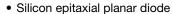


Vishay Semiconductors

Small Signal Fast Switching Diode



FEATURES







Material categorization:
 for definitions of compliance please see compliance www.vishay.com/doc?99912



· Extreme fast switches





MECHANICAL DATA

Case: QuadroMELF (SOD-80)

Weight: approx. 34 mg
Cathode band color: black
Packaging codes / options:

GS18/10K per 13" reel (8 mm tape), 10K/box GS08/2.5K per 7" reel (8 mm tape), 12.5K/box

PARTS TABLE					
PART	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS	
LS4151	LS4151-GS18 or LS4151GS08	i	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}	75	V	
Reverse voltage		V_R	50	V	
Peak forward surge current	t _p = 1 μs	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 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	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		Tj	175	°C	
Storage temperature range		T _{stq}	-65 to +175	°C	



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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 = 50 mA	V _F		0.880	1	V
Reverse voltage	V _R = 50 V	I _R			50	nA
	$V_R = 50 \text{ V}, T_j = 150 ^{\circ}\text{C}$	I _R			50	μΑ
Breakdown voltage	$I_R = 5 \mu A, t_p/T = 0.01,$ $t_p = 0.3 \text{ ms}$	V _(BR)	75			V
Diode capacitance	$V_R = 0, f = 1 \text{ MHz}, V_{HF} = 50 \text{ mV}$	C _D			2	pF
Reverse recovery time	$I_F = I_R = 10 \text{ mA},$ $I_R = 1 \text{ mA}$	t _{rr}			4	ns
	$I_F = 10 \text{ mA}, V_R = 6 \text{ V},$ $I_R = 0.1 \text{ x } I_R, R_L = 100 \Omega$	t _{rr}			2	ns

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

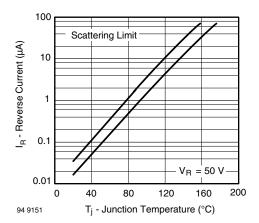


Fig. 1 - Reverse Current vs. Junction Temperature

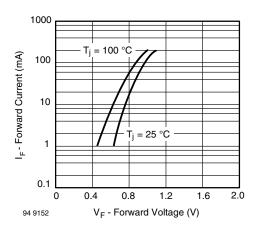


Fig. 2 - Forward Current vs. Forward Voltage

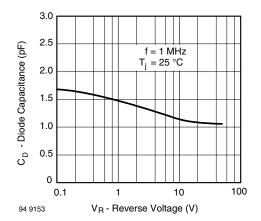
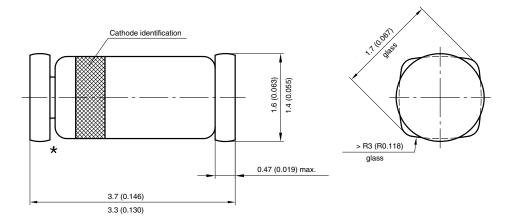


Fig. 3 - Diode Capacitance vs. Reverse Voltage

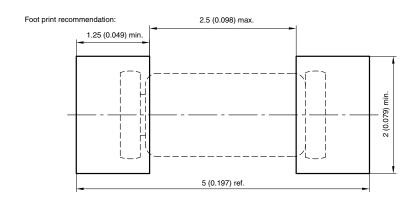


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PACKAGE DIMENSIONS in millimeters (inches): QuadroMELF (SOD-80)



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



Created - Date: 03.November.2003 Rev. 11 - Date: 07.June 2006 Document no.:6.560-5006.01-4 96 12071



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