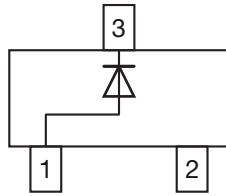


RF PIN Diodes



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

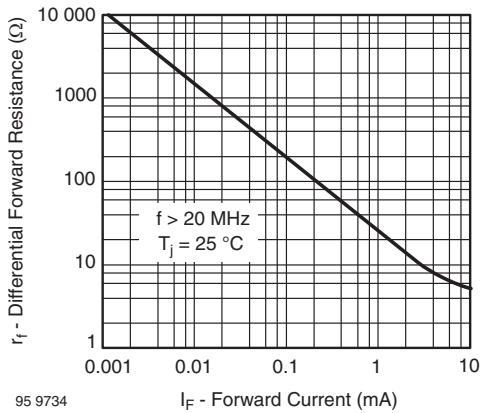


Fig. 2 - Differential Forward Resistance vs. Forward Current

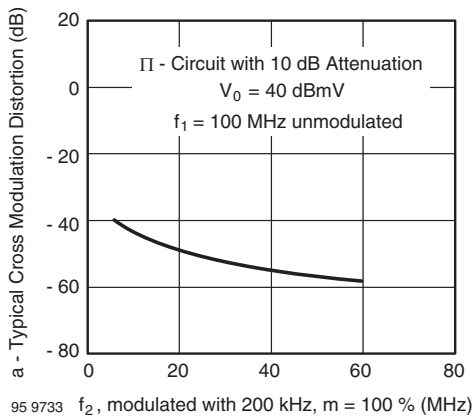
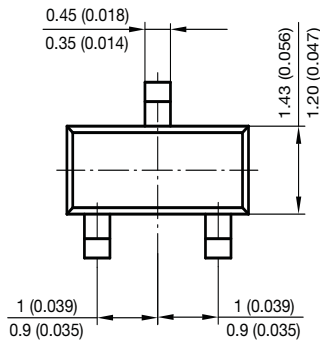
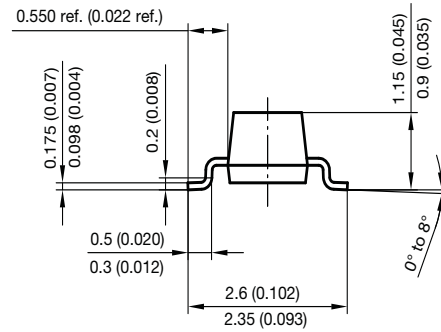
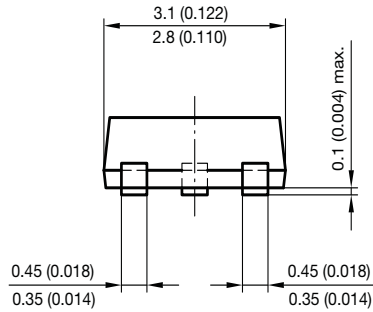


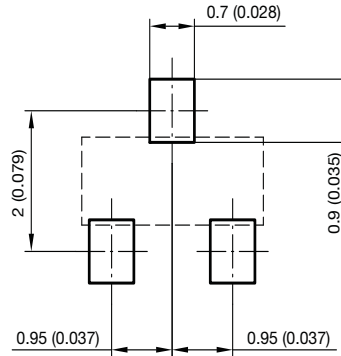
Fig. 3 - Typ. Cross Modulation Distortion vs. Frequency f_2



PACKAGE DIMENSIONS in millimeters (inches): SOT-23



Foot print recommendation:



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Rev. 8 - Date: 23.Sept.2009
17418



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