

Vishay Semiconductors

RF PIN Diode - 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 <u>www.vishay.com/doc?99912</u>
 See 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:

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

PARTS TABLE					
PART	TYPE DIFFERENTIATION	ORDERING CODE	INTERNAL CONSTRUCTION	REMARKS	
S391D	V _R = 30 V	S391D-GS08	Single diode	Tape and reel	

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °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 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION		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		Tj	125	°C	
Storage temperature range		T _{stg}	- 55 to + 150	°C	

ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I _F = 20 mA		V _F			1	V
Reverse current	V _R = 30 V		I _R			0.05	μA
Diode capacitance	$f = 100 \text{ MHz}, \text{ V}_{\text{R}} = 0 \text{ V}$		CD			0.5	pF
Differential forward resistance	f = 100 MHz, I _F = 1.5 mA		r _f	40		60	Ω
Reverse impedance	f = 100 MHz, V _R = 0 V	S391D	Zr	5			kΩ
Minority carrier lifetime	I _F = 10 mA, I _R = 10 mA		τ		4		μs

Rev. 1.7, 21-May-12 For technical questions within your region: <u>DiodesA</u> Document Number: 85569

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TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

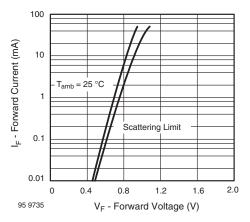
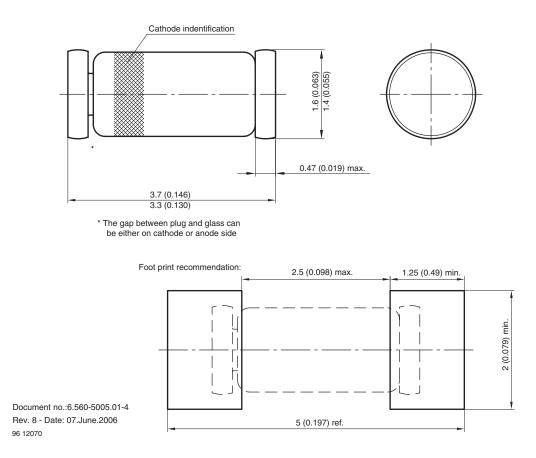


Fig. 1 - Forward Current vs. Forward Voltage

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





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