

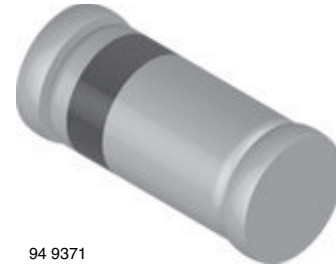
## Small Signal Schottky Diodes

### Features

- Integrated protection ring against static discharge
- Low capacitance
- Low leakage current
- Low forward voltage drop
- Very low switching time
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



**RoHS**  
COMPLIANT



94 9371

### Applications

- HF-Detector
- Protection circuit
- Diode for low currents with a low supply voltage
- Small battery charger
- Power supplies
- DC/DC converter for notebooks

### 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	Type differentiation	Ordering code	Remarks
BAS81	$V_R = 40\text{ V}$	BAS81-GS18 or BAS81-GS08	Tape and Reel
BAS82	$V_R = 50\text{ V}$	BAS82-GS18 or BAS82-GS08	Tape and Reel
BAS83	$V_R = 60\text{ V}$	BAS83-GS18 or BAS83-GS08	Tape and Reel

### Absolute Maximum Ratings

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

Parameter	Test condition	Part	Symbol	Value	Unit
Reverse voltage		BAS81	$V_R$	40	V
		BAS82	$V_R$	50	V
		BAS83	$V_R$	60	V
Peak forward surge current	$t_p = 1\text{ s}$		$I_{FSM}$	500	mA
Repetitive peak forward current			$I_{FRM}$	150	mA
Forward continuous current			$I_F$	30	mA

## Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Junction to ambient air	on PC board 50 mm x 50 mm x 1.6 mm	$R_{thJA}$	320	K/W
Junction temperature		$T_j$	125	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 65 to + 150	$^{\circ}\text{C}$

## Electrical Characteristics

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

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F = 0.1\text{ mA}$	$V_F$			330	mV
	$I_F = 1\text{ mA}$	$V_F$			410	mV
	$I_F = 15\text{ mA}$	$V_F$			1000	mV
Reverse current	$V_R = V_{Rmax}$	$I_R$			200	nA
Diode capacitance	$V_R = 1\text{ V}$ , $f = 1\text{ MHz}$	$C_D$			1.6	pF

