

**RF Linear Hybrid Amplifier**  
**35 to 500 MHz**

**PAW1027-1**

V3

**Features**

- ULTRA HIGH LINEARITY
- LOW NOISE FIGURE 4.5 dB (TYP.)
- RUGGED CONSTRUCTION
- OPERATION OVER A WIDE VOLTAGE RANGE

**Description**

The PAW1027-1 linear power amplifier is a discrete hybrid design, which uses thick film solder manufacturing processes for accurate performance and high reliability. The design has 2 gain stages, using a push pull cascode circuit configuration. Performance is very linear over a broadband frequency range, making it particularly suited for CATV, and commercial & military radio applications.

**Product Image**



**Ordering Information**

| Part Number | Package |
|-------------|---------|
| PAW1027-1   | SOT115J |

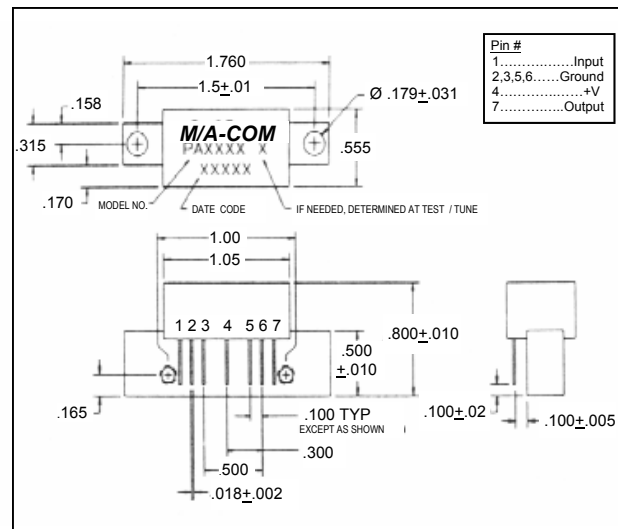
**Absolute Maximum Ratings**

| Parameter                  | Absolute Maximum |
|----------------------------|------------------|
| Storage Temperature        | -40°C to +100°C  |
| Operation Base Temperature | +85°C            |
| RF Input Voltage           | +14 dBm          |
| DC Voltage                 | +28 volts        |

**Electrical Specifications:  $Z_0 = 50\Omega$ ,  $V_{CC} = +24 V_{DC}$**

| Parameter  | Units | Typical     |
|--|-------|-------------|
|  |       | 25°C        |
| Frequency  | MHz   | 35-500      |
| Power Gain (min)<br>f = 35 MHz   | dB    | 37.0 / 38.0 |
| Power Gain (max)<br>f = 35 MHz   | dB    | 39.5 / 40.0 |
| Gain Flatness (max)<br>f = 40 to 500 MHz   | dB    | 0.6         |
| Input / Output Return Loss (min)<br>f = 50 to 500 MHz                              | dB    | 14.0        |
| Composite Triple Beat (CTB)<br>60 channels flat $V_{out} = +46$ dBmV               | dB    | -59.0       |
| Cross Modulation (XMOD)<br>60 channels flat $V_{out} = +46$ dBmV                   | dB    | -59.0       |
| Second Order IMD<br>2 tone $V_{out} = +46$ dBmV<br>$f_1 = 50$ MHz, $f_2 = 500$ MHz | dB    | -64.0       |
| Noise Figure (max)<br>f = 500 MHz  | dB    | 5.0         |
| Total Current (max)  | mA    | 340         |

**Outline Drawing: SOT115J \***



\* Dimensions are inches  $\pm 0.015$  unless otherwise specified.