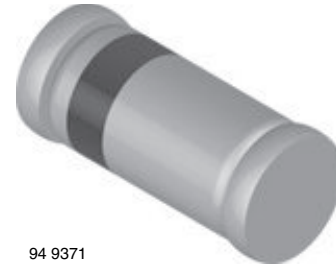


Small Signal Schottky Diode

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
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



94 9371

Applications

- Applications where a very low forward voltage is required

Mechanical Data

Case: MiniMELF SOD-80

Weight: approx. 31 mg

Cathode band color: black

Packaging codes/options:

GS18/10 k per 13" reel (8 mm tape), 10 k/box

GS08/2.5 k per 7" reel (8 mm tape), 12.5 k/box

Parts Table

Part	Ordering code	Type Marking	Remarks
BAS85	BAS85-GS18 or BAS85-GS08	-	Tape and Reel

Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Continuous reverse voltage		V_R	30	V
Forward continuous current		I_F	200 ¹⁾	mA
Peak forward current		I_{FM}	300 ¹⁾	mA
Surge forward current	$t_p < 1\text{ s}$	I_{FSM}	600 ¹⁾	mA
Power dissipation	$T_{amb} = 65\text{ }^{\circ}\text{C}$	P_{tot}	200 ¹⁾	mW

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

Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		R_{thJA}	430 ¹⁾	K/W
Junction temperature		T_j	125	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	- 55 to +150	$^{\circ}\text{C}$

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

Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	$I_R = 10\text{ }\mu\text{A}$ (pulsed)	$V_{(BR)}$	30			V
Leakage current	$V_R = 25\text{ V}$	I_R		0.2	2	μA
Forward voltage	Pulse test $t_p < 300\text{ }\mu\text{s}$, $I_F = 0.1\text{ mA}$	V_F			240	mV
	Pulse test $t_p < 300\text{ }\mu\text{s}$, $I_F = 1\text{ mA}$	V_F			320	mV
	Pulse test $t_p < 300\text{ }\mu\text{s}$, $I_F = 10\text{ mA}$	V_F			400	mV
	Pulse test $t_p < 300\text{ }\mu\text{s}$, $I_F = 30\text{ mA}$	V_F		500		mV
	Pulse test $t_p < 300\text{ }\mu\text{s}$, $I_F = 100\text{ mA}$	V_F			800	mV
Diode capacitance	$V_R = 1\text{ V}$, $f = 1\text{ MHz}$	C_D			10	pF
Reverse recovery time	$I_F = 10\text{ mA}$, $I_R = 10\text{ mA}$, $I_{rr} = 1\text{ mA}$,	t_{rr}			5	ns

