

RF PIN Diodes - Single in MiniMELF SOD-80



FEATURES

- Wide frequency range 10 MHz to 1 GHz
- AEC-Q101 qualified
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

APPLICATIONS

- Current controlled HF resistance in adjustable attenuators

MECHANICAL DATA

Case: MiniMELF SOD-80

Weight: approx. 31 mg

Cathode band color: black

Packaging codes/options:

GS18/10K per 13" reel (8 mm tape), 10K/box

GS08/2.5K per 7" reel (8 mm tape), 12.5K/box

PARTS TABLE

| PART | TYPE DIFFERENTIATION | ORDERING CODE | TYPE MARKING | INTERNAL CONSTRUCTION | REMARKS |
|--------|---------------------------|----------------------------|--------------|-----------------------|---------------|
| BA679 | $z_r > 5 \text{ k}\Omega$ | BA679-GS18 or BA679-GS08 | - | Single diode | Tape and reel |
| BA679S | $z_r > 9 \text{ k}\Omega$ | BA679S-GS18 or BA679S-GS08 | - | Single diode | Tape and reel |

ABSOLUTE MAXIMUM RATINGS ($T_{\text{amb}} = 25 \text{ }^\circ\text{C}$, unless otherwise specified)

| PART | TEST CONDITION | SYMBOL | VALUE | UNIT |
|----------------------------|----------------|--------|-------|------|
| Reverse voltage | | V_R | 30 | V |
| Forward continuous current | | I_F | 50 | mA |

THERMAL CHARACTERISTICS ($T_{\text{amb}} = 25 \text{ }^\circ\text{C}$, 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 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS ($T_{\text{amb}} = 25 \text{ }^\circ\text{C}$, 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 | $f = 100 \text{ MHz}$, $V_R = 0 \text{ V}$ | BA679 | z_r | 5 | | | $\text{k}\Omega$ |
| | | BA679S | z_r | 9 | | | $\text{k}\Omega$ |
| 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)

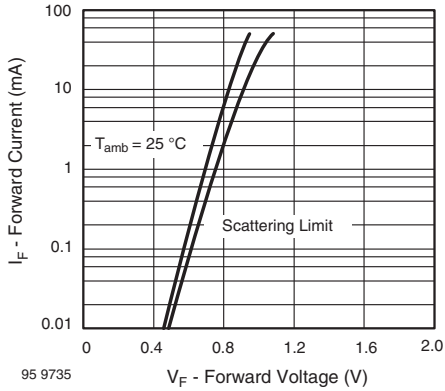


Fig. 1 - Forward Current vs. Forward Voltage

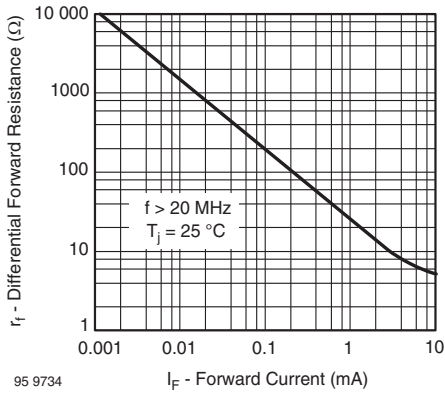


Fig. 2 - Differential Forward Resistance vs. Forward Current

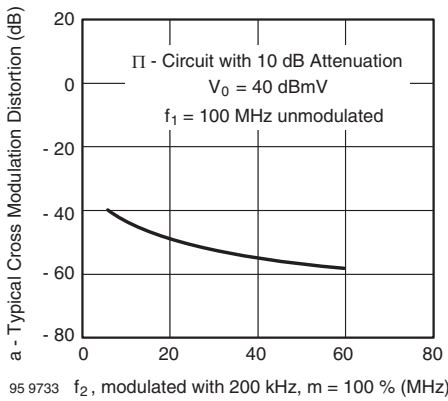
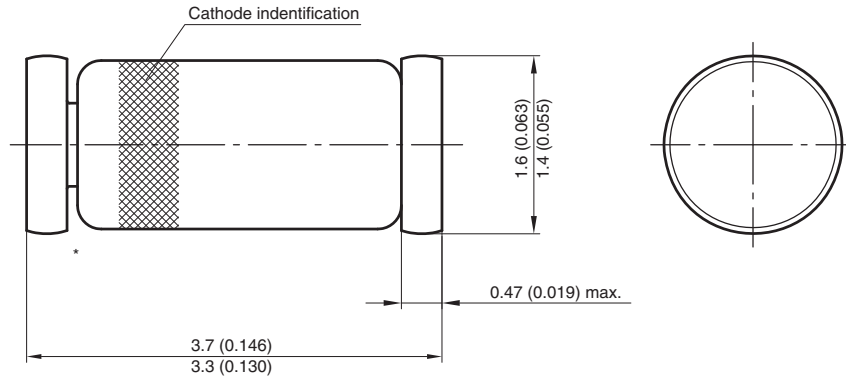


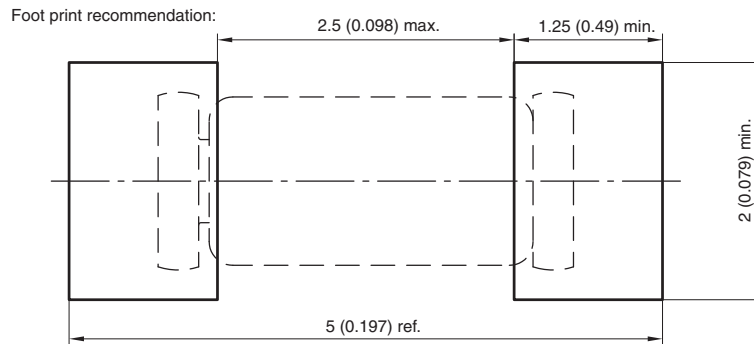
Fig. 3 - Typ. Cross Modulation Distortion vs. Frequency f_2



PACKAGE DIMENSIONS in millimeters (inches): **MiniMELF SOD-80**



* The gap between plug and glass can be either on cathode or anode side



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