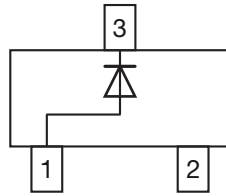


RF PIN Diodes



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.vishay.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:

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

PARTS TABLE

PART	ORDERING CODE	TYPE MARKING	INTERNAL CONSTRUCTION	REMARKS
BA779-G	BA779-HG3-08	PH1	Single diode	Tape and reel

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	on PC board 50 mm x 50 mm x 1.6 mm	R_{thJA}	500	K/W
Junction temperature		T_j	125	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	- 55 to + 150	$^{\circ}\text{C}$
Operating temperature range		T_{op}	- 55 to + 125	$^{\circ}\text{C}$

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	$f = 100\text{ MHz}, V_R = 0\text{ V}$	BA779-G	z_r	5			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

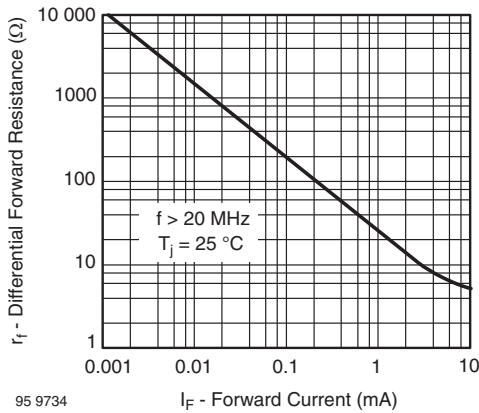


Fig. 2 - Differential Forward Resistance vs. Forward Current

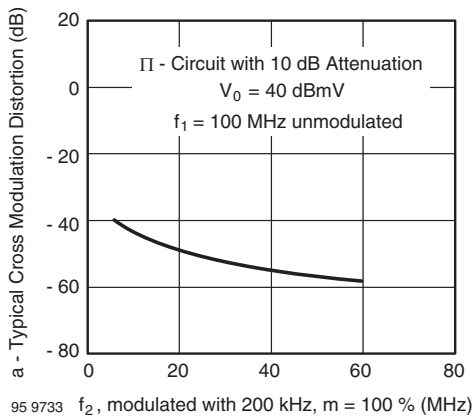
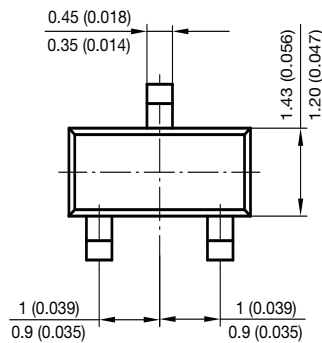
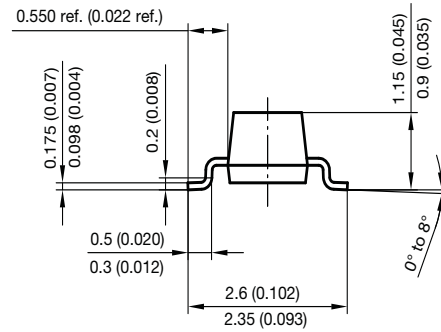
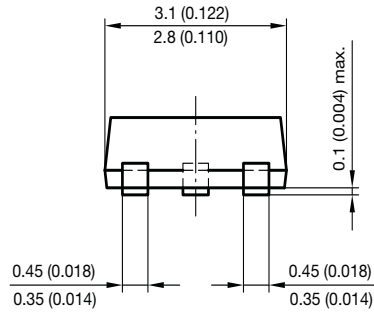


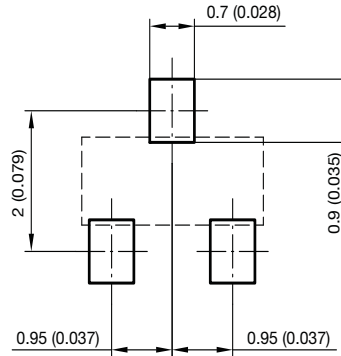
Fig. 3 - Typ. Cross Modulation Distortion vs. Frequency f_2



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



Foot print recommendation:



Document no.: 6.541-5014.01-4
Rev. 8 - Date: 23.Sept.2009
17418



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