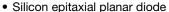


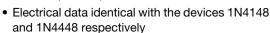
Vishay Semiconductors

Small Signal Fast Switching Diodes



FEATURES







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

RoHS COMPLIANT

ADDITIONAL RESOURCES



MECHANICAL DATA

Case: MiniMELF (SOD-80)
Weight: approx. 31 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

APPLICATIONS

• Extreme fast switches

PARTS TABLE						
PART	TYPE DIFFERENTIATION	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS	
LL4148	$V_{RRM} = 100 \text{ V},$ $V_{F} = \text{max. } 1000 \text{ mV at } I_{F} = 50 \text{ mA}$	LL4148-GS08 or LL4148-GS18	-	Single	Tape and reel	
LL4448	$V_{RRM} = 100 \text{ V},$ $V_{F} = \text{max. } 1000 \text{ mV at } I_{F} = 100 \text{ mA}$	LL4448-GS08 or LL4448-GS18	-	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}	100	V	
Reverse voltage		V_{R}	75	V	
Peak forward surge current	t _p = 1 μs	I _{FSM}	2	А	
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 (1)		P _{tot}	500	mW	

Note

⁽¹⁾ Valid provided that electrodes are kept at ambient temperature

THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to ambient air (1)		R _{thJA}	300	K/W	
Junction temperature		T _J	175	°C	
Storage temperature range		T _{stg}	-65 to +175	°C	

Note

⁽¹⁾ Valid provided that electrodes are kept at ambient temperature



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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
	I _F = 5 mA	LL4448	V _F	0.620		0.720	V
Forward voltage	I _F = 50 mA	LL4148	V _F		0.860	1	V
	I _F = 100 mA	LL4448	V _F		0.930	1	V
	V _R = 20 V		I _R			25	nA
Reverse current	$V_R = 20 \text{ V}, T_j = 150 ^{\circ}\text{C}$		I _R			50	μA
	V _R = 75 V		I _R			5	μA
Breakdown voltage	$I_R = 100 \mu A, t_p/T = 0.01,$ $t_p = 0.3 \text{ ms}$		V _(BR)	100			V
Diode capacitance	$V_R = 0 \text{ V, f} = 1 \text{ MHz,}$ $V_{HF} = 50 \text{ mV}$		C _D			4	pF
Davorna racayany tima	$I_F = I_R = 10 \text{ mA},$ $I_R = 1 \text{ mA}$		t _{rr}			8	ns
Reverse recovery time	$I_F = 10 \text{ mA}, V_R = 6 \text{ V}, \\ i_R = 0.1 \text{ x } I_R, R_L = 100 \Omega$					4	

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

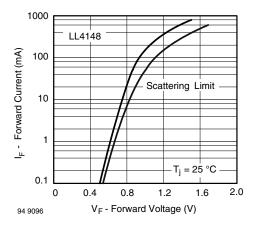


Fig. 1 - Forward Current vs. Forward Voltage

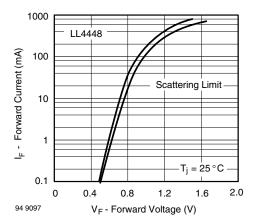


Fig. 2 - Forward Current vs. Forward Voltage

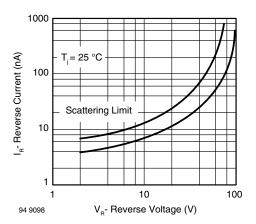


Fig. 3 - Reverse Current vs. Reverse Voltage

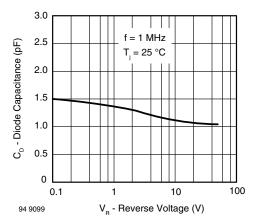
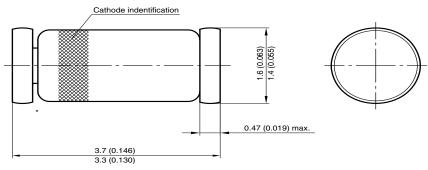


Fig. 4 - Diode Capacitance vs. Reverse Voltage

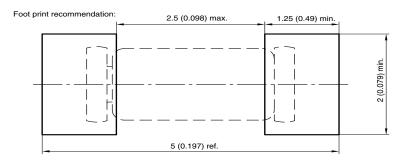


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PACKAGE DIMENSIONS in millimeters (inches): MiniMELF (SOD-80)



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



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