## Typical Characteristics

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

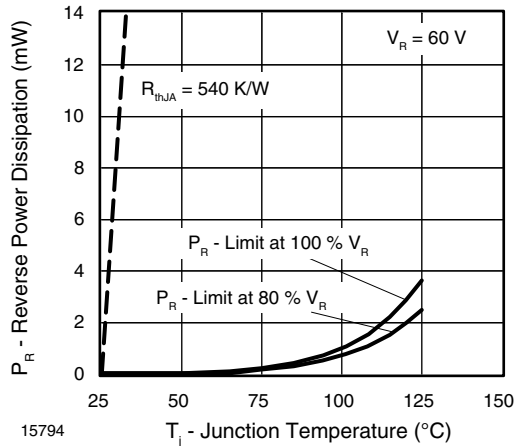


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

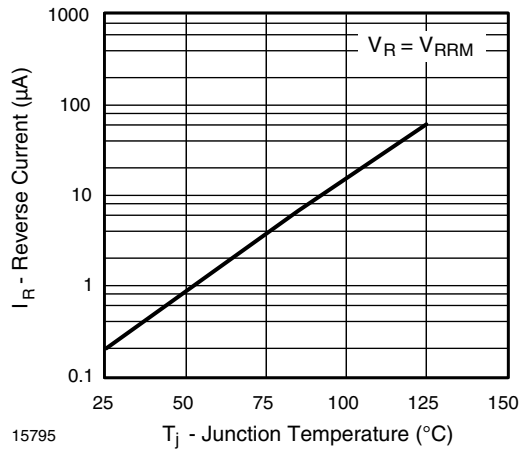


Figure 2. Reverse Current vs. Junction Temperature

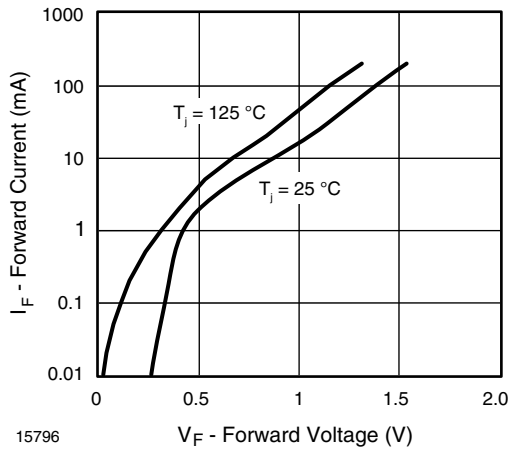


Figure 3. Forward Current vs. Forward Voltage

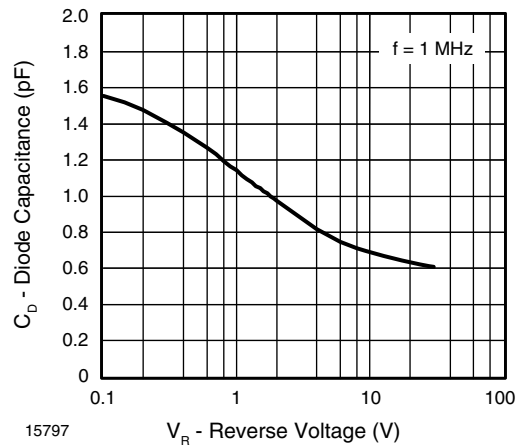
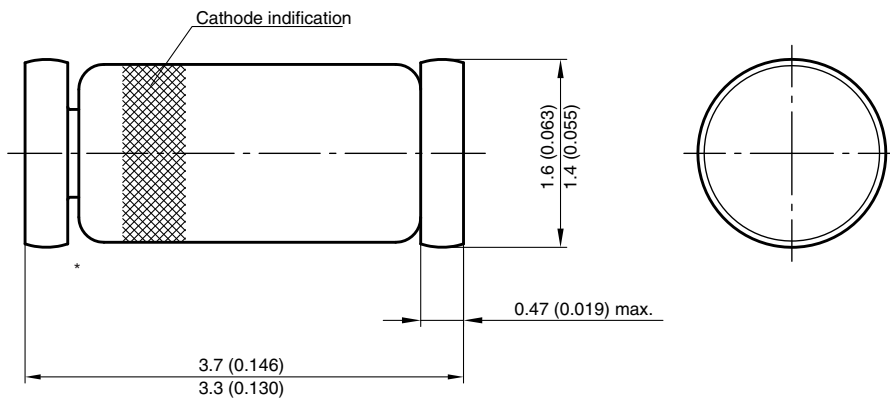


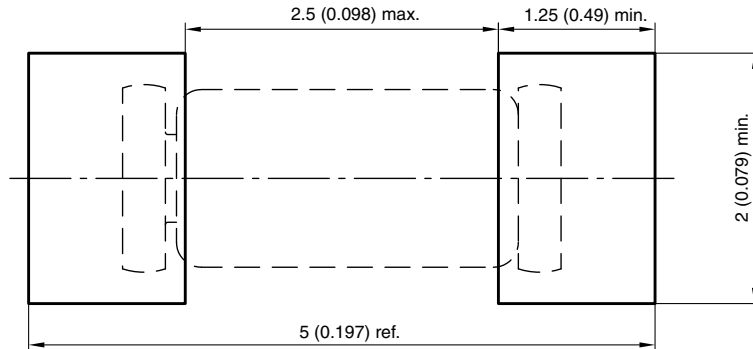
Figure 4. Diode Capacitance vs. Reverse Voltage

## 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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