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



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

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		Тj	125	°C	
Storage temperature range		T _{stg}	-55 to +150	°C	
Operating temperature range		T _{op}	-55 to +125	°C	

Note

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

BAS85-M



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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	μA
	Pulse test $t_p < 300 \ \mu s$, $I_F = 0.1 \ mA$	VF			240	mV
	Pulse test $t_p < 300 \ \mu s$, $I_F = 1 \ mA$	V _F			320	mV
Forward voltage	Pulse test t _p < 300 µs, I _F = 10mA	V _F			400	mV
	Pulse test $t_p < 300 \ \mu s$, $I_F = 30 \ mA$	V _F		500		mV
	Pulse test $t_p < 300 \ \mu s$, $I_F = 100 \ mA$	V _F			800	mV
Diode capacitance	V _R = 1 V, f = 1 MHz	CD			10	pF
Reverse recovery time	$I_F = 10 \text{ mA}, I_R = 10 \text{ mA}, i_R = 1 \text{ mA}$	t _{rr}			5	ns

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

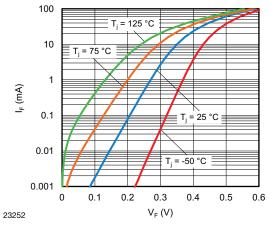


Fig. 1 - Typical Forward Current vs. Forward Voltage

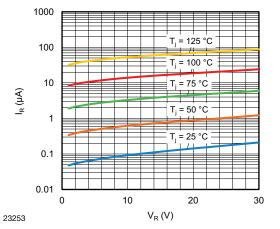


Fig. 2 - Typical Reverse Leakage Current vs. Reverse Voltage

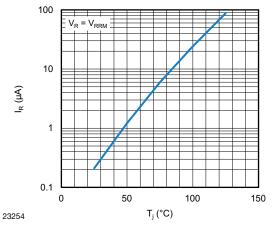
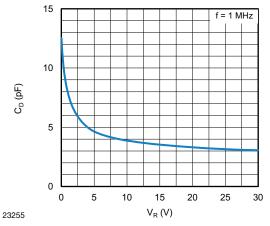
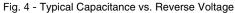


Fig. 3 - Typical Reverse Current vs. Junction Temperature





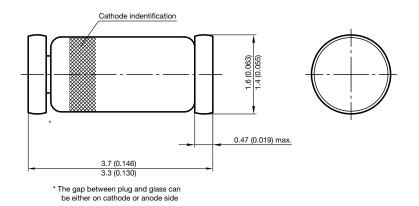
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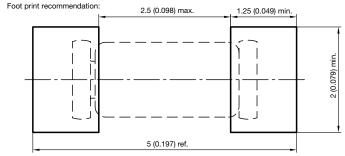
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PACKAGE DIMENSIONS in millimeters (inches): MiniMELF (SOD-80)





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