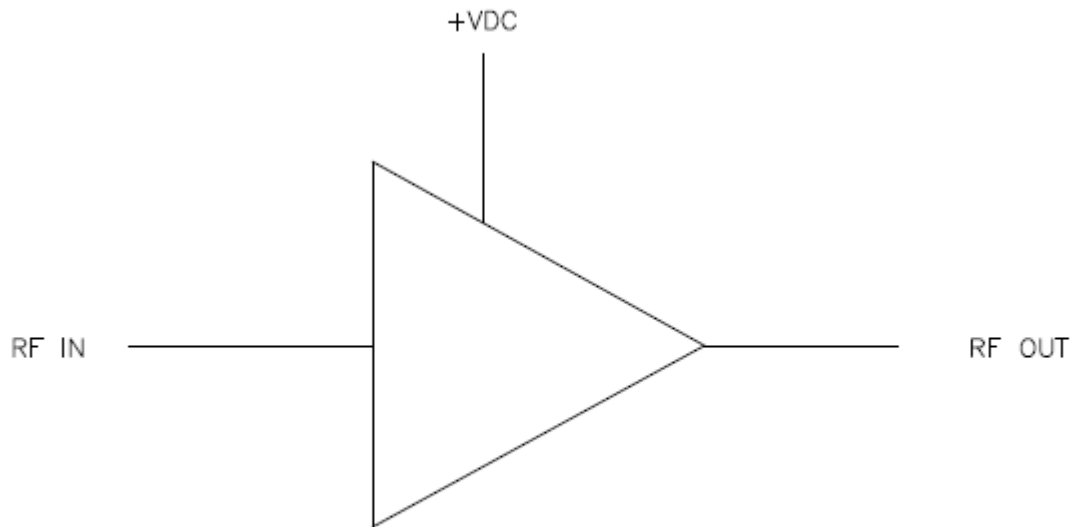


## FINAL ELECTRICAL TEST REPORT

### RECORD DATA @ +25°C ONLY

TEST Vdc +15V	LIMITS -55°C/+25°C/+85°C	ACTUAL DATA
Gain 10 to 2000 MHz	13 dB min	15.4 15.9
Gain Flatness 10 to 2000 MHz	± 1.0 dB max	±0.25
Gain Variation Over Temp. 10 to 2000 MHz	0.7 dB typ	/
Reverse Isolation 10 to 2000 MHz	19 dB typ	22
DC Current at +15 Vdc	137 mA max	122
Input VSWR 10 to 2000 MHz	2.0 : 1 max	1.73
Output VSWR 10 to 2000 MHz	2.0 : 1 max	1.74
Noise Figure 10 to 2000 MHz	8 dB max	6.19
P 1.0 dB Compression 10, 1000 & 2000 MHz	18 dBm min	>19.0
IP3 with Pout = +8.0 dBm each tone 1) F1/F2=11/12 MHz Fc=10&13 MHz 2) F1/F2=998/999MHz Fc=997&1000MHz 3) F1/F2=1998/1999MHz Fc=1997&2000MHz	30.0 dBm min	31.5 35.5 34.0
IP2 with Pout = +8.0 dBm each tone 1) F1-F2=500-490 Fc=10MHz 2) F1+F2=499+501 Fc=1000MHz 3) F1+F2=999+1001 Fc=2000MHz	40.0 dBm min	58.0 48.0 45.0
Stability Test : For all frequencies Where $ S_{21}  > 0\text{dB}$	0 dB max	<0

FUNCTIONAL BLOCK DIAGRAM



NO EXTERNAL COMPONENT REQUIRED