

# PAW1027

## RF Linear Hybrid Amplifier 35 to 350 MHz

Rev. V3

### Features

- ULTRA HIGH LINEARITY
- HIGH GAIN: 38.5 dB (TYP.)
- LOW NOISE FIGURE 3.7 dB (TYP.)
- OPERATION OVER A WIDE VOLTAGE RANGE

### Description

The PAW1027 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     | SOT115J |

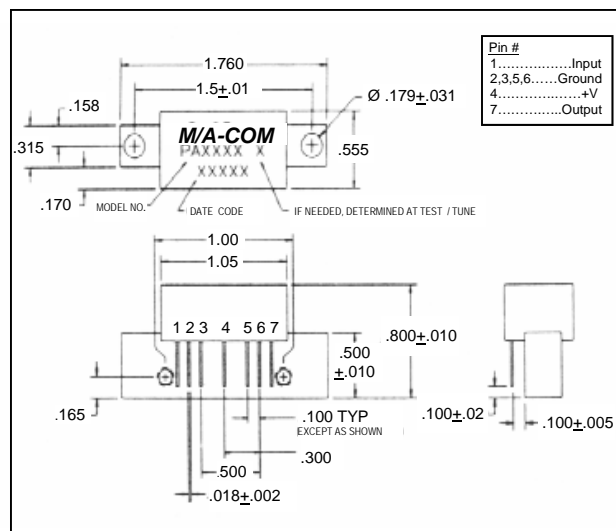
### Electrical Specifications: $Z_0 = 50\Omega$ , $V_{CC} = +24 V_{DC}$

| Parameter  | Units | Typical | Guaranteed   |
|--|-------|---------|--------------|
|  |       | 25°C    | 0°C to +70°C |
| Frequency  | MHz   | 35-350  | 35-350       |
| Power Gain (Min/Max)   | dB    | 38.5    | 37.0 / 40.0  |
| Gain Flatness (max)<br>$f = 40$ to 350 MHz   | dB    | 0.4     | 0.6          |
| Input / Output Return Loss (min)<br>$f = 50$ to 350 MHz                            | dB    | 18.0    | 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, $f_2 = 350$ MHz | dB    | -64.0   |              |
| Noise Figure (max)<br>$f = 350$ MHz  | dB    | 3.7     | 5.0          |
| Total Current (max)  | mA    | 300     | 340          |

### Absolute Maximum Ratings

| Parameter                  | Absolute Maximum |
|----------------------------|------------------|
| Storage Temperature        | -40°C to +85°C   |
| Operation Base Temperature | +70°C            |
| RF Input Voltage           | +14 dBm          |
| DC Voltage                 | +28 volts        |

### Outline Drawing: SOT115J \*



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

1

**ADVANCED:** Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

**PRELIMINARY:** Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400  
 • **India** Tel: +91.80.4155721 • **China** Tel: +86.21.2407.1588  
 Visit [www.macomtech.com](http://www.macomtech.com) for additional data sheets and product information.

M/A-COM Technology Solutions Inc and its affiliates reserve the right to make changes to the products and information contained herein without notice.