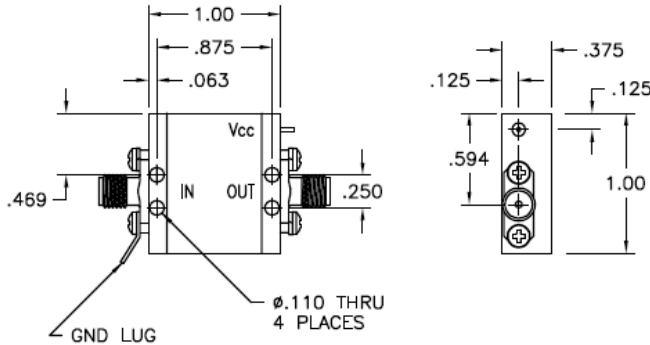
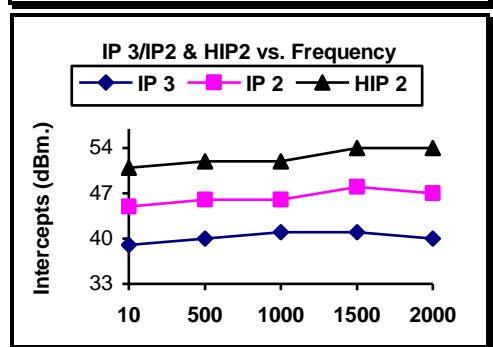
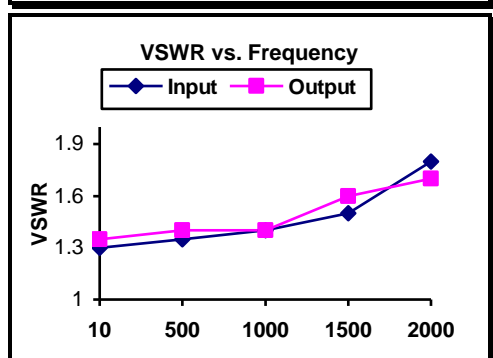
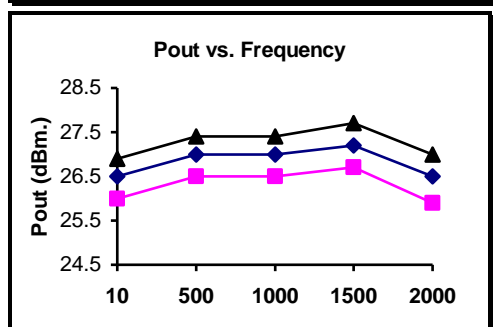
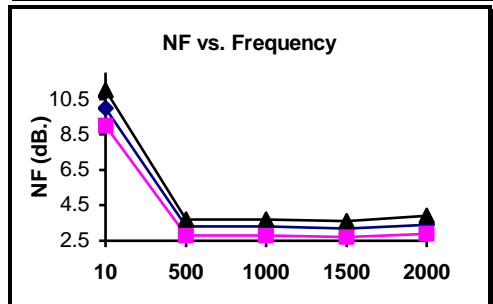
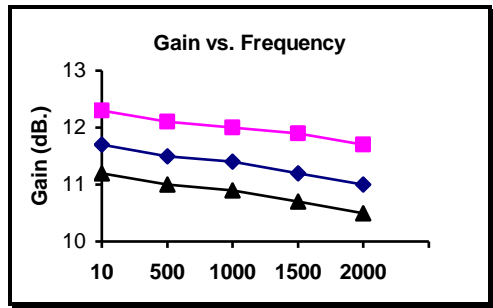


# ASC219C 10-2000 MHz. Wideband Amplifier



## Typical Performance Curves

- ■ -55°C - ◆ -25°C - ▲ +85°C



### Features: (typical values)

- Very high IP3..... + 40 dBm.
- High P1dB..... +26.0 dBm.
- Low NF @100-2000mhz ..... 3.5 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  | 11.0          | 10.0       |            | dB.   |
| Gain Flatness                               | ±0.5          |            | ±0.8       | dB.   |
| Gain Var. over temp.                        | 0.7           |            |            | ΔdB.  |
| Pout @ 1dB. Comp.                           | +26.5         | +25.0      |            | dBm.  |
| NF 100-2000mhz                              | 3.5           |            | 5.5        | dB.   |
| Reverse Isolation                           | 16.0          |            |            | dB.   |
| IP <sub>3</sub> /IP <sub>2</sub> (two-tone) | 40/46         | 35/40      |            | 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                                | +15/190       |            | +15/200    | v/mA. |