Typical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

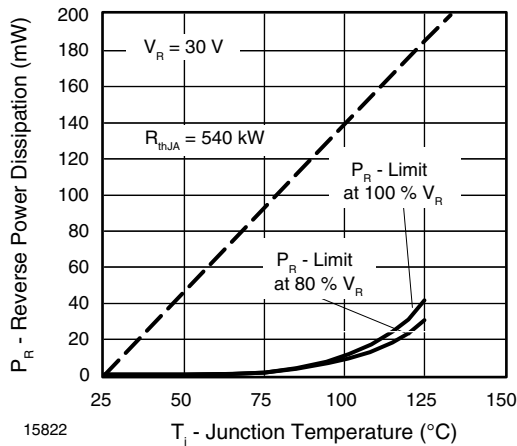


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

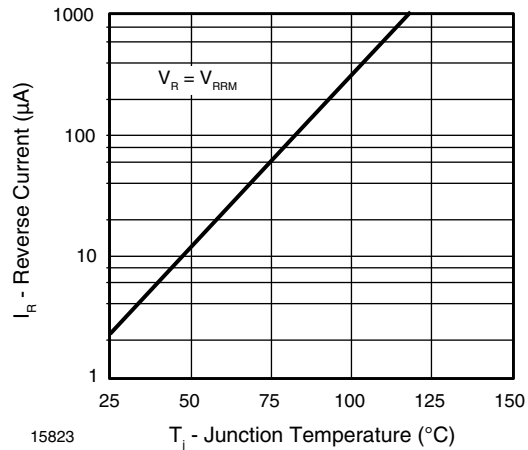


Figure 2. Reverse Current vs. Junction Temperature

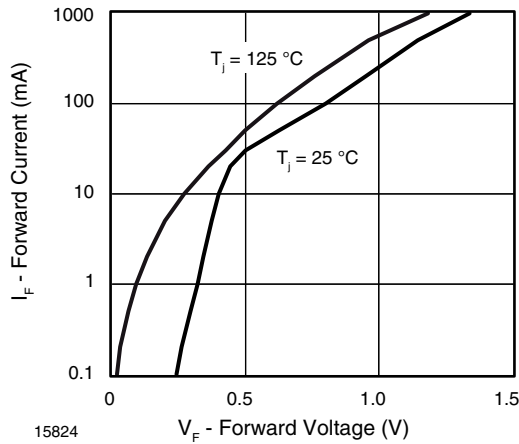


Figure 3. Forward Current vs. Forward Voltage

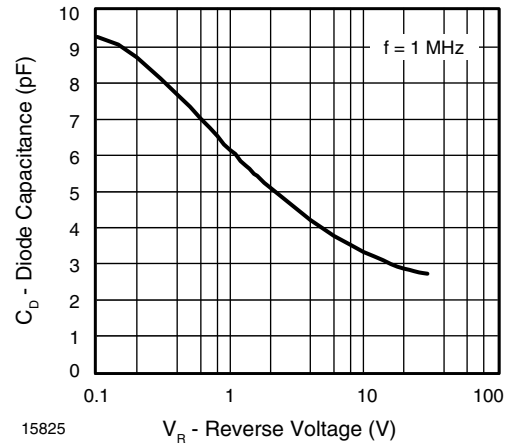
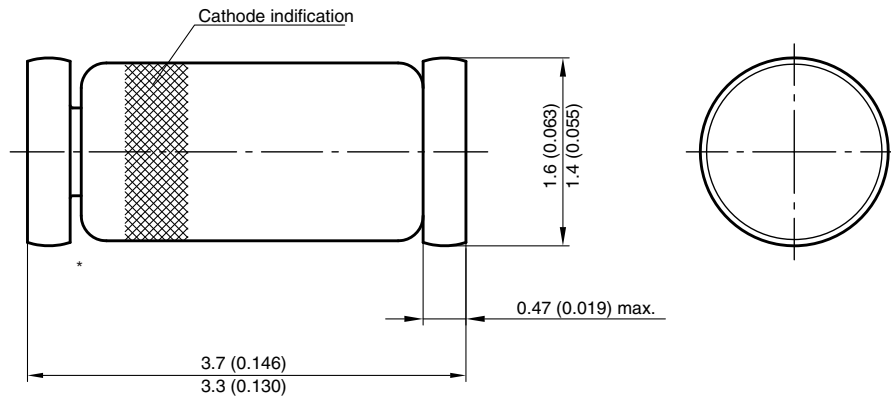


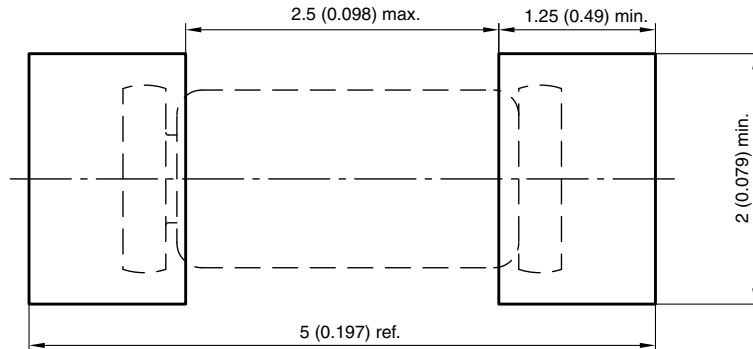
Figure 4. Diode Capacitance vs. Reverse Voltage

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:



Document no.:6.560-5005.01-4
 Rev. 8 - Date: 07.June.2006
 96 12070



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