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[BAS86-GS18](#)

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www.vishay.com

BAS86

Vishay Semiconductors

Small Signal Schottky Diode



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
- Metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring
- The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and low logic level applications
- This diode is also available in a DO-35 case with type designation BAT86
- AEC-Q101 qualified
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

APPLICATIONS

- Applications where a very low forward voltage is required

PARTS TABLE

PART	ORDERING CODE	INTERNAL CONSTRUCTION	REMARKS
BAS86	BAS86-GS18 or BAS86-GS08	Single diode	Tape and reel

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Continuous reverse voltage		V _R	50	V
Forward continuous current ⁽¹⁾		I _F	200	mA
Repetitive peak forward current ⁽¹⁾	t _p < 1 s, δ ≤ 0.5	I _{FRM}	500	mA
Power dissipation ⁽¹⁾		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}	300	K/W
Junction temperature		T _j	125	°C
Ambient operating temperature range		T _{amb}	- 65 to + 125	°C
Storage temperature range		T _{stg}	- 65 to + 150	°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	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	I _R = 10 μA (pulsed)	V _(BR)	50			V
Leakage current	V _R = 40 V	I _R			5	μA
Forward voltage	Pulse test t _p < 300 μs, I _F = 0.1 mA, δ < 2 %	V _F		200	300	mV
	Pulse test t _p < 300 μs, I _F = 1 mA, δ < 2 %	V _F		275	380	mV
	Pulse test t _p < 300 μs, I _F = 10 mA, δ < 2 %	V _F		365	450	mV
	Pulse test t _p < 300 μs, I _F = 30 mA, δ < 2 %	V _F		460	600	mV
	Pulse test t _p < 300 μs, I _F = 100 mA, δ < 2 %	V _F		700	900	mV
Diode capacitance	V _R = 1 V, f = 1 MHz	C _D			8	pF
Reverse recovery time	I _F = 10 mA, I _R = 10 mA, i _R = 1 mA	t _{rr}			5	ns

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

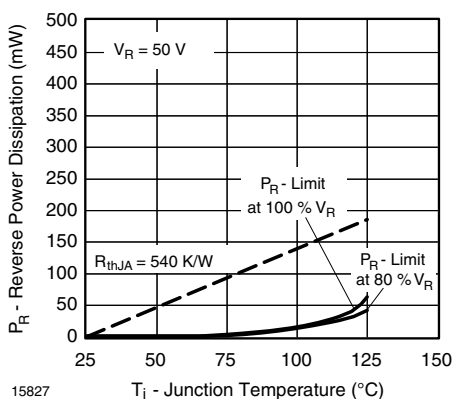


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

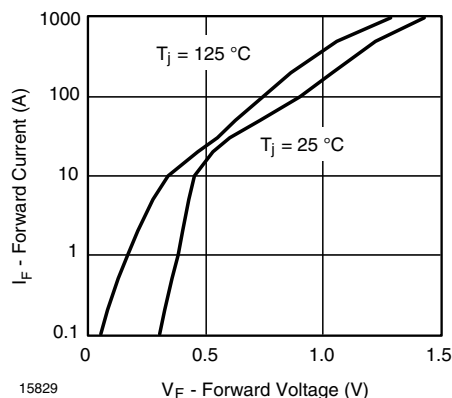


Fig. 3 - Forward Current vs. Forward Voltage

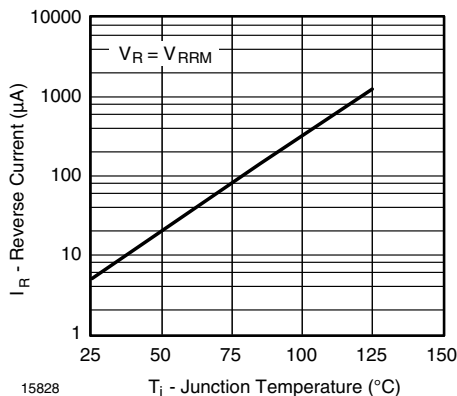


Fig. 2 - Reverse Current vs. Junction Temperature

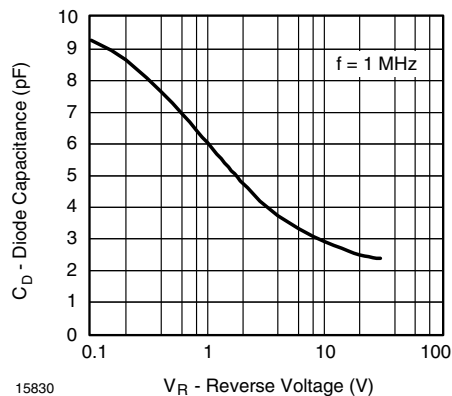


Fig. 4 - Diode Capacitance vs. Reverse Voltage

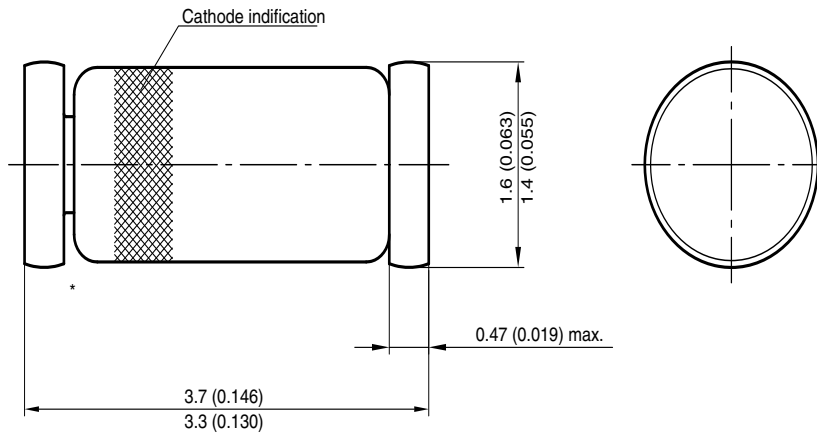


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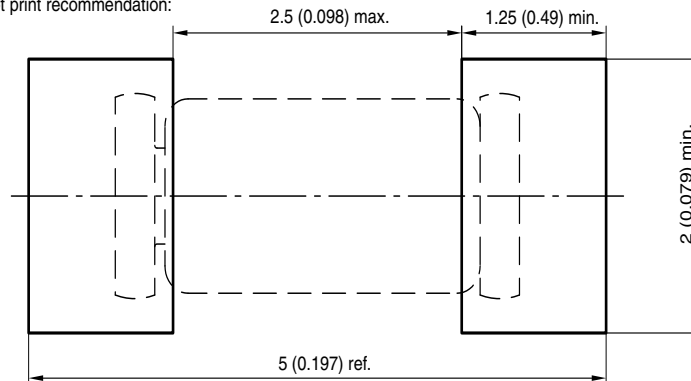
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PACKAGE DIMENSIONS in millimeters (inches): **MiniMELF SOD-80**



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

Foot print recommendation:



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