

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:

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



- This diode is also available in a DO-35 case with type designation BAT85
- 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	BAS85-GS18 or BAS85-GS08	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	С°	

Note

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

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1

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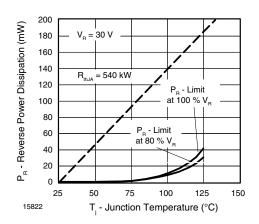
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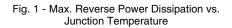
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BAS85

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reserve 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 μs, I _F = 0.1 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 μs, I _F = 10 mA	V _F			400	mV
	Pulse test t _p < 300 μs, I _F = 30 mA	V _F		500		mV
	Pulse test t _p < 300 μs, I _F = 100 mA	V _F			800	mV
Diode capacitance	V _R = 1 V, f = 1 MHz	CD			10	pF
Reserve 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)





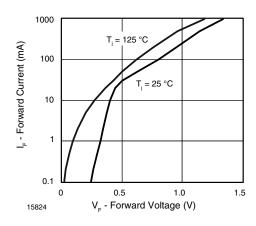


Fig. 2 - Forward Current vs. Forward Voltage

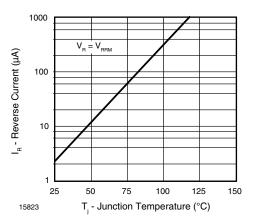


Fig. 3 - Reverse Current vs. Junction Temperature

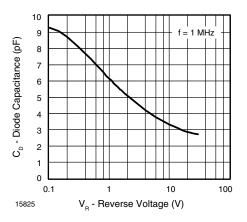


Fig. 4 - Diode Capacitance vs. Reverse Voltage

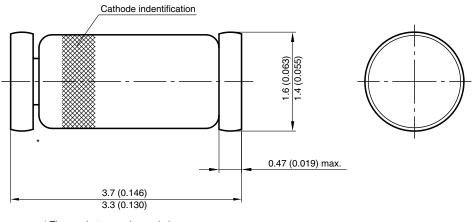
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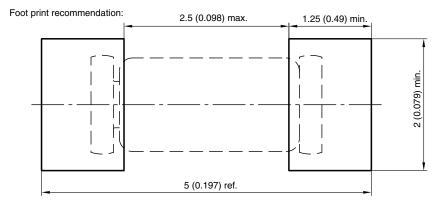
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PACKAGE DIMENSIONS in millimeters (inches): MiniMELF (SOD-80)



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



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