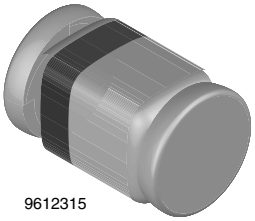
Small Signal Schottky Diodes

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
- Halogen-free according to IEC 61249-2-21 definition

RoHS COMPLIANT
HALOGEN FREE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Applications

- General purpose and switching Schottky barrier diode
- 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: 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
BAS381	V_R = 40 V	BAS381-TR3 or BAS381-TR	Tape and Reel
BAS382	V_R = 50 V	BAS382-TR3 or BAS382-TR	Tape and Reel
BAS383	V_R = 60 V	BAS383-TR3 or BAS383-TR	Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test condition	Part	Symbol	Value	Unit
Reverse voltage		BAS381	V_R	40	V
		BAS382	V_R	50	V
		BAS383	V_R	60	V
Peak forward surge current	t_p = 1 s		I_{FSM}	500	mA
Repetitive peak forward current			I_{FRM}	150	mA
Forward continuous current			I_F	30	mA

For technical questions within your region, please contact one of the following:
DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

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		T_j	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
Forward voltage	I_F = 0.1 mA	V_F			330	mV
	I_F = 1 mA	V_F			410	mV
	I_F = 15 mA	V_F			1000	mV
Reverse current	$V_R = V_{Rmax}$	I_R			200	nA
Diode capacitance	V_R = 1 V, f = 1 MHz	C_D			1.6	pF

