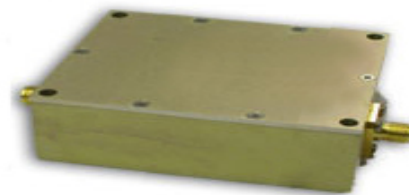


## Broadband Linear RF Amplifier

3007

- **Frequency Response: 10-1000 MHz**
- **Linear Power: 1 watt**
- **Saturated Power: 2 watts**
- **Gain: 23 dB**



### Description:

Designed for linear application in the 10 to 1000 MHz range. This amplifier utilizes RF Power MOSFET devices that provide high gain, wide dynamic range and an excellent 3<sup>rd</sup> order intercept point. Suggested applications: multi-carrier, pulse, AM & FM modulation.

### ELECTRICAL SPECIFICATION @ VDD= +28VDC: Temp.=25°C, 50Ω System

| Parameter   | Symbol            | Min          | Typ   | Max    | Unit |
|---|-------------------|--------------|-------|--------|------|
| Operating Frequency   | BW                | 10           |       | 1000   | MHz  |
| Power Output Saturated  | P <sub>sat</sub>  |              | 2     |        | Watt |
| Power Output P-1dB  | P <sub>-1dB</sub> |              | 1     |        | Watt |
| Gain  | G                 | 20           | 23    |        | dB   |
| Small Signal Gain Flatness  | ΔG                |              |       | ±1.0dB | dB   |
| Input VSWR  | S11               |              | 1.3:1 | 1.5:1  | -    |
| Harmonics   | H                 |              | -36   | -30    | dBc  |
| Inter-modulation Point<br>2 Tones, 100mW per tone @ 900 & 901 MHz | IP <sub>3</sub>   |              | +38   |        | dBm  |
| Spurious Signals  | dBc               |              | -70   | -60    | dBc  |
| Operating Voltage   | Vdc               | 24           | 28    | 30     | Volt |
| Operating Current   | mAmps             |              | 750   | 850    | mAmp |
| Enable / Disable (shut down pin: gnd=off, open=on)                | ms                | Not included |       |        | ms   |

### MECHANICAL SPECIFICATION

| Parameter            | Description            | Limits | Units |
|----------------------|------------------------|--------|-------|
| Dimensions           | 3.5 x 1.6 x 0.75       | Max    | Inch  |
| RF Connectors IN/OUT | SMA                    | -      | -     |
| DC Connectors        | Filtered feed-through  | -      | -     |
| Cooling              | Heat-sink not included | -      | -     |
| Weight               |                        | Max    | lb    |

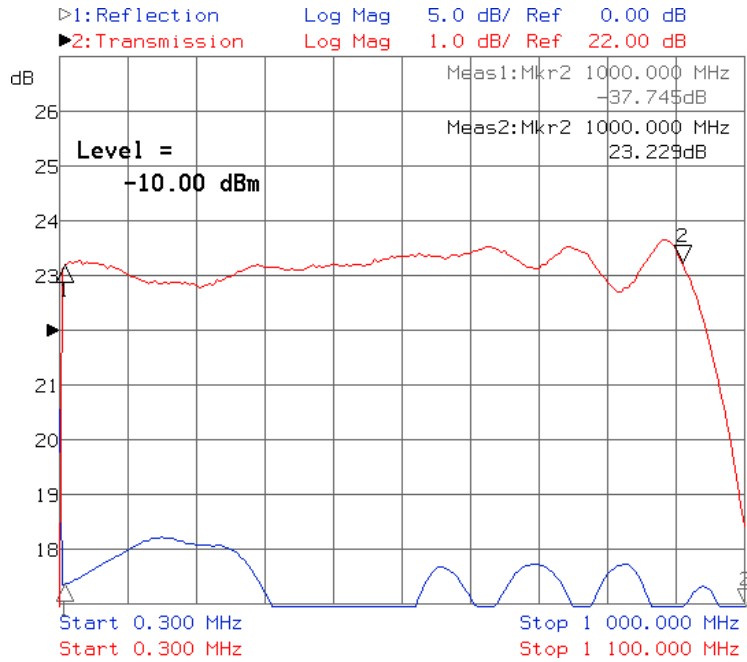
### PROTECTIONS

|                             |                       |     |
|-----------------------------|-----------------------|-----|
| Thermal Shutdown            | None                  | Typ |
| Input Overdrive             | +13 dBm Max           | Max |
| Load VSWR                   | Infinite up to 1 Watt | Max |
| Reverse Polarity Protection | None                  | -   |

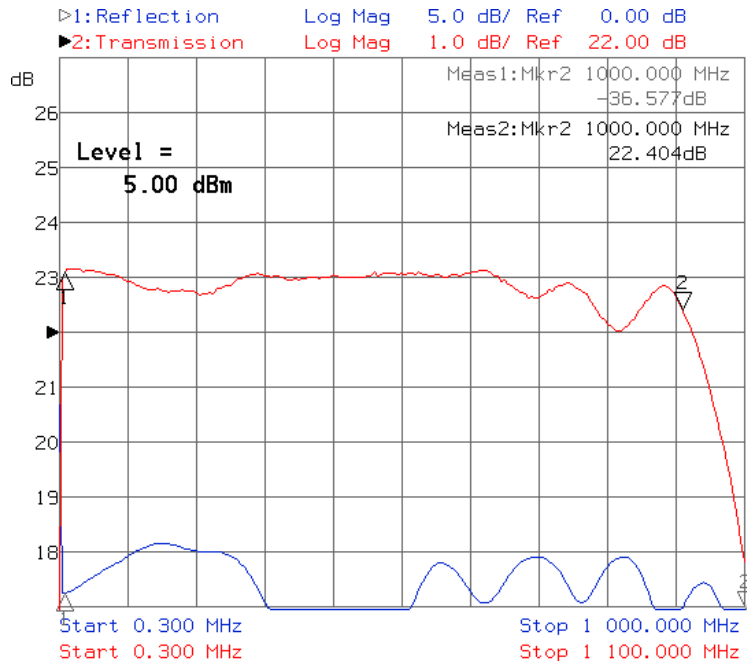
### ENVIRONMENTAL CHARACTERISTICS

| Parameter                          | Symbol           | Min   | Typ | Max    | Units |
|------------------------------------|------------------|-------|-----|--------|-------|
| Operating Case Temperature         | T <sub>c</sub>   | 0°C   |     | +50°C  | °C    |
| Storage Temperature                | T <sub>stg</sub> | -30°C |     | +100°C | °C    |
| Relative humidity non-condensation | RH               | 95    |     |        | %     |

## Response Curve



Small Signal Frequency Response Curve



Frequency Response Curve @ 0.5 Watt Output



**Outline Drawing**

