

# Small Signal Schottky Diode



## FEATURES

- Integrated protection ring against static discharge
- Very low forward voltage
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



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

## LINKS TO ADDITIONAL RESOURCES



## MECHANICAL DATA

**Case:** MicroMELF

**Weight:** approx. 12 mg

**Cathode band color:** black

**Packaging codes/options:**

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

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

## APPLICATIONS

- Applications where a very low forward voltage is required

## PARTS TABLE

PART	TYPE DIFFERENTIATION	ORDERING CODE	CIRCUIT CONFIGURATION	REMARKS
BAS385	$V_R = 30\text{ V}$	BAS385-TR3 or BAS385-TR	Single	Tape and reel

## ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		$V_R$	30	V
Peak forward surge current	$t_p = 10\text{ ms}$	$I_{FSM}$	5	A
Repetitive peak forward current	$t_p \leq 1\text{ s}$	$I_{FRM}$	300	mA
Forward continuous current		$I_F$	200	mA
Average forward current	$V_{RWM} = 25\text{ V}$	$I_{FAV}$	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	$^{\circ}\text{C}$

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 0.1\text{ mA}$	$V_F$			240	mV
	$I_F = 1\text{ mA}$	$V_F$			320	mV
	$I_F = 10\text{ mA}$	$V_F$			400	mV
	$I_F = 30\text{ mA}$	$V_F$			500	mV
	$I_F = 100\text{ mA}$	$V_F$			800	mV
Reverse current	$V_R = 25\text{ V}$ , $t_p = 300\text{ }\mu\text{s}$	$I_R$			2.3	$\mu\text{A}$
Diode capacitance	$V_R = 1\text{ V}$ , $f = 1\text{ MHz}$	$C_D$			10	pF

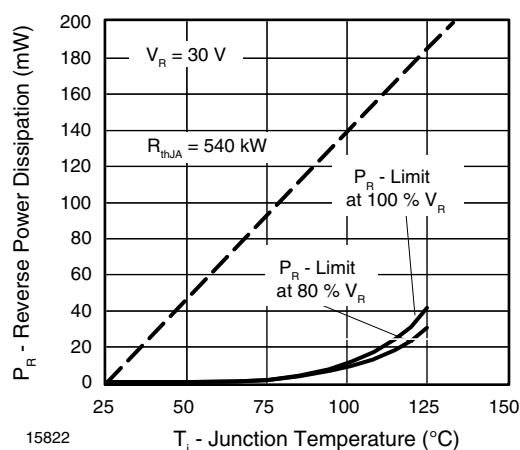
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)


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

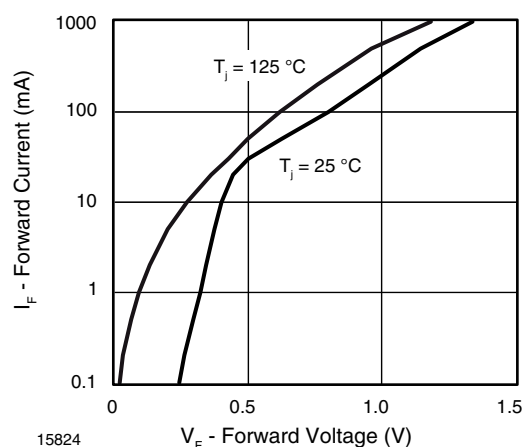


Fig. 3 - Forward Current vs. Forward Voltage

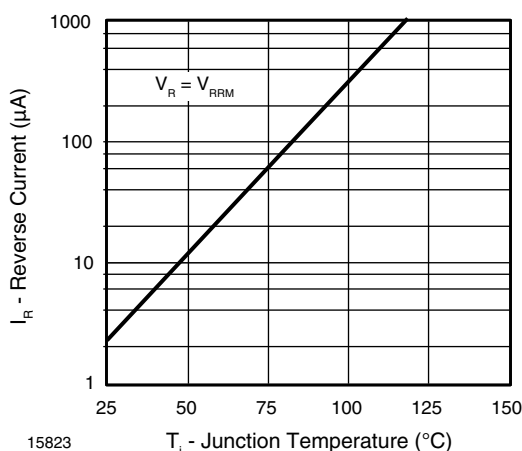


Fig. 2 - Reverse Current vs. Junction Temperature

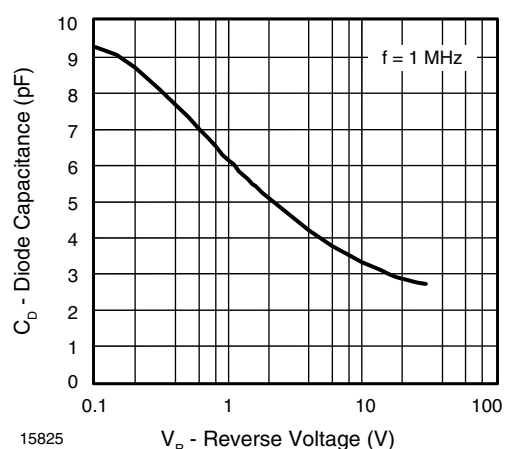
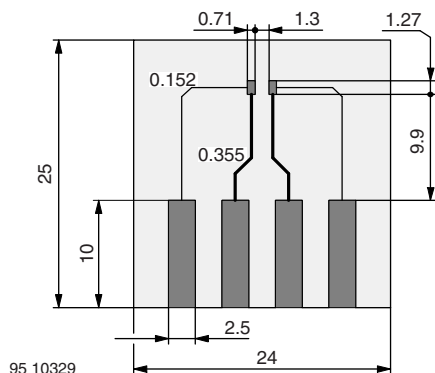
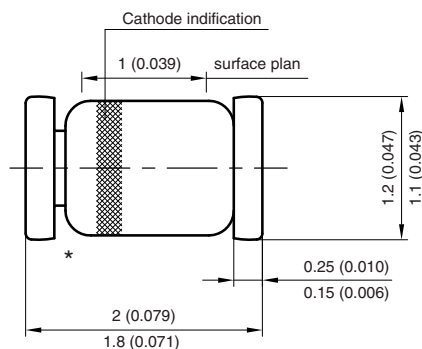
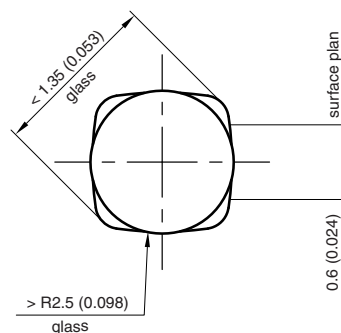


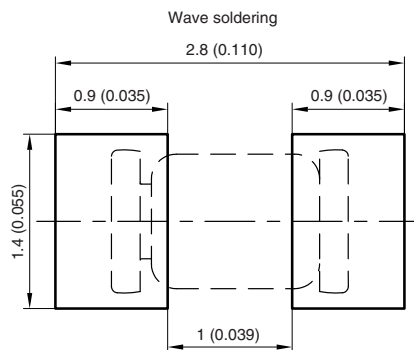
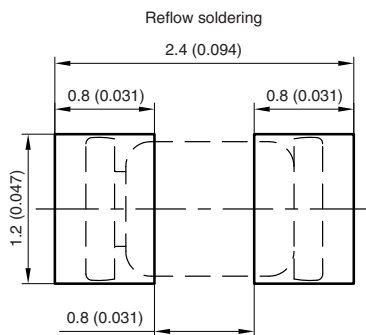
Fig. 4 - Diode Capacitance vs. Reverse Voltage

Fig. 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



Foot print recommendation:



Created - Date: 26.July.1996  
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96 12072



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