

## Small Signal Schottky Diodes



### FEATURES

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


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COMPLIANT

### LINKS TO ADDITIONAL RESOURCES



### MECHANICAL DATA

**Case:** QuadroMELF (SOD-80)

**Weight:** approx. 34 mg

**Cathode band color:** black

**Packaging codes/options:**

GS18/10K per 13" reel (8 mm tape), 10K/box

GS08/2.5K per 7" reel (8 mm tape), 12.5K/box

### 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

### PARTS TABLE

PART	TYPE DIFFERENTIATION	ORDERING CODE	CIRCUIT CONFIGURATION	REMARKS
BAS281	$V_R = 40\text{ V}$	BAS281-GS18 or BAS281-GS08	Single	Tape and reel
BAS282	$V_R = 50\text{ V}$	BAS282-GS18 or BAS282-GS08	Single	Tape and reel
BAS283	$V_R = 60\text{ V}$	BAS283-GS18 or BAS283-GS08	Single	Tape and reel

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

PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Reverse voltage		BAS281	$V_R$	40	V
		BAS282	$V_R$	50	V
		BAS283	$V_R$	60	V
Peak forward surge current	$t_p = 1\text{ s}$		$I_{FSM}$	500	mA
Repetitive peak forward current			$I_{FRM}$	150	mA
Forward current			$I_F$	30	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 <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I <sub>F</sub> = 0.1 mA	V <sub>F</sub>			330	mV
	I <sub>F</sub> = 1 mA	V <sub>F</sub>			410	mV
	I <sub>F</sub> = 15 mA	V <sub>F</sub>			1000	mV
Reverse current	V <sub>R</sub> = V <sub>Rmax.</sub>	I <sub>R</sub>			200	nA
Diode capacitance	V <sub>R</sub> = 1 V, f = 1 MHz	C <sub>D</sub>			1.6	pF

