

## Features

- Ultra High Linearity
- High Gain: 38 dB
- Low Noise Figure: 4.5 dB
- Operation Over a Wide Voltage Range

## Product Image



## 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.

## Electrical Specifications: Freq. = 35 - 500 MHz, $Z_0 = 75 \Omega$ , $V_{CC} = +24 V_{DC}$ Nominal

Parameter	Units	Typical	Guaranteed
		25°C	0°C to +70°C
Power Gain (min./max.)	dB	38	36 / 40
Gain Flatness (max.) f = 40 - 500 MHz	dB	0.5	1.0
Input / Output Return Loss (min.) f = 50 - 500 MHz	dB	16	12
Composite Triple Beat (CTB) 60 channels flat $V_{OUT} = +46$ dBmV	dB	-59	—
Cross Modulation (XMOD) 60 channels flat $V_{OUT} = +46$ dBmV	dB	-59	—
Second Order IMD 2 tone $V_{OUT} = +46$ dBmV $f_1 = 50$ MHz, $f_2 = 500$ MHz	dB	-64	—
Noise Figure (max.) f = 500 MHz	dB	4.2	6.0
Total Current (max.)	mA	300	350

## Ordering Information

Part Number	Package
PAW1027-1	SOT115J

## 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

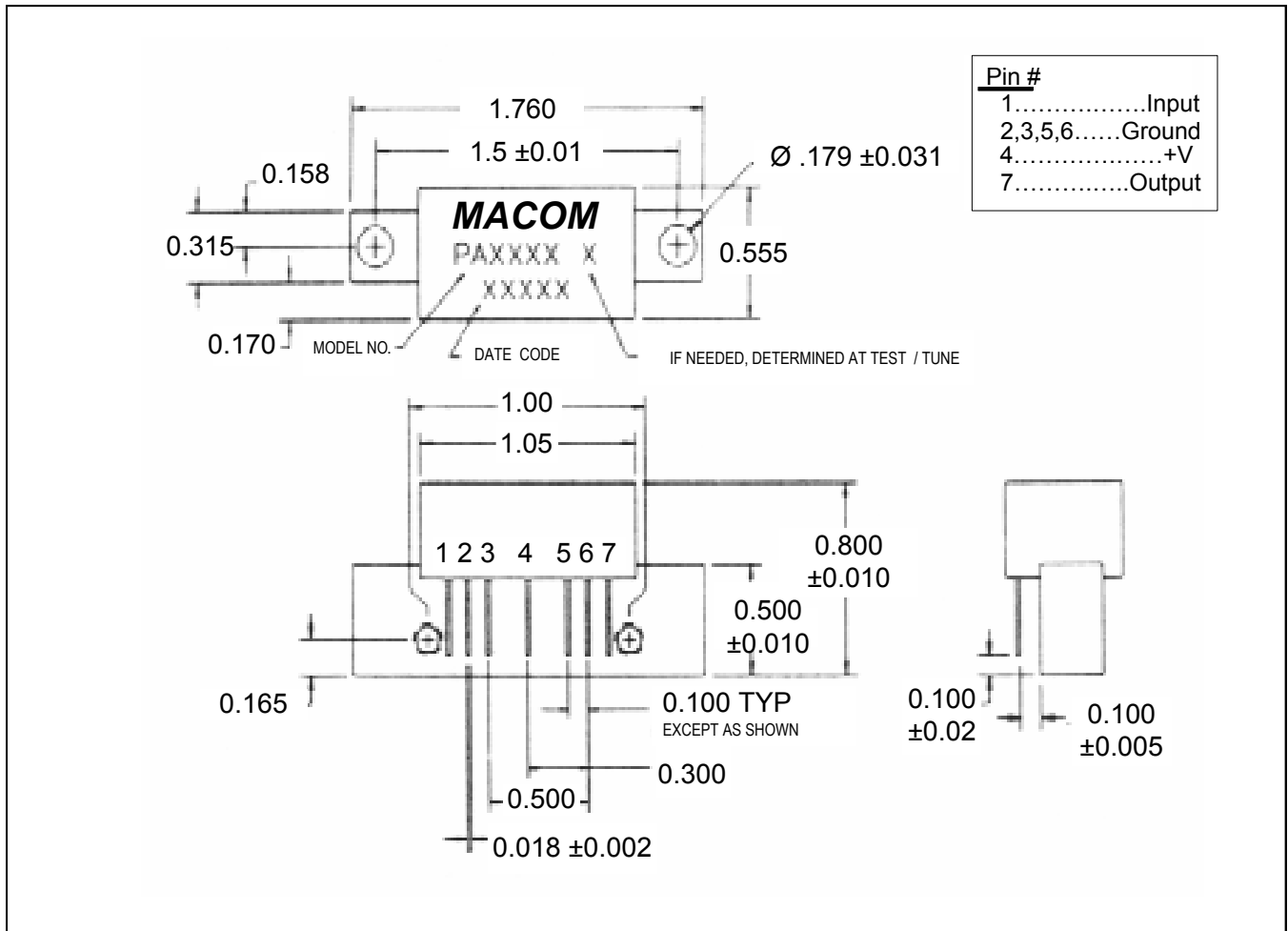
# PAW1027-1



RF Linear Hybrid Amplifier  
35 - 500 MHz

Rev. V4

## Outline Drawing: SOT115J\*



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

MACOM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with MACOM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.