

Small Signal Fast Switching Diode



FEATURES

- Silicon epitaxial planar diodes
- Electrical data identical with the device 1N4154
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

APPLICATIONS

- Extreme fast switches

LINKS TO ADDITIONAL RESOURCES



MECHANICAL DATA

Case: MiniMELF (SOD-80)

Weight: approx. 31 mg

Cathode band color: black

Packaging codes / options:

18/10K per 13" reel (8 mm tape), 10K/box

08/2.5K per 7" reel (8 mm tape), 12.5/K box

PARTS TABLE

PART	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS
LL4154-M	LL4154-M-18 or LL4154-M-08	-	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}	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	$V_R = 0$	$I_{F(AV)}$	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 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I _F = 30 mA	V _F			1	V
Reverse current	V _R = 25 V	I _R			100	nA
	V _R = 25 V, T _j = 150 °C	I _R			100	μA
Breakdown voltage	I _R = 5 μA, t _p /T = 0.01, t _p = 0.3 ms	V _(BR)	35			V
Diode capacitance	V _R = 0, f = 1 MHz, V _{HF} = 50 mV	C _D			4	pF
Reverse recovery time	I _F = I _R = 10 mA, i _R = 1 mA	t _{rr}			4	ns
	I _F = 10 mA, V _R = 6 V, i _R = 0.1 x I _R , R _L = 100 Ω	t _{rr}			2	ns

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

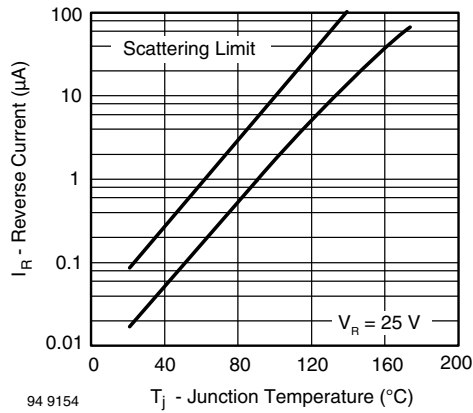


Fig. 1 - Reverse Current vs. Junction Temperature

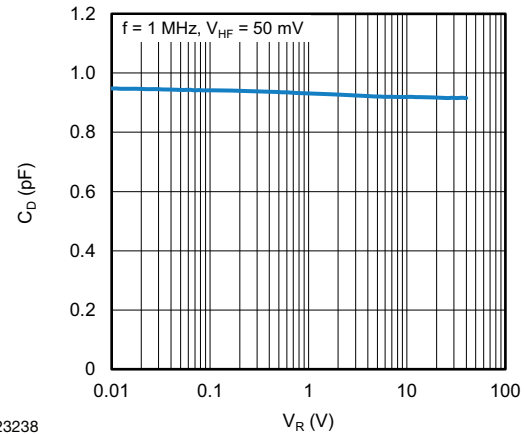


Fig. 3 - Typical Capacitance vs. Reverse Voltage

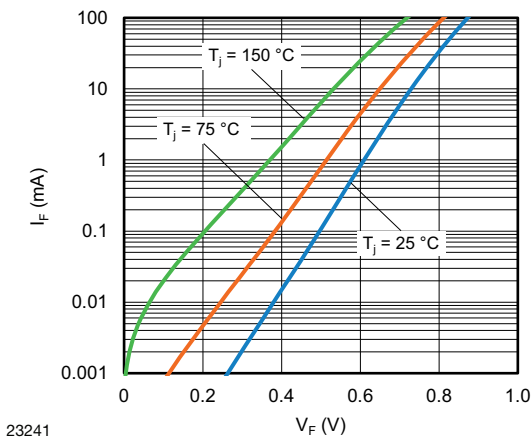
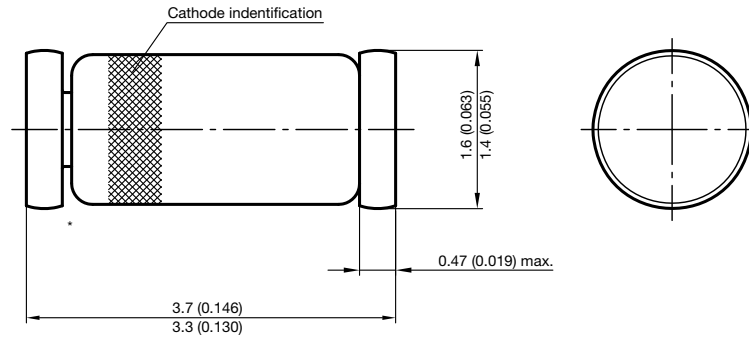
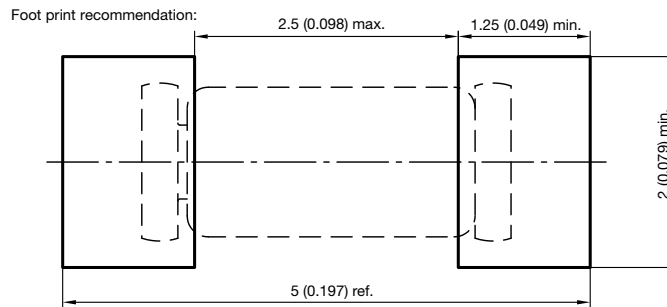


Fig. 2 - Forward Current vs. Forward Voltage

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



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



Document no.:6.560-5005.01-4
 Rev. 8 - Date: 07.June.2006
 96 12070



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