

Vishay Semiconductors

Small Signal Schottky Diode



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

FEATURES

- Integrated protection ring against static discharge
- Very low forward voltage
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>
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APPLICATIONS

· Applications where a very low forward voltage is required

PARTS TABLE				
PART	TYPE DIFFERENTIATION	ORDERING CODE	CIRCUIT CONFIGURATION	REMARKS
BAS386	V _R = 50 V	BAS386-TR3 or BAS386-TR	Single	Tape and reel

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Reverse voltage		V _R	50	V	
Peak forward surge current	t _p = 10 ms	I _{FSM}	5	A	
Repetitive peak forward current	$t_p \le 1 s$	I _{FRM}	500	mA	
Forward continuous current		I _F	200	mA	
Average forward current		I _{FAV}	200	mA	

THERMAL CHARACTERISTICS (T _{amb} = 25 °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		Tj	125	°C	
Storage temperature range		T _{stg}	-65 to +150	°C	

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
	I _F = 0.1mA	V _F			300	mV
	I _F = 1 mA	V _F			380	mV
Forward voltage	I _F = 10 mA	V _F			450	mV
	I _F = 30 mA	V _F			600	mV
	I _F = 100 mA	V _F			900	mV
Reserve current	V _R = 40 V	I _R			5	μA
Diode capacitance	V _R = 1 V, f = 1 MHz	CD			8	pF

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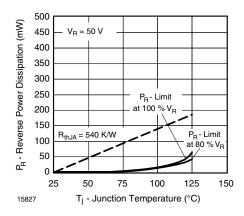
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TYPICAL CHARACTERISTICS ($T_{amb} = 25 \text{ °C}$, unless otherwise specified)





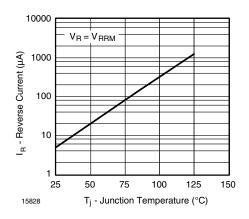


Fig. 2 - Reverse Current vs. Junction Temperature

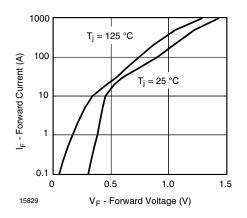


Fig. 3 - Forward Current vs. Forward Voltage

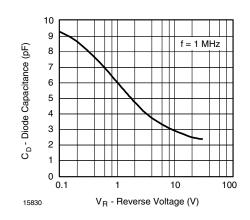


Fig. 4 - Diode Capacitance vs. Reverse Voltage

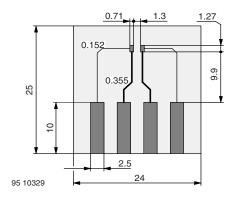


Fig. 5 - Board for R_{thJA} Definition (in mm)

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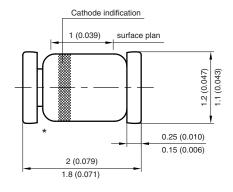
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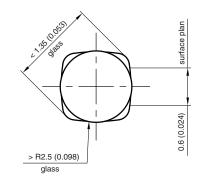


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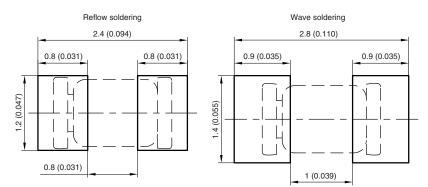
PACKAGE DIMENSIONS in millimeters (inches): MicroMELF



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



Foot print recommendation:



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