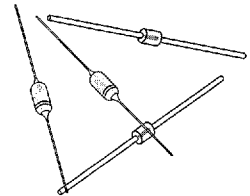


Features

- Large Resistance Range
- Hermetic Glass Package
- Low Harmonic Distortion
- Low Capacitance



Maximum Ratings

| | |
|------------------------|---------------------------------|
| Operating Temperature: | -65 to 150 °C |
| Storage Temperature: | -65 to 175 °C |
| Power Dissipation: | Derated linearly to 0 at 150 °C |
| P_D at 25 °C: | 250 mW |

Description

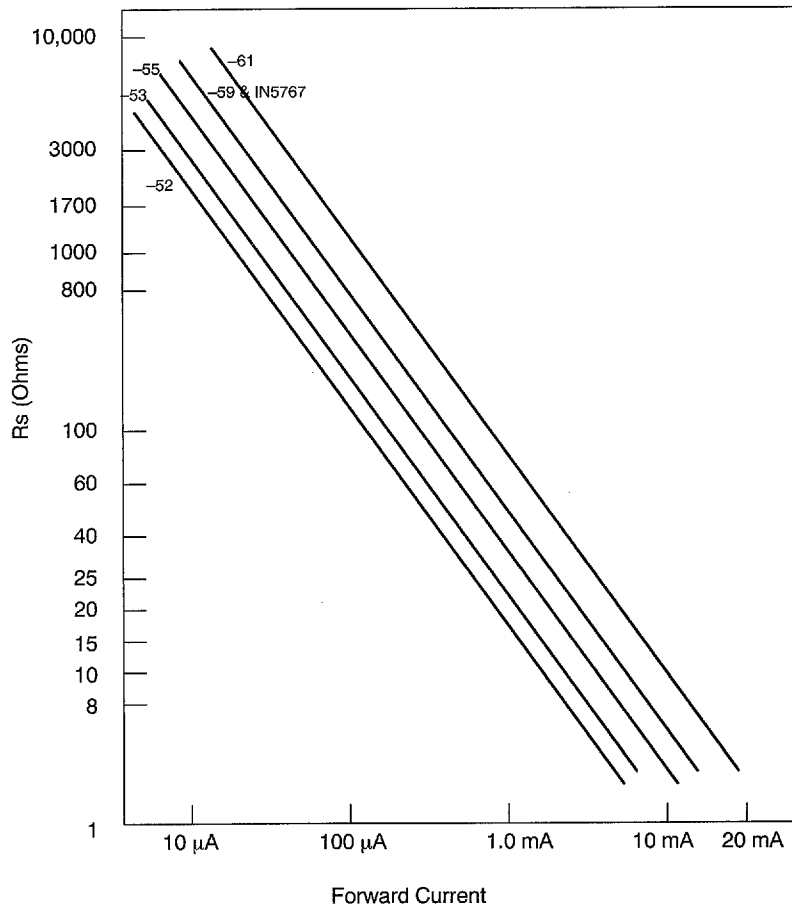
The forward biased resistance of a PIN diode is determined by the magnitude of the bias current. These devices are specifically designed so that the resistance can be varied over a wide current range (10 μ A to 10 mA). The resistance is nearly log-linear with current over this range providing a wide variation in resistance from 10K Ω or more at the low current end to 2-4 Ω or less at the high current end depending on the device type.

These devices are designed for use in current controlled attenuator and modulator applications. They can also be used for electronically tuneable filters, phase shifters and switch applications. The low capacitance allows their use well into the microwave region. These devices also have a long lifetime and thick intrinsic region allowing their use at frequencies as low as 1 MHz with low distortion. Several levels of resistance (15 - 50 Ω at 1 mA) are available in the series allowing flexibility of design.

Electrical Specifications

| Part Number | V_B @ $I_R = 10 \mu A$ Volts (min) | C_T -50V 1.0 MHz pF (max) | R_S @ 1.0 mA 100 MHz Ω | R_{High} @ 10.0 μA 100 MHz Ω (min) | R_{Low} 20. μA 100 MHz Ω (max) | R @100 mA 100 MHz Ω (max) | T_L $I_f = 10mA$ $I_f = 6 mA$ ns (typ) | Outline Drawing Number |
|-------------|--|--------------------------------------|---------------------------------------|---|---|---|---|------------------------------|
| DSB6419-52 | 100 | 0.3 | 15 | 800 | - | 1.5 | 800 | 075-001 |
| DSB6419-55 | 100 | 0.3 | 40 | 1200 | - | 1.5 | 800 | 075-001 |
| DSB6419-59 | 100 | 0.4 | 25 | 1000 | 8.0 | 2.5 | 1000 | 075-001 |
| DSB6419-61 | 100 | 0.4 | 60 | 1500 | - | 3.5 | 1300 | 075-001 |
| IN5767 | 100 | 0.4 | 40 | 1000 | 8.0 | 2.5 | 1000 | 075-001 |

