

Small Signal Fast Switching Diode



FEATURES

- Silicon epitaxial planar diodes
- Low forward voltage drop
- High forward current capability
- AEC-Q101 qualified
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

APPLICATIONS

- High speed switch and general purpose use in computer and industrial applications

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

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

PARTS TABLE

PART	ORDERING CODE	TYPE MARKING	INTERNAL CONSTRUCTION	REMARKS
LL4150	LL4150GS08 or LL4150GS18	-	Single diode	Tape and reel

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V_{RRM}	50	V
Reverse voltage		V_R	50	V
Peak forward surge current	$t_p = 1\text{ }\mu\text{s}$	I_{FSM}	4	A
Forward continuous current		I_F	600	mA
Average forward current	$V_R = 0$	$I_{F(AV)}$	300	mA
Power dissipation		P_{tot}	500	mW

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}	300	K/W
Junction temperature		T_j	175	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-65 to +175	$^{\circ}\text{C}$
Operating temperature range		T_{op}	-55 to +175	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I _F = 1 mA	V _F	0.540		0.620	V
	I _F = 10 mA	V _F	0.660		0.740	V
	I _F = 50 mA	V _F	0.760		0.860	V
	I _F = 100 mA	V _F	0.820		0.920	V
	I _F = 200 mA	V _F	0.870		1	V
Reverse current	V _R = 50 V	I _R			100	nA
	V _R = 50 V, T _J = 150 °C	I _R			100	μA
Diode capacitance	V _R = 0, f = 1 MHz, V _{HF} = 50 mV	C _D			2.5	pF
Reverse recovery time	I _F = I _R = 10 mA to 100 mA, i _R = 0.1 x I _R , R _L = 100 Ω	t _{rr}			4	ns

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

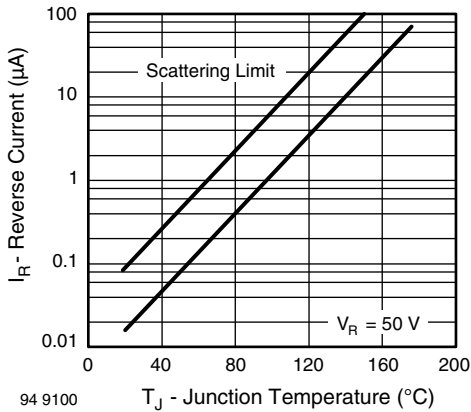


Fig. 1 - Reverse Current vs. Junction Temperature

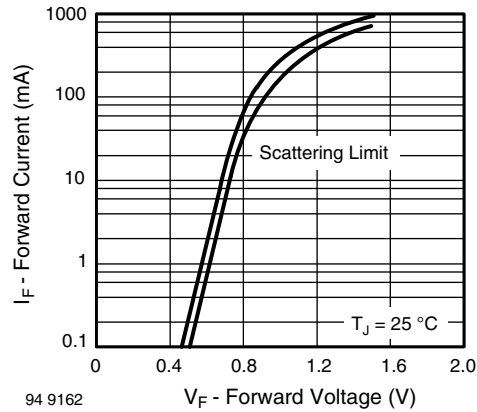
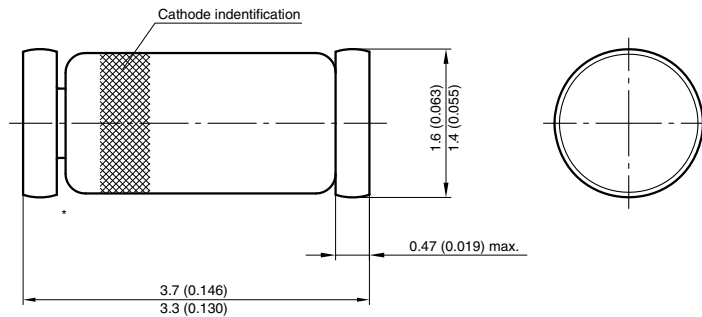
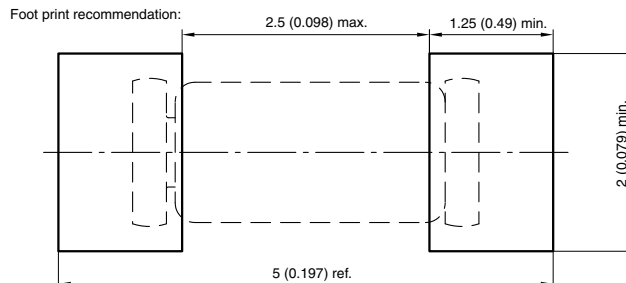


Fig. 2 - Forward Current vs. Forward Voltage

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



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



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