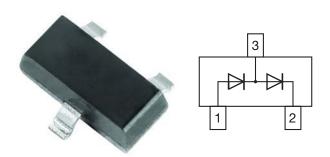


# Vishay Semiconductors

## **RF PIN Diodes - Dual Series**



#### **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 www.vishav.com/doc?99912

### AUTOMOTIVE GRADE





### RoHS COMPLIANT GREEN (5-2008)

#### **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

PARTS TABLE					
PART	PART ORDERING CODE		INTERNAL CONSTRUCTION	REMARKS	
BA779-2-G	BA779-2-HG3-08 or BA779-2-HG3-18	PH2	Dual series	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		$V_{R}$	30	V		
Forward continuous current		I <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	on PC board 50 mm x 50 mm x 1.6 mm	R <sub>thJA</sub>	500	K/W	
Junction temperatureBase P/N-HG3 - green, automotive grade		Tj	125	°C	
Storage temperature range		T <sub>stg</sub>	- 55 to + 150	°C	
Operating temperature range		T <sub>op</sub>	- 55 to + 125	°C	

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °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 <sub>R</sub>			0.05	μA
Diode capacitance	f = 100 MHz, V <sub>R</sub> = 0 V		C <sub>D</sub>			0.5	pF
Differential forward resistance	$f = 100 \text{ MHz}, I_F = 1.5 \text{ mA}$		r <sub>f</sub>			50	Ω
Reverse impedance	$f = 100 \text{ MHz}, V_R = 0 \text{ V}$	BA779-2-G	z <sub>r</sub>	5			kΩ
Minority carrier lifetime	$I_F = 10 \text{ mA}, I_R = 10 \text{ mA}$		τ		4		μs

# Vishay Semiconductors

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

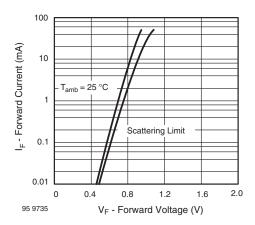


Fig. 1 - Forward Current vs. Forward Voltage

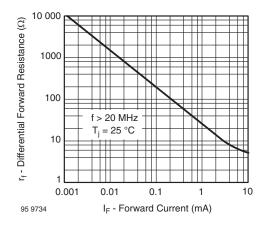


Fig. 2 - Differential Forward Resistance vs. Forward Current

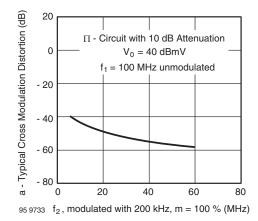
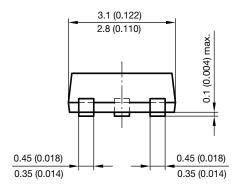


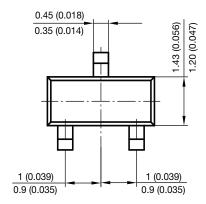
Fig. 3 - Typ. Cross Modulation Distortion vs. Frequency f<sub>2</sub>



# Vishay Semiconductors

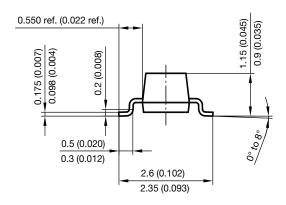
## PACKAGE DIMENSIONS in millimeters (inches): SOT-23



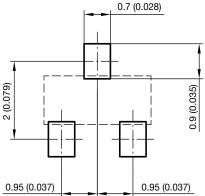


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### Foot print recommendation:





## **Legal Disclaimer Notice**

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