

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 www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

APPLICATIONS

- Applications where a very low forward voltage is required

PARTS TABLE

PART	TYPE DIFFERENTIATION	ORDERING CODE	CIRCUIT CONFIGURATION	REMARKS
BAS386	$V_R = 50 \text{ V}$	BAS386-TR3 or BAS386-TR	Single	Tape and reel

ABSOLUTE MAXIMUM RATINGS ($T_{\text{amb}} = 25 \text{ }^{\circ}\text{C}$, 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 ($T_{\text{amb}} = 25 \text{ }^{\circ}\text{C}$, 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 ($T_{\text{amb}} = 25 \text{ }^{\circ}\text{C}$, 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
Reserve current	$V_R = 40 \text{ V}$	I_R			5	μA
Diode capacitance	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$	C_D			8	pF

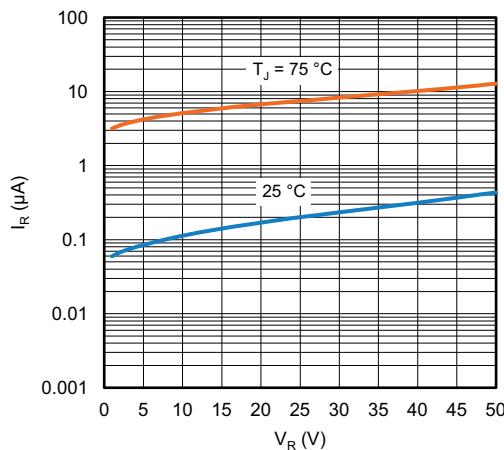
TYPICAL CHARACTERISTICS ($T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Typical Reverse Leakage Current vs. Reverse Voltage

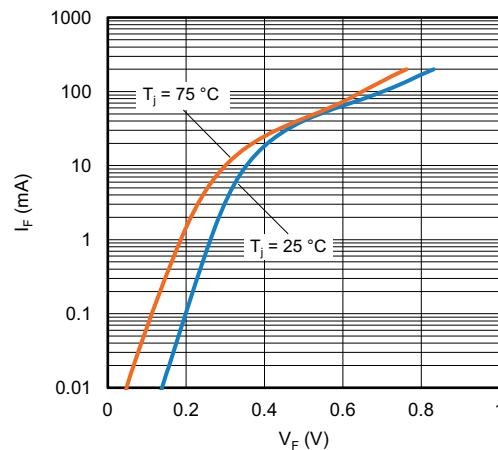


Fig. 3 - Typical Forward Current vs. Forward Voltage

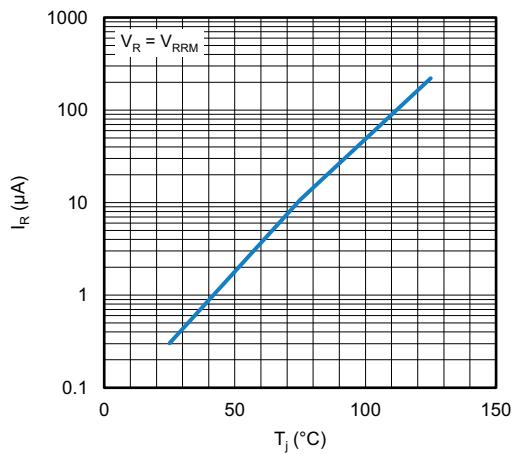


Fig. 2 - Reverse Current vs. Junction Temperature

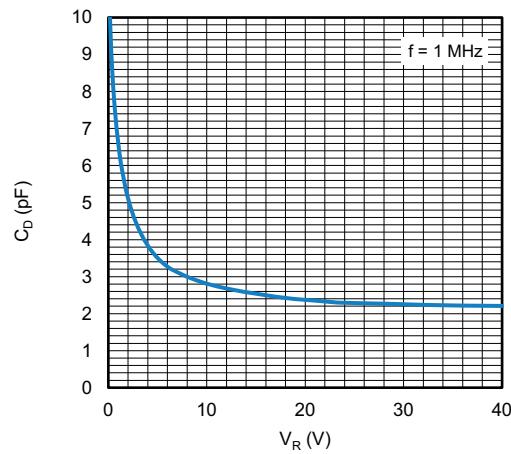
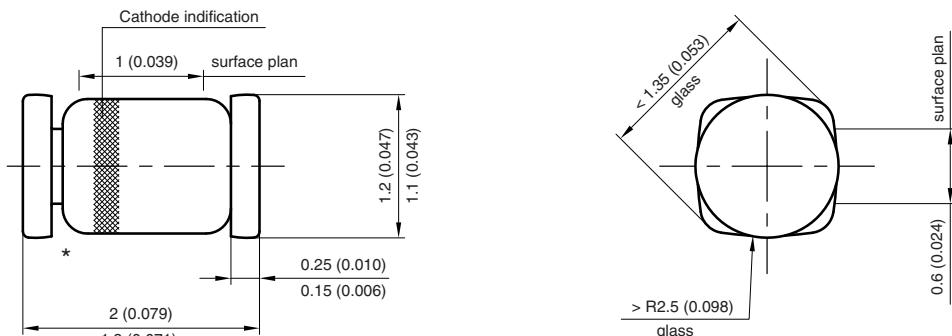
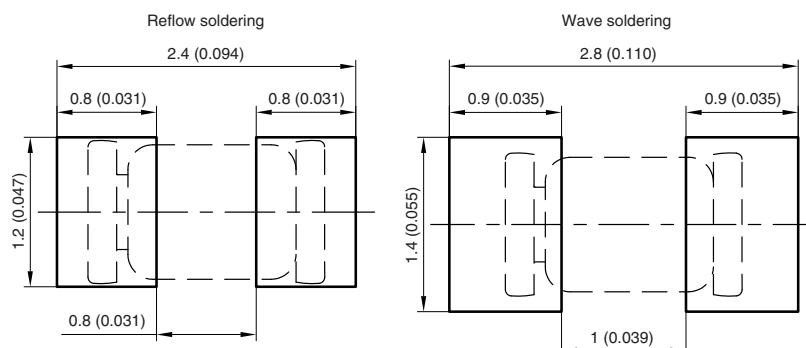


Fig. 4 - Typical Capacitance vs. Reverse Voltage

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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