

RF Amplifier

- * Operating Frequency : 10-1000 MHz.
- * Gain : 24 dB.
- * Medium Output power : 31 dBm.
- * No external components required

ELECTRICAL SPECIFICATION @ VDD= +15 VDC; Temp. = 25°C, 50Ω System

| Parameter | Symbol | Min | Typ | Max | Unit |
|----------------------------|-----------|-------|-------|-------|-------|
| Operating Frequency | BW | 10 | | 1000 | MHz. |
| Gain | G | 22 | 24 | | dB. |
| Gain Flatness | Δ G | | ±0.50 | ± 1.0 | dB. |
| Gain variation verses Temp | G. V. | | ±0.50 | ± 1.0 | dB. |
| Noise Figure | N.F. | | 5 | | dB. |
| Output Power | P 1dB | 30 | 31 | | dBm. |
| Two Tone Intercept | OIP3/OIP2 | 45/70 | | | dBm. |
| VSWR in/out | S11/S22 | | 1.7:1 | 2.0:1 | Ratio |
| Operating Voltage | Vdc | | 15 | | Volt |
| Operating Current | Id | | 450 | | mA. |

MECHANICAL SPECIFICATION

| Parameter | Description | Limits | Units |
|-------------------|-------------|--------|-------|
| Dimension | SMA Housing | | |
| Cooling | None | | |
| Monitor Connector | None | | |

PROTECTIONS

| | | | |
|-----------------------------|-------------------|-----|------|
| RF Input Power | 20 | Max | dBm. |
| Reverse Polarity Protection | | | |
| Load VSWR | Infinite up to 1W | | |
| Stability | 100% Tested | | |

ENVIRONMENTAL CHARACTERISTICS

| Parameter | Symbol | Min. | Typ. | Max. | Units |
|----------------------------|--------|-------|------|-------|-------|
| Operating Case Temperature | Tc | 0 | | 70 | °C |
| Storage Temperature | Tstg | - 55C | | 120°C | °C |

3009 Old State Rd, Telford, PA 18969

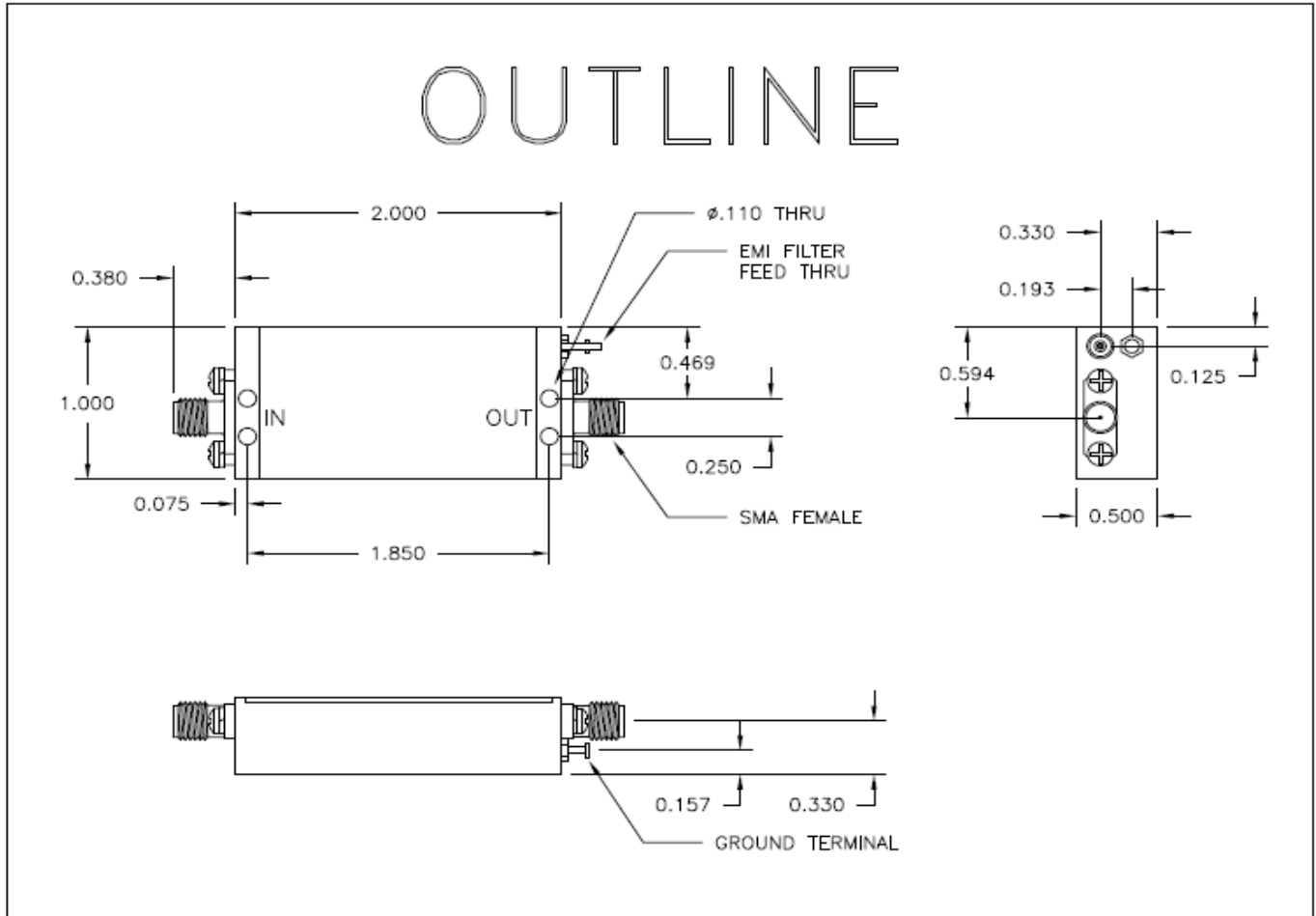
Web: www.amplifiersolutions.com
 Email: sales@amplifiersolutions.com

Tel: 215-799-2561
 Fax: 215-799-2563

FINAL TEST REPORT ASC1074C

| TEST | LIMIT / S/N | ACTUAL DATA |
|---|---------------|------------------|
| Gain 10 to 1000 MHz | 22.0 dB min | 25.5 25.8 |
| Gain Flatness 10 to 1000 MHz | ± 1.0 dB max | ±0.15 |
| DC Current at +15 Vdc | 450 mA Typ | 450 |
| Input VSWR 10 to 1000 MHz | 2.0 : 1 max | 1.55 |
| Output VSWR 10 to 1000 MHz | 2.0 : 1 max | 1.76 |
| Noise Figure 10 to 1000 MHz | 5.0 dB Typ | 2.5 |
| P 1.0 dB Compression 10 to 1000 MHz | +30.0 dBm min | 31.0 |
| IP3 with Pout = +15.0 dBm each tone 1) F1/F2=11/12 MHz Fc=10&13 MHz 2) F1/F2=499,500MHz Fc=498,501MHz 3) F1/F2=998,999MHz Fc=997,1000MHz | 45.0 dBm Typ | 44.5 45 44 |
| IP2 with Pout = +15.0 dBm each tone 1) F1-F2=20+480 Fc=500MHz 2) F1+F2=20+980 Fc=1000MHz 3) F1+F2=1000-980 Fc=20MHz | 70.0 dBm Typ | 77 70 70 |
| Stability Test : For all frequencies Where $ S_{21} > 0\text{dB}$ | 0 dB max | <0 |

Outline Drawing



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FUNCTIONAL BLOCK DIAGRAM

