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

RoHS COMPLIANT

HALOGEN FREE

APPLICATIONS

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

LINKS TO ADDITIONAL RESOURCES

3D Models

MECHANICAL DATA

Case: MiniMELF (SOD-80)

Weight: approx. 31 mg

Cathode band color: black

Packaging codes / options:

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

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

PARTS TABLE

PART	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS
LL4150-M	LL4150-M-08 or LL4150-M-18	-	Single	Tape and reel

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °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 µs	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 °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	°C
Storage temperature range		T_{stg}	-65 to +175	°C
Operating temperature range		T_{op}	-55 to +175	°C

For technical questions within your region: DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

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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)

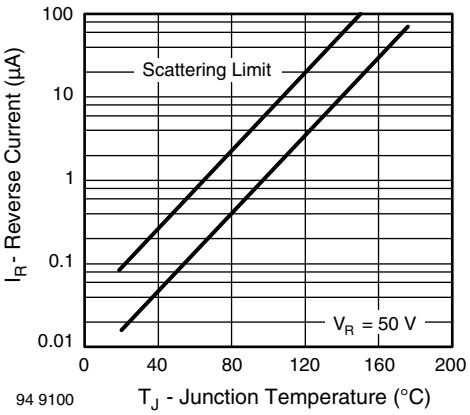


Fig. 1 - Reverse Current vs. Junction Temperature

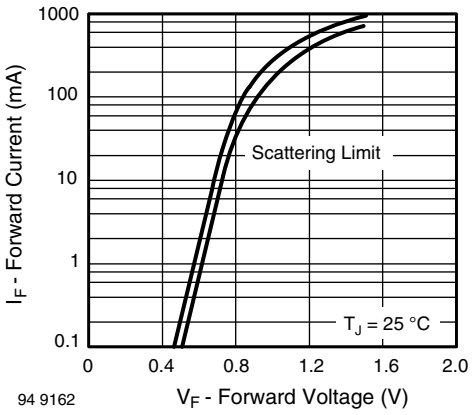
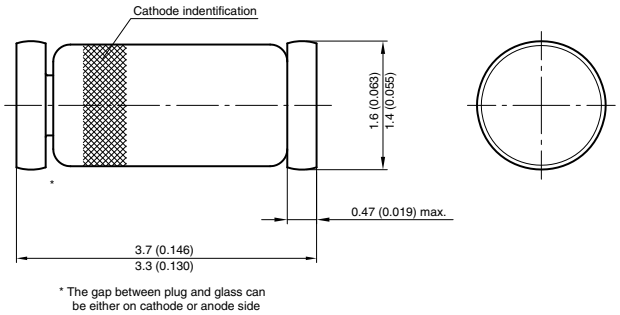
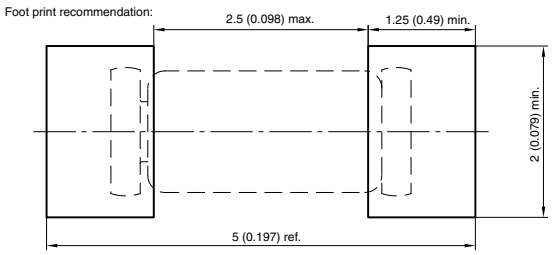


Fig. 2 - Forward Current vs. Forward Voltage

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





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