Typical Characteristics

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

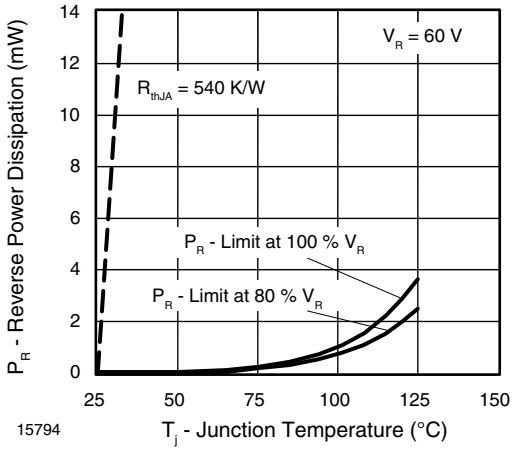

Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

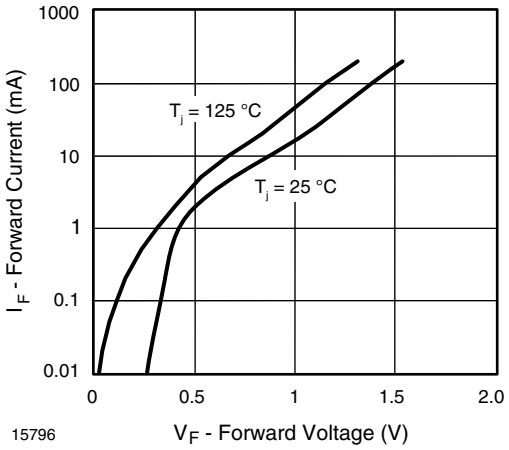

Figure 3. Forward Current vs. Forward Voltage

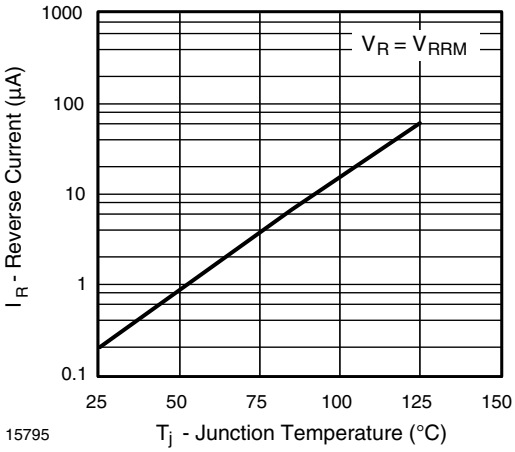

Figure 2. Reverse Current vs. Junction Temperature

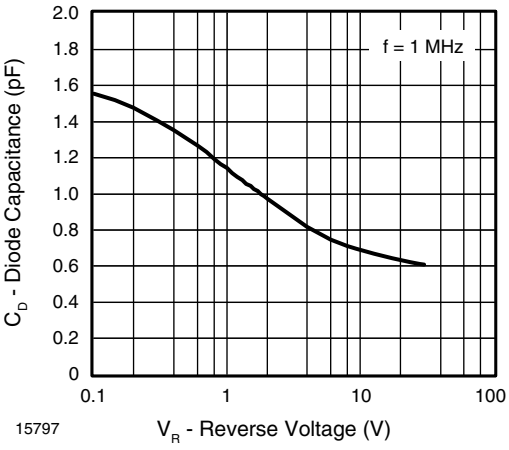

Figure 4. Diode Capacitance vs. Reverse Voltage

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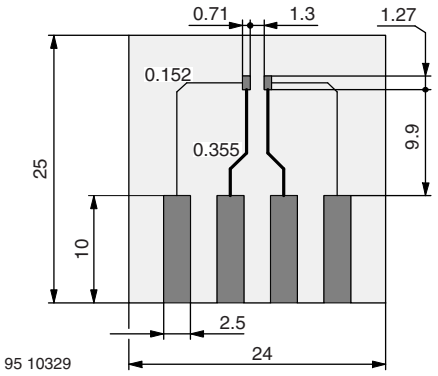
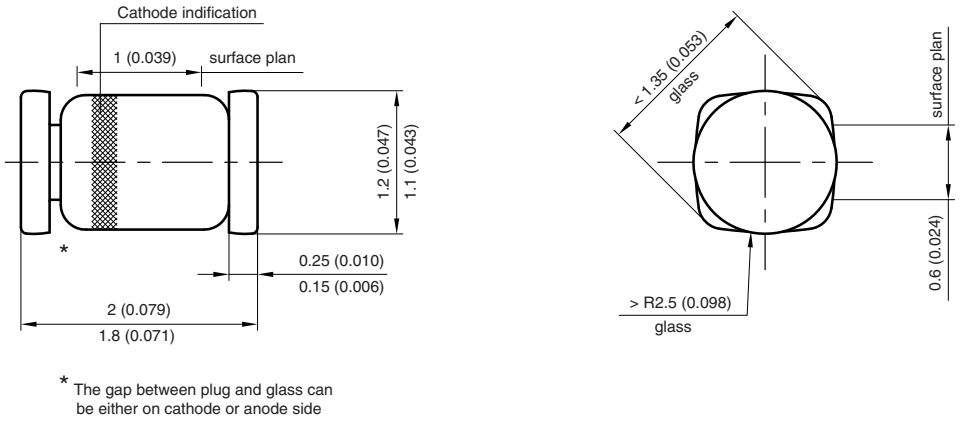


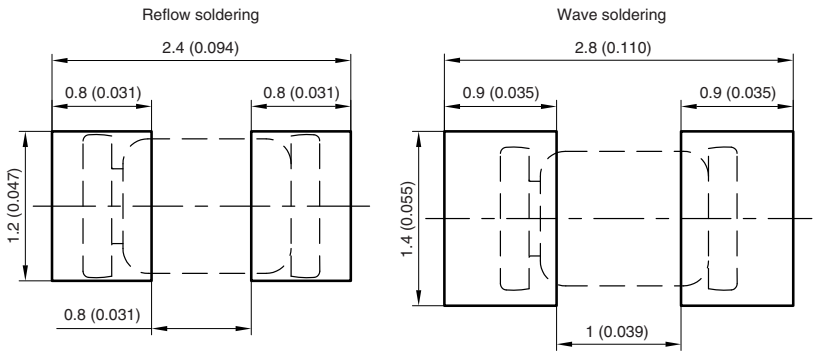
Figure 5. Board for R_{thJA} definition (in mm)

Package Dimensions in millimeters (inches): **MicroMELF**



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

Foot print recommendation:



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