

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
HALOGEN
FREE

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:

18/10K per 13" reel (8 mm tape), 10K/box

08/2.5K per 7" reel (8 mm tape), 12.5K/box

DESIGN SUPPORT TOOLS

3D
Models
Available

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PARTS TABLE

PART	TYPE DIFFERENTIATION	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS
BA679-M	$z_r > 5 \text{ k}\Omega$	BA679-M-18 or BA679-M-08	-	Single	Tape and reel
BA679S-M	$z_r > 9 \text{ k}\Omega$	BA679S-M-18 or BA679S-M-08	-	Single	Tape and reel

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

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

THERMAL CHARACTERISTICS ($T_{\text{amb}} = 25^\circ\text{C}$, 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 ($T_{\text{amb}} = 25^\circ\text{C}$, 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-M	z_r	5			$\text{k}\Omega$
		BA679S-M	z_r	9			$\text{k}\Omega$
Minority carrier lifetime	$I_F = 10 \text{ mA}$, $I_R = 10 \text{ mA}$		τ		4		μs

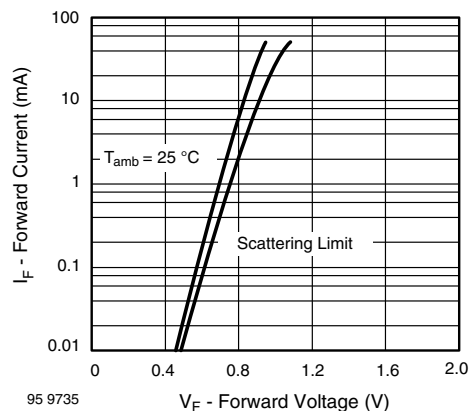
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Forward Current vs. Forward Voltage

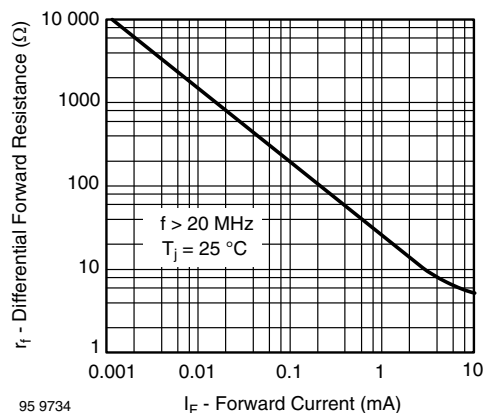
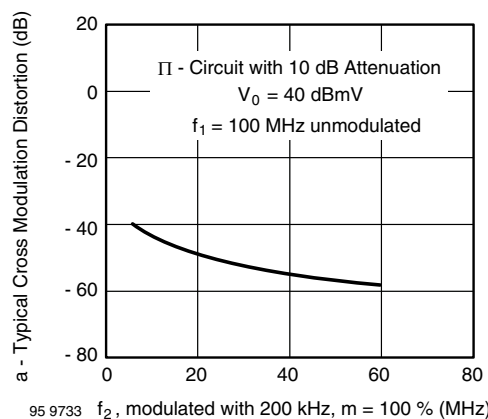
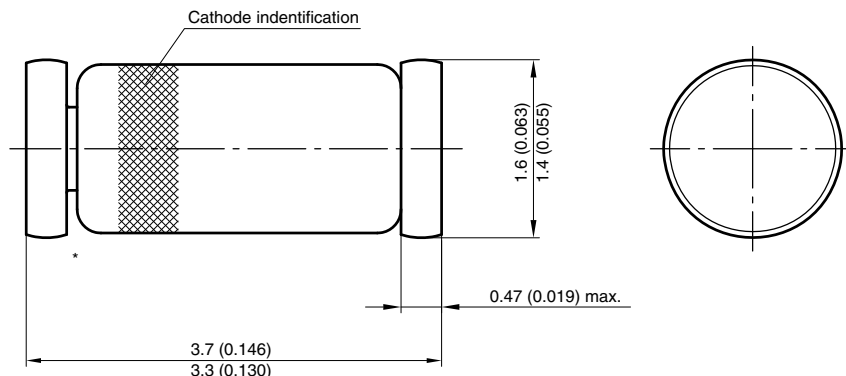


Fig. 2 - Differential Forward Resistance vs. Forward Current


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

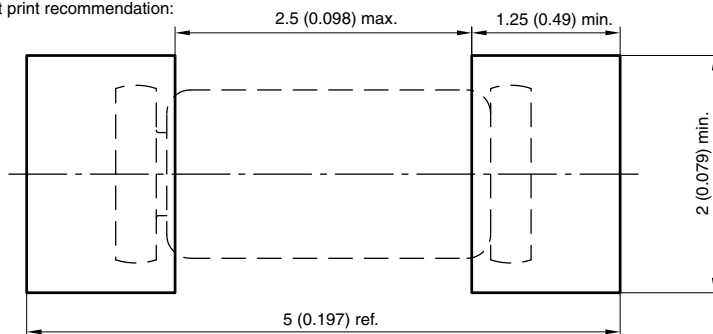


PACKAGE DIMENSIONS in millimeters (inches): **MiniMELF (SOD-80)**



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

Foot print recommendation:



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