

## Small Signal Schottky Diode

### Features

- Integrated protection ring against static discharge
- Very low forward voltage
- 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



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**



9612315

### Applications

- Applications where a very low forward voltage is required

### Mechanical Data

**Case:** MicroMELF

**Weight:** approx. 12 mg

**Cathode band color:** black

**Packaging codes/options:**

TR3/10 k per 13" reel (8 mm tape), 10 k/box

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

### Parts Table

Part	Type differentiation	Ordering code	Remarks
BAS386	$V_R = 50\text{ V}$	BAS386-TR3 or BAS386-TR	Tape and Reel

### Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Reverse voltage		$V_R$	50	V
Peak forward surge current	$t_p = 10\text{ ms}$	$I_{FSM}$	5	A
Repetitive peak forward current	$t_p \leq 1\text{ s}$	$I_{FRM}$	500	mA
Forward continuous current		$I_F$	200	mA
Average forward current		$I_{FAV}$	200	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	$I_F = 0.1\text{ mA}$	$V_F$			300	mV
	$I_F = 1\text{ mA}$	$V_F$			380	mV
	$I_F = 10\text{ mA}$	$V_F$			450	mV
	$I_F = 30\text{ mA}$	$V_F$			600	mV
	$I_F = 100\text{ mA}$	$V_F$			900	mV
Reverse current	$V_R = 40\text{ V}$	$I_R$			5	$\mu\text{A}$
Diode capacitance	$V_R = 1\text{ V}, f = 1\text{ MHz}$	$C_D$			8	pF

