

RF PIN Diodes - Single in DO-35



FEATURES

- Wide frequency range 10 MHz to 1 GHz
- AEC-Q101 qualified
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

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

TAP/10K per ammpack (52 mm tape), 50K/box

PARTS TABLE

| PART | TYPE DIFFERENTIATION | ORDERING CODE | TYPE MARKING | INTERNAL CONSTRUCTION | REMARKS |
|--------|--|-------------------------|--------------|-----------------------|-----------------------|
| BA479G | $V_R = 30\text{ V}$, $z_r > 5\text{ k}\Omega$ | BA479G-TR or BA479G-TAP | BA479G | Single diode | Tape and reel/ammpack |
| BA479S | $V_R = 30\text{ V}$, $z_r > 9\text{ k}\Omega$ | BA479S-TR or BA479S-TAP | BA479S | Single diode | Tape and reel/ammpack |

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^\circ\text{C}$, unless otherwise specified)

| PART | 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 | | | 1 | V |
| Reverse current | $V_R = 30\text{ V}$ | | I_R | | | 0.05 | μA |
| Diode capacitance | $f = 100\text{ MHz}$, $V_R = 0\text{ V}$ | | C_D | | | 0.5 | pF |
| Differential forward resistance | $f = 100\text{ MHz}$, $I_F = 1.5\text{ mA}$ | | r_f | | | 50 | Ω |
| Reverse impedance | $f = 100\text{ MHz}$, $V_R = 0\text{ V}$ | BA479G | z_r | 5 | | | k Ω |
| | | BA479S | z_r | 9 | | | k Ω |
| Minority carrier lifetime | $I_F = 10\text{ mA}$, $I_R = 10\text{ mA}$ | | τ | | 4 | | μs |

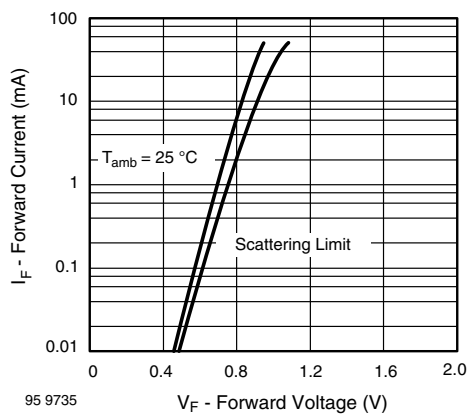
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Forward Current vs. Forward Voltage

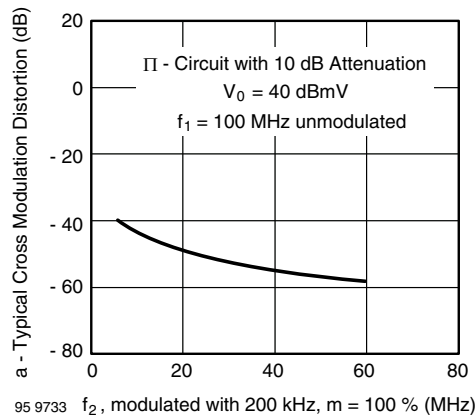
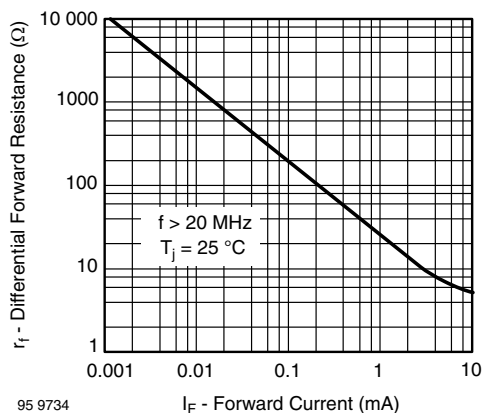
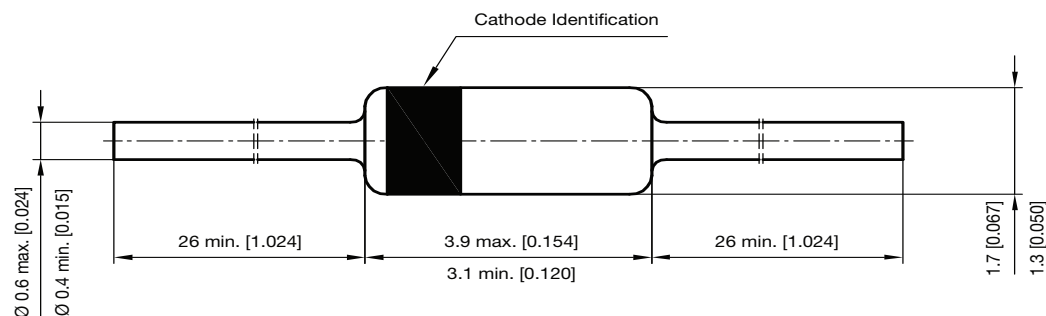

Fig. 3 - Typ. Cross Modulation Distortion vs. Frequency f_2


Fig. 2 - Differential Forward Resistance vs. Forward Current

PACKAGE DIMENSIONS in millimeters (inches): **DO-35**


Rev. 6 - Date: 19. December 2011
Document no.: SB-V-3906.04-031(4)
94 9366



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