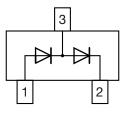
# BA779-2-G

**Vishay Semiconductors** 



# **RF PIN Diodes - Dual Series**





## DESIGN SUPPORT TOOLS click logo to get started



## FEATURES

- Wide frequency range 10 MHz to 1 GHz
- AEC-Q101 qualified
- Base P/N-HG3 green, automotive grade
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

## **APPLICATIONS**

• Current controlled HF resistance in adjustable attenuators

## **MECHANICAL DATA**

Case: SOT-23

Weight: approx. 8.1 mg

### Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K/box 08/3K per 7" reel (8 mm tape), 15K/box

Pb-free	



#### RoHS COMPLIANT HALOGEN FREE GREEN (5-2008)

PARTS TABLE					
PART	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS	
BA779-2-G	BA779-2-HG3-08 or BA779-2-HG3-18	PH2	Dual serial	Tape and reel	

<b>ABSOLUTE MAXIMUM RATINGS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PART	TEST CONDITION	SYMBOL	VALUE	UNIT	
Reverse voltage		V <sub>R</sub>	30	V	
Forward continuous current		I <sub>F</sub>	50	mA	

<b>THERMAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION		VALUE	UNIT		
Thermal resistance junction to ambient air	on PC board 50 mm x 50 mm x 1.6 mm	R <sub>thJA</sub>	500	K/W		
Junction temperature		Тj	125	°C		
Storage temperature range		T <sub>stg</sub>	-55 to +150	°C		
Operating temperature range		T <sub>op</sub>	-55 to +125	°C		

ELECTRICAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I <sub>F</sub> = 20 mA		V <sub>F</sub>			1	V
Reverse current	V <sub>R</sub> = 30 V		I <sub>R</sub>			0.05	μA
Diode capacitance	$f = 100 \text{ MHz}, \text{ V}_{\text{R}} = 0 \text{ V}$		CD			0.5	pF
Differential forward resistance	f = 100 MHz, I <sub>F</sub> = 1.5 mA		r <sub>f</sub>			50	Ω
Reverse impedance	$f = 100 \text{ MHz}, \text{ V}_{\text{R}} = 0 \text{ V}$	BA779-2-G	Zr	5			kΩ
Minority carrier lifetime	l <sub>F</sub> = 10 mA, l <sub>R</sub> = 10 mA		τ		4		μs

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## TYPICAL CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

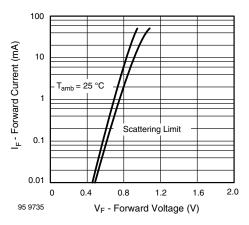


Fig. 1 - Forward Current vs. Forward Voltage

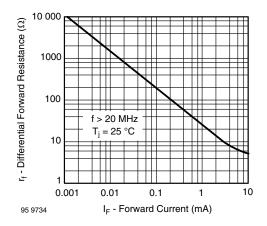


Fig. 2 - Differential Forward Resistance vs. Forward Current

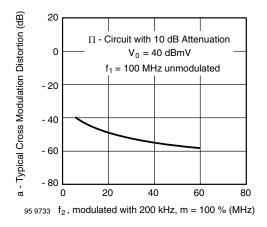


Fig. 3 - Typ. Cross Modulation Distortion vs. Frequency f<sub>2</sub>

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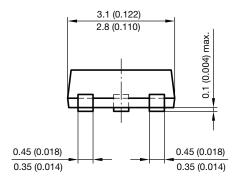
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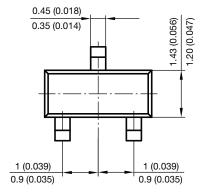
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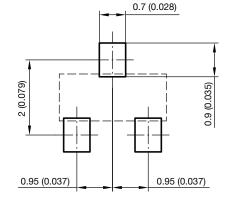
## PACKAGE DIMENSIONS in millimeters (inches): SOT-23





0.550 ref. (0.022 ref.) 1.15 (0.045) 0.9 (0.035) 0.175 (0.007) 0.098 (0.004) 0.2 (0.008) 0° to 8° 0.5 (0.020) 0.3 (0.012) 2.6 (0.102) 2.35 (0.093)

Foot print recommendation:



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