### Typical Characteristics

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

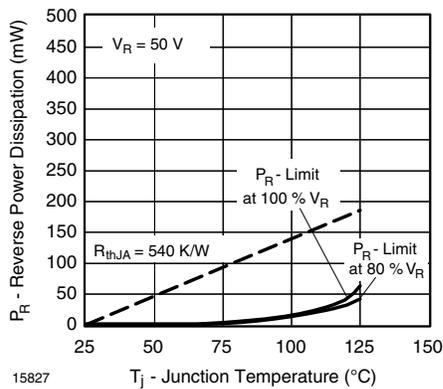


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

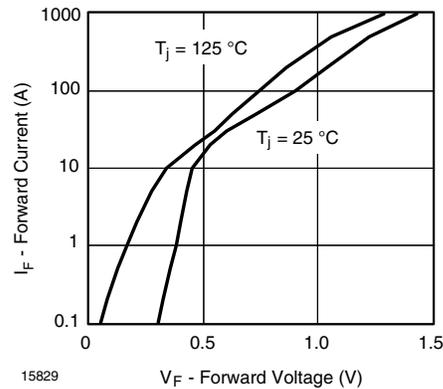


Figure 3. Forward Current vs. Forward Voltage

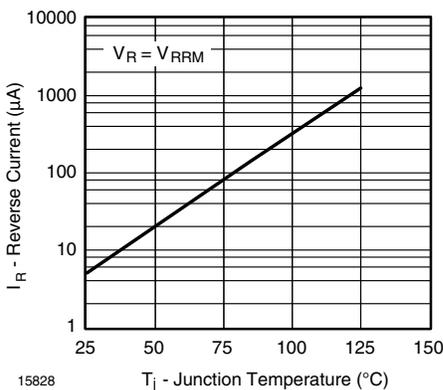


Figure 2. Reverse Current vs. Junction Temperature

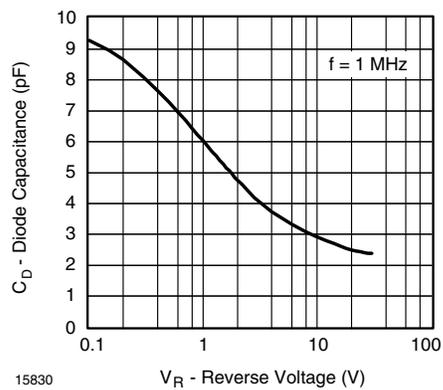


Figure 4. Diode Capacitance vs. Reverse Voltage

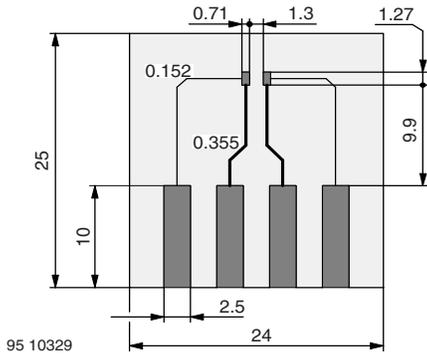
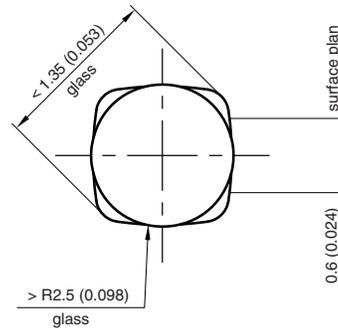
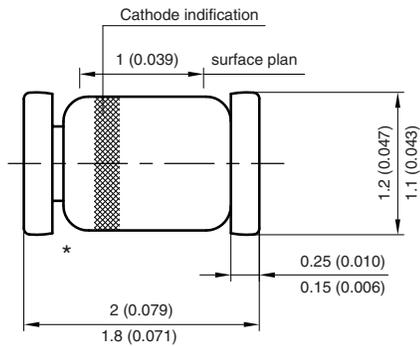


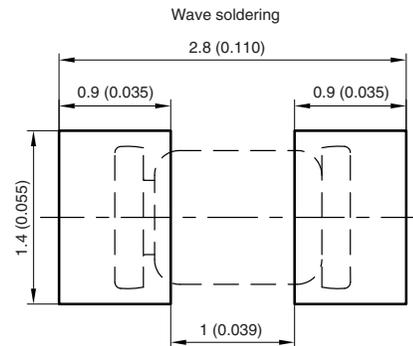
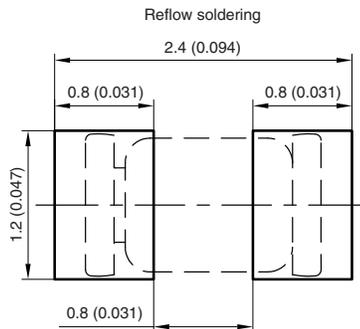
Figure 5. Board for  $R_{thJA}$  definition (in mm)

## Package Dimensions in millimeters (inches): MicromELF



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

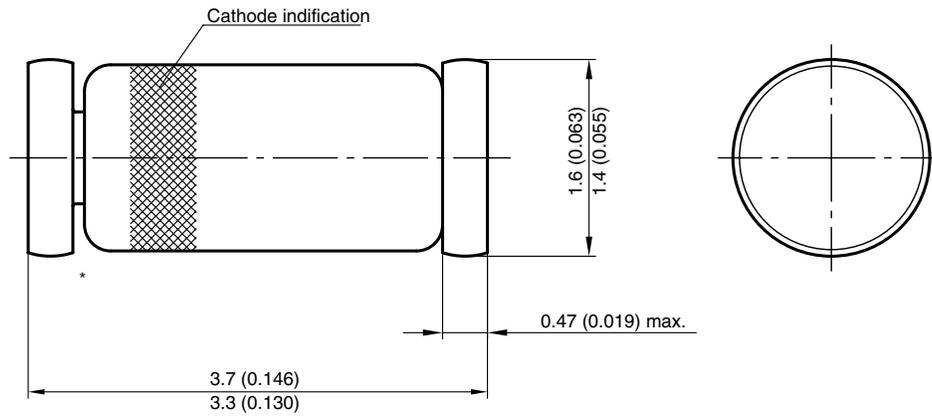
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 96 12072

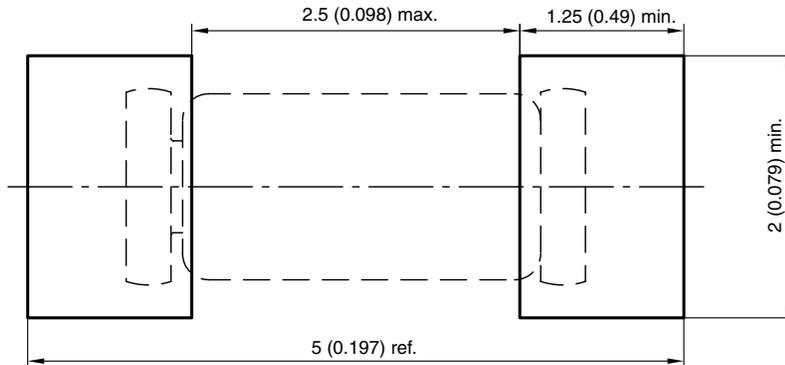


**PACKAGE DIMENSIONS** in millimeters (inches)



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

Foot print recommendation:



Document no.:6.560-5005.01-4  
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96 12070



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