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Vishay Semiconductors

Small Signal Schottky Diode



LINKS TO ADDITIONAL RESOURCES



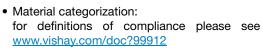
MECHANICAL DATA

Case: MiniMELF (SOD-80)
Weight: approx. 31 mg
Cathode band color: black
Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K/box 08/2.5K per 7" reel (8 mm tape), 12.5K/box

FEATURES

- For general purpose applications
- This diode features low turn-on voltage
- The devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges







COMPLIANT HALOGEN

APPLICATIONS

Applications where a very low forward voltage is required

PARTS TABLE			
PART	ORDERING CODE	CIRCUIT CONFIGURATION	REMARKS
BAS85-M	BAS85-M-18 or BAS85-M-08	Single	Tape and reel

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Continuous reverse voltage		V_{R}	30	V	
Forward continuous current (1)		I _F	200	mA	
Peak forward current (1)		I _{FM}	300	mA	
Surge forward current (1)	t _p < 1 s	I _{FSM}	600	mA	
Power dissipation (1)	T _{amb} = 65 °C	P _{tot}	200	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}	430	K/W	
Junction temperature		Tj	125	°C	
Storage temperature range		T _{stg}	-55 to +150	°C	

Note

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

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	I _R = 10 μA (pulsed)	V _(BR)	30			V
Leakage current	V _R = 25 V	I_{R}		0.2	2	μΑ
	Pulse test $t_p < 300 \mu s$, $I_F = 0.1 \text{ mA}$	V_{F}			240	mV
	Pulse test $t_p < 300 \mu s$, $I_F = 1 mA$	V_{F}			320	mV
Forward voltage	Pulse test $t_p < 300 \mu s$, $I_F = 10 mA$	V_{F}			400	mV
	Pulse test $t_p < 300 \mu s$, $I_F = 30 \text{ mA}$	V _F		500		mV
	Pulse test $t_p < 300 \mu s$, $I_F = 100 \text{ mA}$		800	mV		
Diode capacitance	V _R = 1 V, f = 1 MHz	C _D			10	pF
Reverse recovery time	$I_F = 10 \text{ mA}, I_R = 10 \text{ mA}, I_R = 1 \text{ mA}$	t _{rr}			5	ns

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

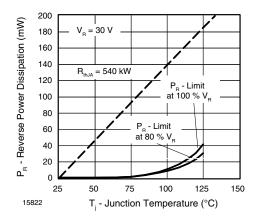


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

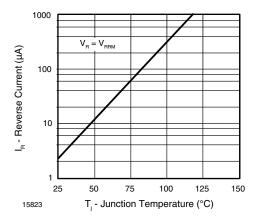


Fig. 2 - Reverse Current vs. Junction Temperature

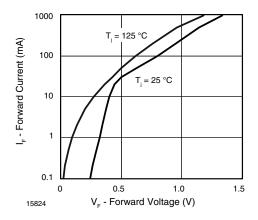


Fig. 3 - Forward Current vs. Forward Voltage

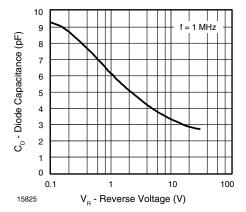
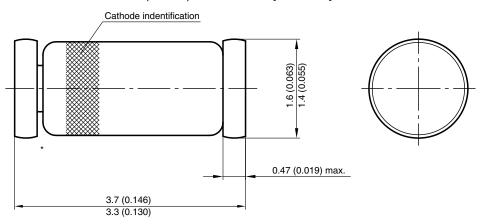


Fig. 4 - Diode Capacitance vs. Reverse Voltage

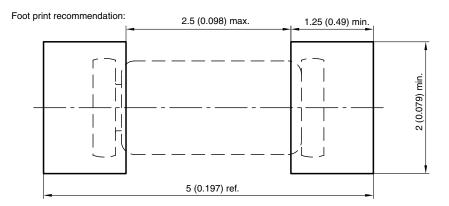


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PACKAGE DIMENSIONS in millimeters (inches): MiniMELF (SOD-80)



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



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