

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 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:

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

PARTS TABLE

PART	TYPE DIFFERENTIATION	ORDERING CODE	INTERNAL CONSTRUCTION	REMARKS
S391D	$V_R = 30\text{ V}$	S391D-GS08	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	$^{\circ}\text{C}$

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	40		60	Ω
Reverse impedance	$f = 100\text{ MHz}$, $V_R = 0\text{ V}$	S391D	z_r	5			k Ω
Minority carrier lifetime	$I_F = 10\text{ mA}$, $I_R = 10\text{ mA}$		τ		4		μs

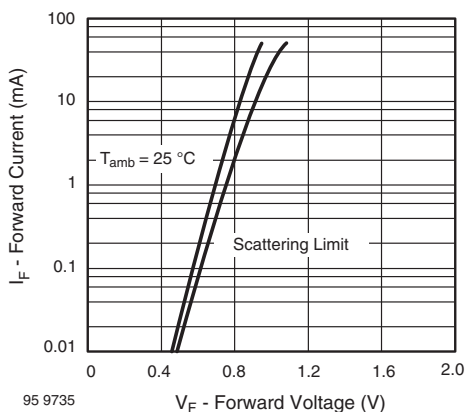
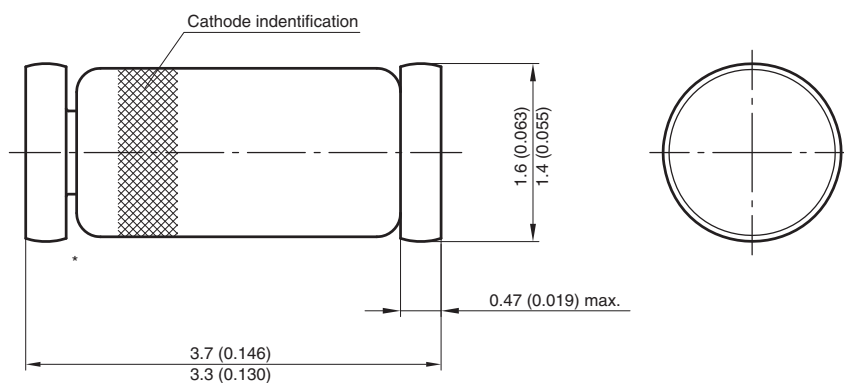
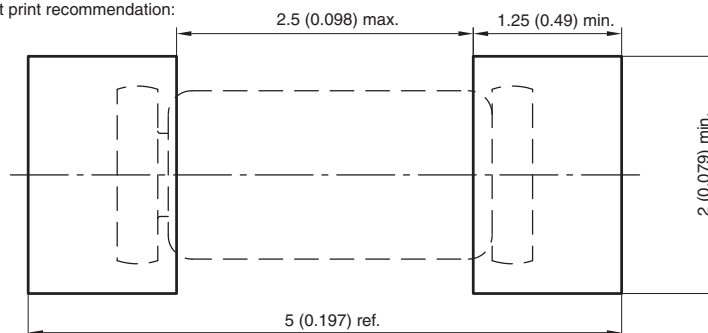
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Forward Current vs. Forward Voltage

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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