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Vishay Semiconductors

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

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

APPLICATIONS

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

PARTS TABLE						
PART	RT ORDERING CODE		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	А		
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	

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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
	I _F = 1 mA	V _F	0.540		0.620	V
	I _F = 10 mA	V _F	0.660		0.740	V
Forward voltage	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
Deverage automent	V _R = 50 V	I _R			100	nA
Reverse current	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	$I_F = I_R = 10 \text{ mA to } 100 \text{ mA},$ $I_R = 0.1 \text{ x } I_R, R_L = 100 \Omega$	t _{rr}			4	ns

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

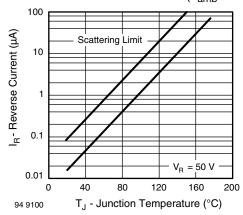


Fig. 1 - Reverse Current vs. Junction Temperature

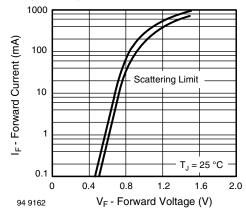
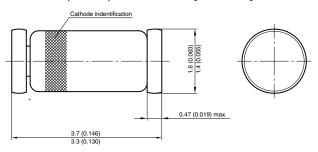
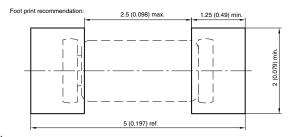


Fig. 2 - Forward Current vs. Forward Voltage

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



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



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