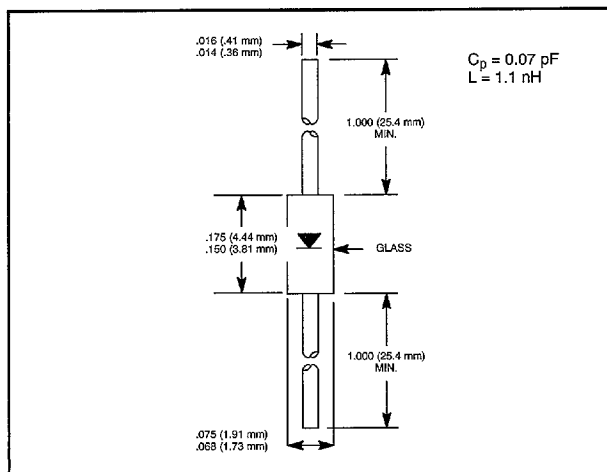
Performance Data



Series Resistance vs. Forward Current

Outline Drawing

075-001



RF GaAs MMIC Products in Metal Packages

Numerical Index

| Part Number | Page | Part Number | Page | Part Number | Page |
|-------------|------|-------------|------|-------------|------|
| AD004T2-00 | 2-44 | AK006R2-01 | 2-30 | AS006M1-01 | 2-8 |
| AD004T2-11 | 2-44 | AK006R2-10 | 2-30 | AS006M1-10 | 2-8 |
| AE002M2-29 | 2-74 | AK006R2-00 | 2-28 | AS006M2-00 | 2-16 |
| AE002M4-05 | 2-42 | AK402D4-11 | 2-64 | AS006M2-01 | 2-22 |
| AH002R2-11 | 2-26 | AK402D4-31 | 2-68 | AS006M2-10 | 2-22 |
| AK002D2-11 | 2-70 | AN002M2-29 | 2-72 | AS006R1-00 | 2-4 |
| AK002D4-11 | 2-62 | AN002M4-31 | 2-38 | AS006R2-00 | 2-16 |
| AK002D4-31 | 2-66 | AN002M4-05 | 2-40 | AS006R2-01 | 2-20 |
| AK002M4-00 | 2-36 | AS002M4-00 | 2-34 | AS006R2-10 | 2-20 |
| AK002M4-31 | 2-38 | AS004L1-08 | 2-6 | AS406M2-01 | 2-24 |
| AK004L1-11 | 2-12 | AS004L1-11 | 2-6 | AS406R2-01 | 2-24 |
| AK004M1-11 | 2-14 | AS004L2-11 | 2-18 | AT001D3-11 | 2-60 |
| AK004M2-11 | 2-32 | AS004M1-08 | 2-8 | AT001D4-31 | 2-56 |
| AK004R2-11 | 2-30 | AS004M1-11 | 2-8 | AT001D6-31 | 2-58 |
| AK006L1-00 | 2-10 | AS004M2-08 | 2-22 | AT002D8-31 | 2-54 |
| AK006L1-01 | 2-12 | AS004M2-11 | 2-22 | AT002N5-00 | 2-49 |
| AK006L1-10 | 2-12 | AS004R2-08 | 2-20 | AT002N5-01 | 2-49 |
| AK006M1-00 | 2-10 | AS004R2-11 | 2-20 | AT002N5-10 | 2-49 |
| AK006M1-01 | 2-14 | AS006L1-00 | 2-4 | AT002N5-11 | 2-49 |
| AK006M1-10 | 2-14 | AS006L1-01 | 2-6 | AT002S3-11 | 2-52 |
| AK006M2-01 | 2-32 | AS006L1-10 | 2-6 | AT004N3-11 | 2-46 |
| AK006M2-10 | 2-32 | AS006L2-00 | 2-18 | AT006N3-00 | 2-46 |
| AK006M2-00 | 2-28 | AS006L2-01 | 2-18 | AT006N3-10 | 2-46 |
| AK006R1-00 | 2-10 | AS006M1-00 | 2-4 | AT006N3-01 | 2-46 |

0585443 0002501 710