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

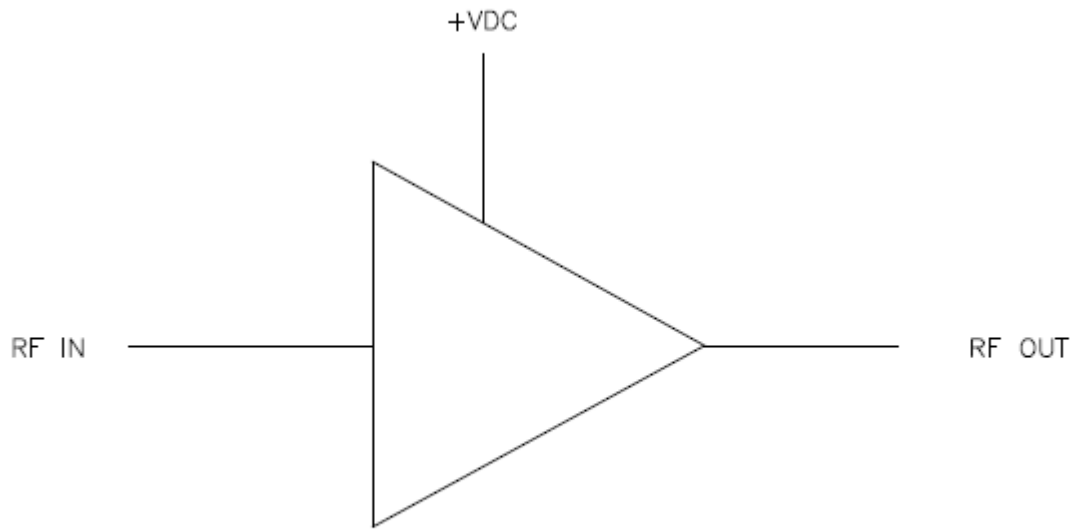
### Maximum Ratings

- Storage Temperature ..... -62°C to +125°C
- DC Voltage ..... +17 volts
- RF Input Power ..... +20.0 dBm.
- Case Temperature ..... +95°C

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

| <b>TEST</b><br>Vdc +15V   | <b>LIMITS</b><br>-55°C/+25°C/+85°C | <b>ACTUAL</b><br><b>DATA</b> |
|---|------------------------------------|------------------------------|
| Gain<br>10 to 2000 MHz  | 10 dB min                          | 12.0<br>12.6                 |
| Gain Flatness<br>10 to 2000 MHz   | ± 0.8 dB max                       | ±0.3                         |
| Gain Variation Over Temp.<br>10 to 2000 MHz   | 0.7 dB typ                         | /                            |
| Reverse Isolation<br>10 to 2000 MHz   | 16 dB typ                          | 20                           |
| DC Current at +15 Vdc   | 200 mA max                         | 169                          |
| Input VSWR<br>10 to 2000 MHz  | 2.0 : 1 max                        | 1.68                         |
| Output VSWR<br>10 to 2000 MHz   | 2.0 : 1 max                        | 1.76                         |
| Noise Figure<br>100 to 2000 MHz   | 5.5 dB max                         | 4.3                          |
| P 1.0 dB Compression<br>10, 1000 & 2000 MHz   | 25 dBm min                         | 26.0                         |
| IP3 with Pout = +15.0 dBm each tone<br>1) F1/F2=11/12 MHz Fc=10&13 MHz<br>2) F1/F2=998/999MHz Fc=997&1000MHz<br>3) F1/F2=1998/1999MHz Fc=1997&2000MHz | 35.0 dBm min                       | 40.0                         |
| IP2 with Pout = +15.0 dBm each tone<br>1) F1-F2=500-490 Fc=10MHz<br>2) F1+F2=499+501 Fc=1000MHz<br>3) F1+F2=999+1001 Fc=2000MHz                       | 40.0 dBm min                       | 50.0                         |
| Stability Test : For all frequencies<br>Where $ S_{21}  > 0\text{dB}$   | 0 dB max                           | <0                           |

FUNCTIONAL BLOCK DIAGRAM



NO EXTERNAL COMPONENT REQUIRED