

# BA479G, BA479S

#### **Vishay Semiconductors**

# **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
   RoHS
- Halogen-free according to IEC 61249-2-21
  compliant
  definition
  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/10 k per 13" reel (52 mm tape), 50 k/box TAP/10 k per Ammopack (52 mm tape), 50 k/box

#### Parts Table

Part	Type differentiation	Ordering code	Type Marking	Remarks
BA479G	$V_{R}$ = 30 V, $Z_{r}$ > 5 k $\Omega$	BA479G-TR or BA479G-TAP	BA479G	Tape and Reel/Ammopack
BA479S	$V_{R}$ = 30 V, $Z_{r}$ > 9 k $\Omega$	BA479S-TR or BA479S-TAP	BA479S	Tape and Reel/Ammopack

#### **Absolute Maximum Ratings**

T<sub>amb</sub> = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit	
Reverse voltage		V <sub>R</sub>	30	V	
Forward continuous current		١ <sub>F</sub>	50	mA	

#### **Thermal Characteristics**

T<sub>amb</sub> = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit	
Thermal resistance junction to ambient air	$I = 4 \text{ mm}, T_L = \text{constant}$	R <sub>thJA</sub>	350	K/W	
Junction temperature		Tj	125	°C	
Storage temperature range		T <sub>stg</sub>	- 55 to + 150	°C	

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#### **Electrical Characteristics**

T<sub>amb</sub> = 25 °C, unless otherwise specified

Parameter	Test condition	Part	Symbol	Min.	Тур.	Max.	Unit
Forward voltage	I <sub>F</sub> = 20 mA		V <sub>F</sub>			1000	mV
Reverse current	V <sub>R</sub> = 30 V		I <sub>R</sub>			50	nA
Diode capacitance	f = 100 MHz, V <sub>R</sub> = 0		CD			0.5	pF
Differential forward resistance	f = 100 MHz, I <sub>F</sub> = 1.5 mA		r <sub>f</sub>			50	Ω
Deveras impedance	f = 100 MHz, V <sub>R</sub> = 0	BA479G	z <sub>r</sub>	5			kΩ
Reverse impedance		BA479S	z <sub>r</sub>	9			kΩ
Minority carrier lifetime	I <sub>F</sub> = 10 mA, I <sub>R</sub> = 10 mA		τ		4		μs

## **Typical Characteristics**

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

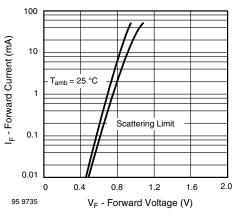


Figure 1. Forward Current vs. Forward Voltage

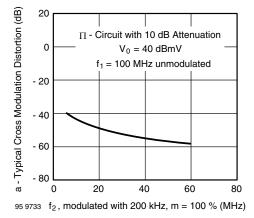


Figure 3. Typ. Cross Modulation Distortion vs. Frequency f<sub>2</sub>

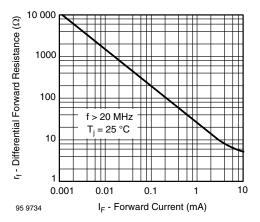


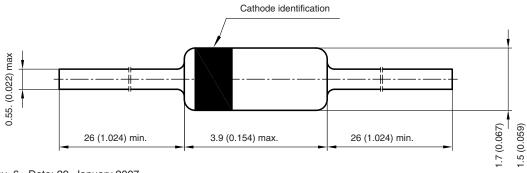
Figure 2. Differential Forward Resistance vs. Forward Current

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



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 For technical questions within your region, please contact one of the following:

 Rev. 1.7, 05-Aug-10
 DiodesAmericas@vishay.com, DiodesAsia@vishay.com, Nature.com, Nature.co



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