



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



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

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 × I _R , R _L = 100 Ω	t _{rr}			4	ns

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

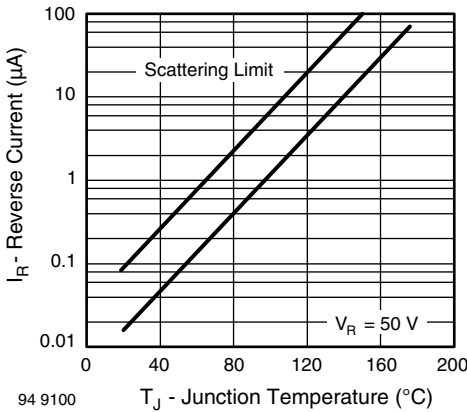


Fig. 1 - Reverse Current vs. Junction Temperature

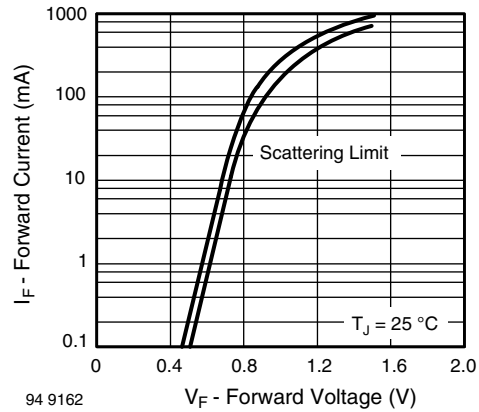
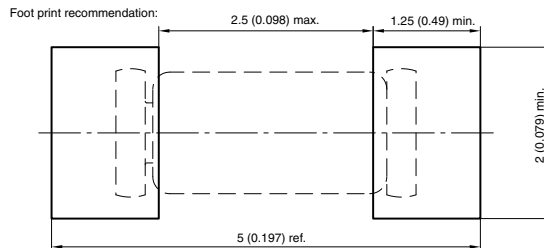
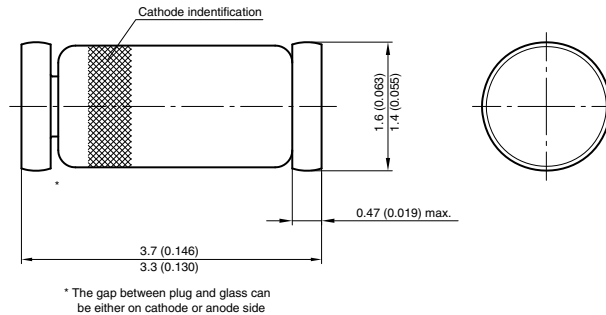


Fig. 2 - Forward Current vs. Forward Voltage

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



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