

## Small Signal Fast Switching Diode



### FEATURES

- Silicon epitaxial planar diodes
- Low forward voltage drop
- High forward current capability
- Material categorization:  
for definitions of compliance please see  
[www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


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COMPLIANT

### APPLICATIONS

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

### LINKS TO ADDITIONAL RESOURCES



### 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	CIRCUIT CONFIGURATION	REMARKS
LL4150	LL4150GS08 or LL4150GS18	-	Single	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 <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I <sub>F</sub> = 1 mA	V <sub>F</sub>	0.540		0.620	V
	I <sub>F</sub> = 10 mA	V <sub>F</sub>	0.660		0.740	V
	I <sub>F</sub> = 50 mA	V <sub>F</sub>	0.760		0.860	V
	I <sub>F</sub> = 100 mA	V <sub>F</sub>	0.820		0.920	V
	I <sub>F</sub> = 200 mA	V <sub>F</sub>	0.870		1	V
Reverse current	V <sub>R</sub> = 50 V	I <sub>R</sub>			100	nA
	V <sub>R</sub> = 50 V, T <sub>J</sub> = 150 °C	I <sub>R</sub>			100	μA
Diode capacitance	V <sub>R</sub> = 0, f = 1 MHz, V <sub>HF</sub> = 50 mV	C <sub>D</sub>			2.5	pF
Reverse recovery time	I <sub>F</sub> = I <sub>R</sub> = 10 mA to 100 mA, i <sub>R</sub> = 0.1 × I <sub>R</sub> , R <sub>L</sub> = 100 Ω	t <sub>rr</sub>			4	ns

**TYPICAL CHARACTERISTICS** (T<sub>amb</sub> = 25 °C, unless otherwise specified)

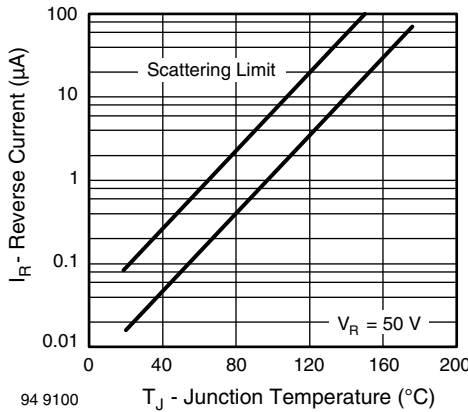


Fig. 1 - Reverse Current vs. Junction Temperature

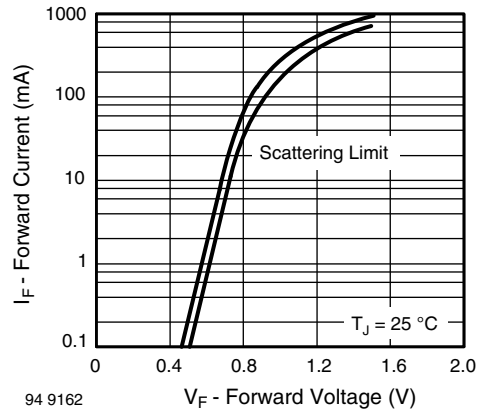
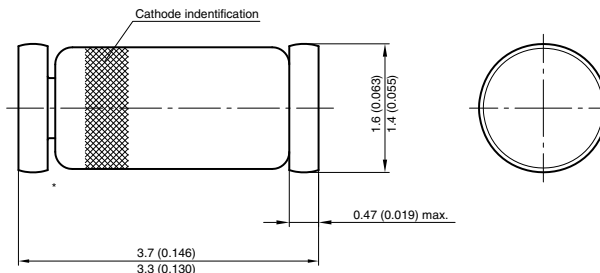
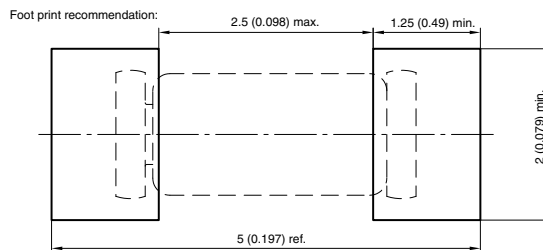


Fig. 2 - Forward Current vs. Forward Voltage

**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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