

## RF PIN Diodes - Single in DO-35

### Features

- Wide frequency range 10 MHz to 1 GHz
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**



94 9367

### Applications

- Current controlled HF resistance in adjustable attenuators

### Mechanical Data

**Case:** DO-35

**Weight:** approx. 125 mg

**Cathode Band Color:** black

**Packaging Codes/Options:**

TR/10 k per 13" reel (52 mm tape), 50 k/box

TAP/10 k per Ammpack (52 mm tape), 50 k/box

### Parts Table

| Part   | Type differentiation                             | Ordering code           | Type Marking | Remarks               |
|--------|--|-------------------------|--------------|-----------------------|
| BA479G | $V_R = 30 \text{ V}$ , $Z_r > 5 \text{ k}\Omega$ | BA479G-TR or BA479G-TAP | BA479G       | Tape and Reel/Ammpack |
| BA479S | $V_R = 30 \text{ V}$ , $Z_r > 9 \text{ k}\Omega$ | BA479S-TR or BA479S-TAP | BA479S       | Tape and Reel/Ammpack |

### Absolute Maximum Ratings

$T_{amb} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified

| Parameter                  | Test condition | Symbol | Value | Unit |
|----------------------------|----------------|--------|-------|------|
| Reverse voltage            |                | $V_R$  | 30    | V    |
| Forward continuous current |                | $I_F$  | 50    | mA   |

### Thermal Characteristics

$T_{amb} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified

| Parameter                                  | Test condition                               | Symbol     | Value         | Unit             |
|--|--|------------|---------------|------------------|
| Thermal resistance junction to ambient air | $l = 4 \text{ mm}$ , $T_L = \text{constant}$ | $R_{thJA}$ | 350           | K/W              |
| Junction temperature                       |  | $T_j$      | 125           | $^\circ\text{C}$ |
| Storage temperature range                  |  | $T_{stg}$  | - 55 to + 150 | $^\circ\text{C}$ |

### Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

| Parameter                       | Test condition                               | Part   | Symbol | Min. | Typ. | Max. | Unit          |
|---------------------------------|--|--------|--------|------|------|------|---------------|
| Forward voltage                 | $I_F = 20\text{ mA}$                         |        | $V_F$  |      |      | 1000 | mV            |
| Reverse current                 | $V_R = 30\text{ V}$                          |        | $I_R$  |      |      | 50   | nA            |
| Diode capacitance               | $f = 100\text{ MHz}$ , $V_R = 0$             |        | $C_D$  |      |      | 0.5  | pF            |
| Differential forward resistance | $f = 100\text{ MHz}$ , $I_F = 1.5\text{ mA}$ |        | $r_f$  |      |      | 50   | $\Omega$      |
| Reverse impedance               | $f = 100\text{ MHz}$ , $V_R = 0$             | BA479G | $z_r$  | 5    |      |      | k $\Omega$    |
|                                 |  | BA479S | $z_r$  | 9    |      |      | k $\Omega$    |
| Minority carrier lifetime       | $I_F = 10\text{ mA}$ , $I_R = 10\text{ mA}$  |        | $\tau$ |      | 4    |      | $\mu\text{s}$ |

### Typical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

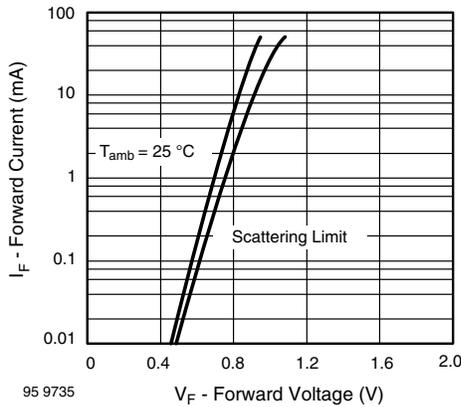


Figure 1. Forward Current vs. Forward Voltage

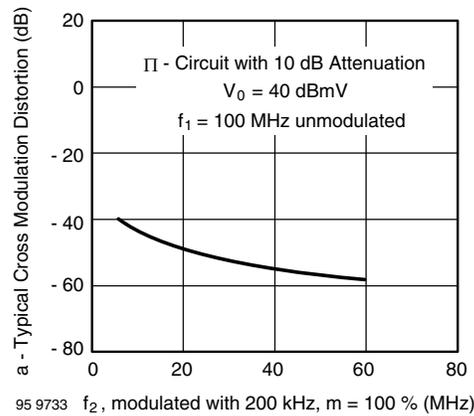


Figure 3. Typ. Cross Modulation Distortion vs. Frequency  $f_2$

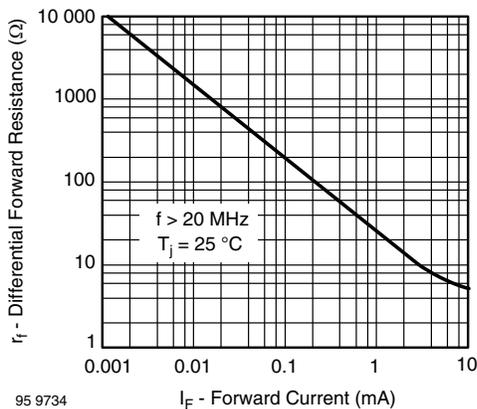
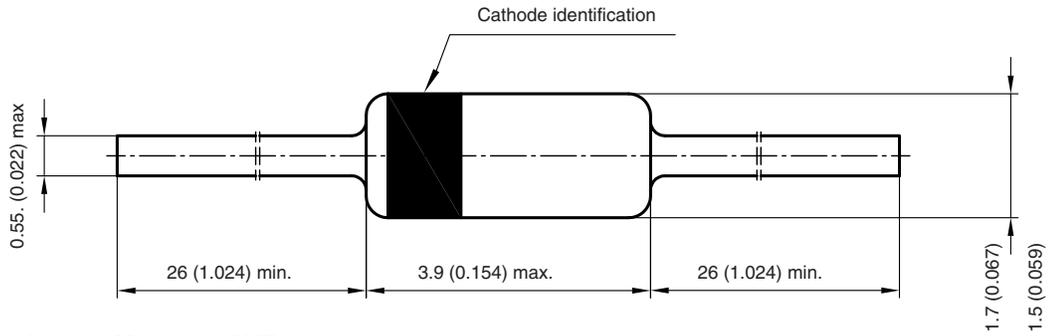


Figure 2. Differential Forward Resistance vs. Forward Current

## Package Dimensions in millimeters (inches): DO-35



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