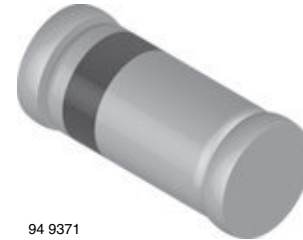


Small Signal Schottky Diode

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.
- 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
- AEC-Q101 qualified
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



94 9371

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

Applications

- Applications where a very low forward voltage is required

Parts Table

Part	Ordering code	Type marking	Remarks
BAS86-M	BAS86-M-18 or BAS86-M-08	-	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	50	V
Forward continuous current		I_F	200 ¹⁾	mA
Repetitive peak forward current	$t_p < 1\text{ s}, v \leq 0.5$	I_{FRM}	500 ¹⁾	mA
Power dissipation ¹⁾		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}	300 ¹⁾	K/W
Junction temperature		T_j	125	$^{\circ}\text{C}$
Ambient operating temperature range		T_{amb}	- 65 to + 125	$^{\circ}\text{C}$
Storage temperature range		T_S	- 65 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)	$V_{(BR)}$	50			V
Leakage current	$V_R = 40\text{ V}$	I_R			5	μA
Forward voltage	Pulse test $t_p < 300\text{ }\mu\text{s}$, $I_F = 0.1\text{ mA}$, $\delta < 2\%$	V_F		200	300	mV
	Pulse test $t_p < 300\text{ }\mu\text{s}$, $I_F = 1\text{ mA}$, $\delta < 2\%$	V_F		275	380	mV
	Pulse test $t_p < 300\text{ }\mu\text{s}$, $I_F = 10\text{ mA}$, $\delta < 2\%$	V_F		365	450	mV
	Pulse test $t_p < 300\text{ }\mu\text{s}$, $I_F = 30\text{ mA}$, $\delta < 2\%$	V_F		460	600	mV
	Pulse test $t_p < 300\text{ }\mu\text{s}$, $I_F = 100\text{ mA}$, $\delta < 2\%$	V_F		700	900	mV
Diode capacitance	$V_R = 1\text{ V}$, $f = 1\text{ MHz}$	C_D			8	pF
Reverse recovery time	$I_F = 10\text{ mA}$, $I_R = 10\text{ mA}$, $t_{rr} = 1\text{ mA}$,	t_{rr}			5	ns

Typical Characteristics

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

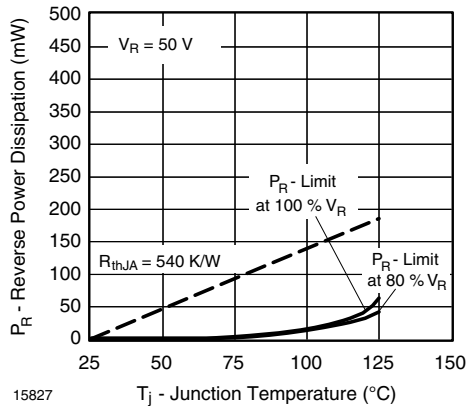


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

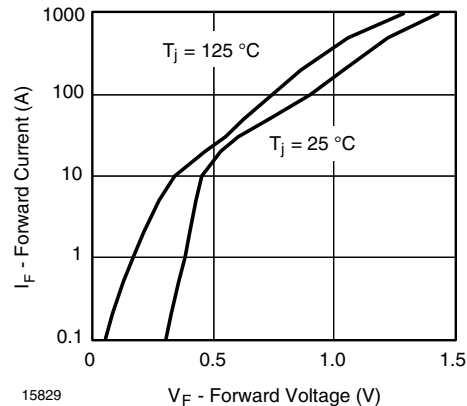


Figure 3. Forward Current vs. Forward Voltage

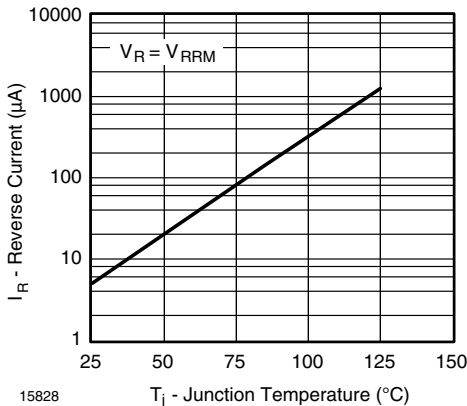


Figure 2. Reverse Current vs. Junction Temperature

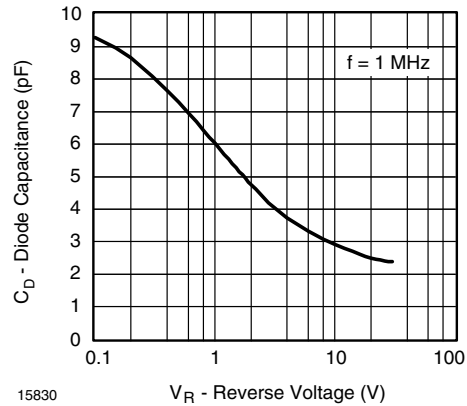
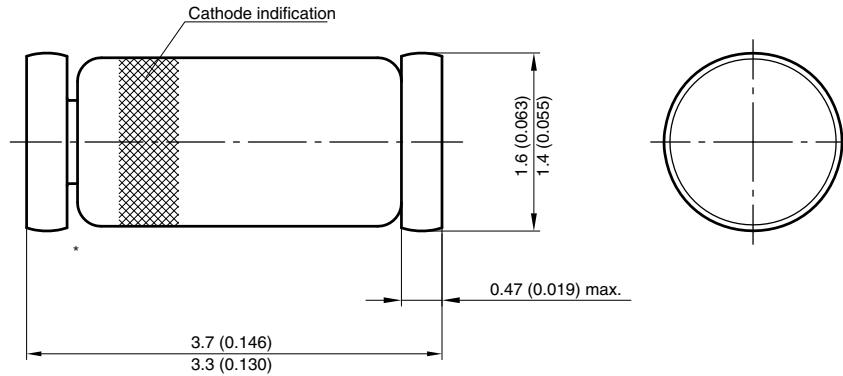


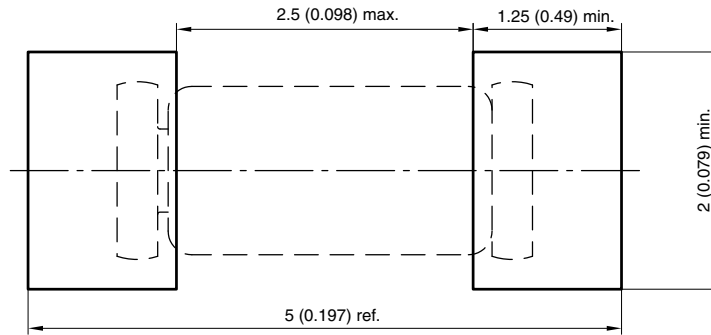
Figure 4. Diode Capacitance vs. Reverse Voltage

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:



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