

## Fast Switching Diode

### Features

- Silicon Epitaxial Planar Diodes
- Electrical data identical with the device 1N4151

### Applications

Extreme fast switches

### Mechanical Data

**Case:** MiniMELF Glass Case (SOD-80)

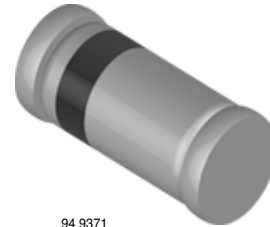
**Weight:** approx. 30 mg

**Cathode Band Color:** Black

### Packaging Codes/Options:

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

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



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### Parts Table

Part	Type differentiation	Ordering code	Remarks
LL4151	$V_{RRM} = 75\text{ V}$	LL4151-GS18 or LL4151-GS08	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		$V_{RRM}$	75	V
Reverse voltage		$V_R$	50	V
Peak forward surge current	$t_p = 1\text{ }\mu\text{s}$	$I_{FSM}$	2	A
Repetitive peak forward current		$I_{FRM}$	500	mA
Forward current		$I_F$	300	mA
Average forward current	$V_R = 0$	$I_{FAV}$	150	mA
Power dissipation		$P_V$	500	mW

### Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Junction ambient	on PC board 50 mm x 50 mm x 1.6 mm	$R_{thJA}$	500	K/W
Junction temperature		$T_j$	175	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	-65 to +175	$^{\circ}\text{C}$

### Electrical Characteristics

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

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Forward voltage	$I_F = 50\text{ mA}$	$V_F$		0.88	1	V
Reverse current	$V_R = 50\text{ V}$	$I_R$			50	nA
	$V_R = 50\text{ V}, T_j = 150\text{ }^{\circ}\text{C}$	$I_R$			50	$\mu\text{A}$
Breakdown voltage	$I_R = 5\text{ }\mu\text{A}, t_p/T = 0.01, t_p = 0.3\text{ ms}$	$V_{(BR)}$	75			V
Diode capacitance	$V_R = 0, f = 1\text{ MHz}, V_{HF} = 50\text{ mV}$	$C_D$			2	pF
Reverse recovery time	$I_F = I_R = 10\text{ mA}, i_R = 1\text{ mA}$	$t_{rr}$			4	ns
	$I_F = 10\text{ mA}, V_R = 6\text{ V}, i_R = 0.1 \times I_R, R_L = 100\text{ }\Omega$	$t_{rr}$			2	ns

### Typical Characteristics ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

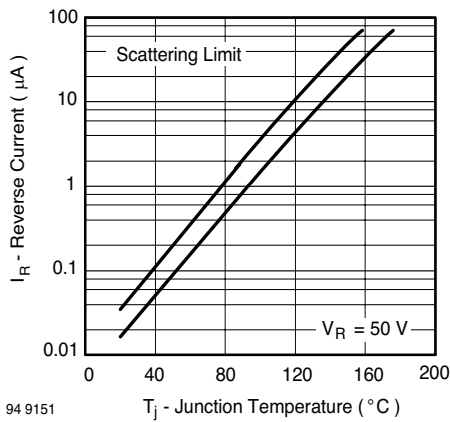


Fig. 1 Reverse Current vs. Junction Temperature

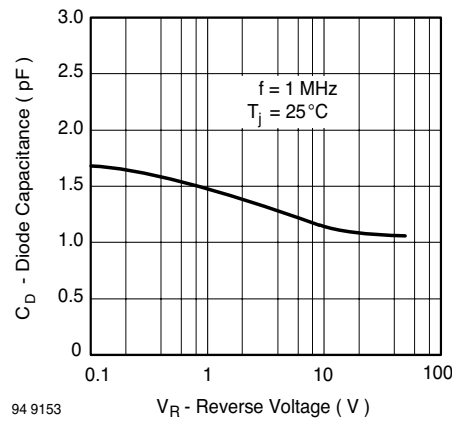


Fig. 3 Diode Capacitance vs. Reverse Voltage

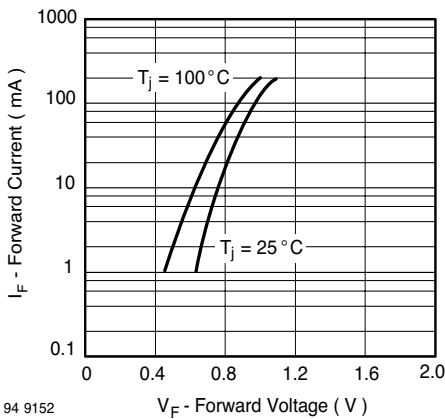


Fig. 2 Forward Current vs. Forward Voltage

## Package Dimensions in mm (Inches)

