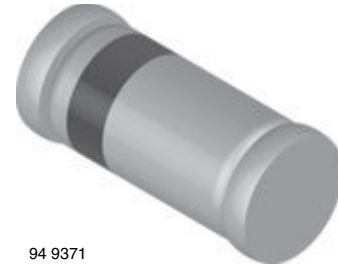
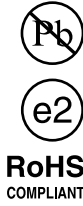


## Small Signal Fast Switching Diode

### Features

- Silicon epitaxial planar diodes
- Electrical data identical with the device 1N4154
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



94 9371

### Applications

- Extreme fast switches

### Mechanical Data

**Case:** MiniMELF SOD-80

**Weight:** approx. 31 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

### Parts Table

Part	Ordering code	Type Marking	Remarks
LL4154	LL4154-GS18 or LL4154-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		$V_{RRM}$	35	V
Reverse voltage		$V_R$	25	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 continuous current		$I_F$	300	mA
Average forward current	$V_R = 0$	$I_{FAV}$	150	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	$R_{thJA}$	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	$I_F = 30\text{ mA}$	$V_F$			1000	mV
Reverse current	$V_R = 25\text{ V}$	$I_R$			100	nA
	$V_R = 25\text{ V}, T_j = 150\text{ }^{\circ}\text{C}$	$I_R$			100	$\mu\text{A}$
Breakdown voltage	$I_R = 5\text{ }\mu\text{A}, t_p/T = 0.01,$ $t_p = 0.3\text{ ms}$	$V_{(BR)}$	35			V
Diode capacitance	$V_R = 0, f = 1\text{ MHz},$ $V_{HF} = 50\text{ mV}$	$C_D$			4	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

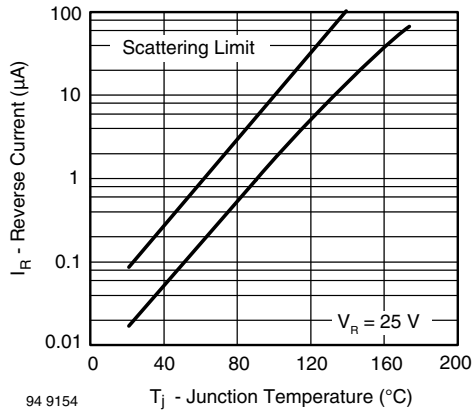


Figure 1. Reverse Current vs. Junction Temperature

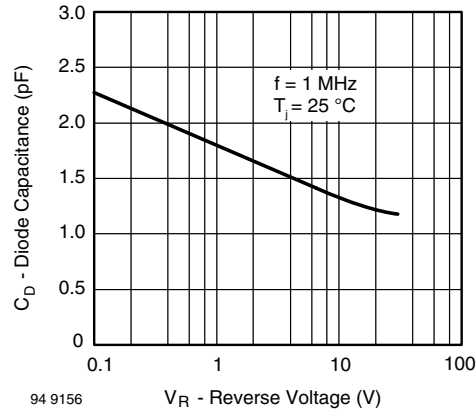


Figure 3. Diode Capacitance vs. Reverse Voltage

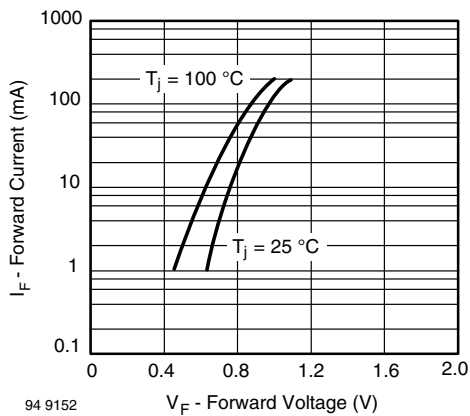
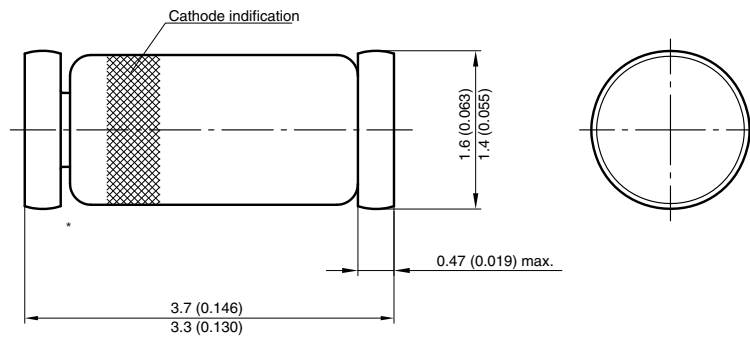


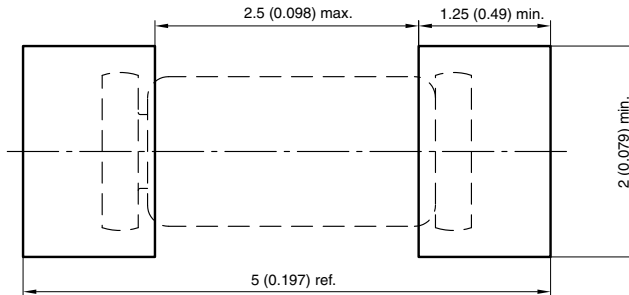
Figure 2. Forward Current vs. Forward Voltage

## Package Dimensions in millimeters (inches): MiniMELF SOD-80



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

Foot print recommendation:



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 Rev. 8 - Date: 07.June.2006  
 96 12070



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