**TYPICAL CHARACTERISTICS** (T<sub>amb</sub> = 25 °C, unless otherwise specified)

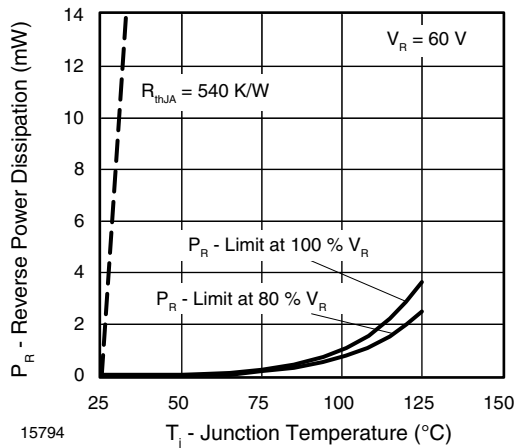


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

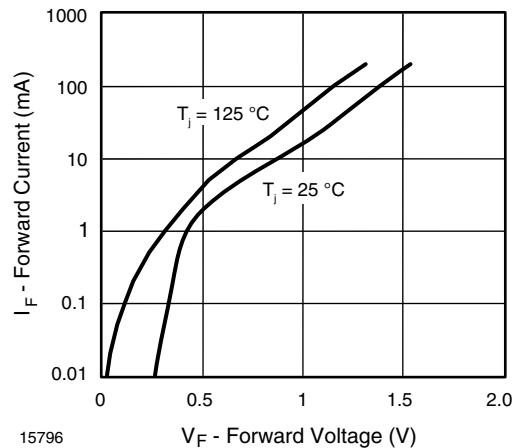


Fig. 3 - Forward Current vs. Forward Voltage

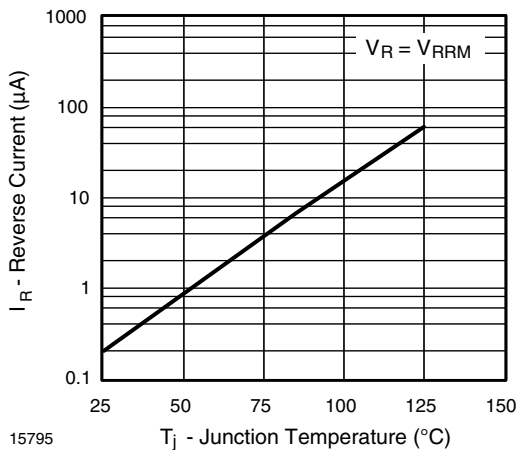


Fig. 2 - Reverse Current vs. Junction Temperature

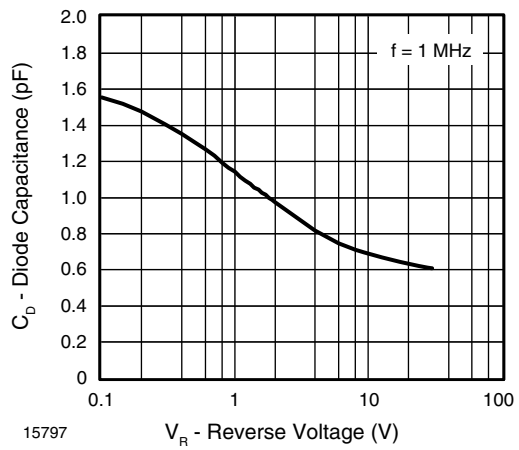
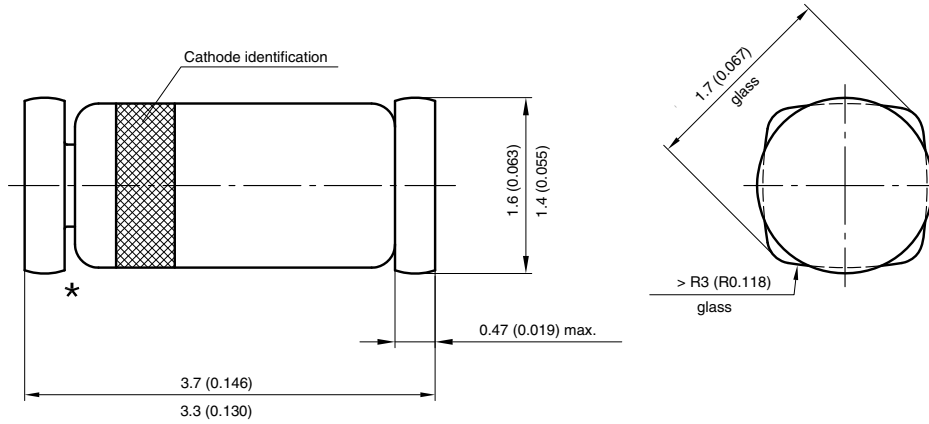


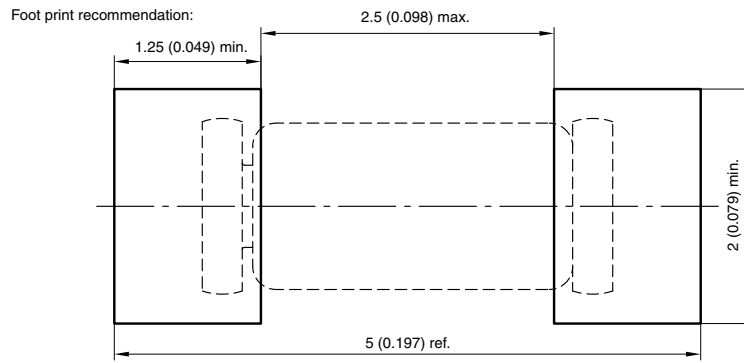
Fig. 4 - Diode Capacitance vs. Reverse Voltage



### PACKAGE DIMENSIONS in millimeters (inches): **QuadroMELF (SOD-80)**



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



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