

Small Signal Schottky Diodes



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

FEATURES

- Integrated protection ring against static discharge
- Low capacitance
- Low leakage current
- Low forward voltage drop
- Very low switching time
- AEC-Q101 qualified
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

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	INTERNAL CONSTRUCTION	REMARKS
BAS281	$V_R = 40\text{ V}$	BAS281-GS18 or BAS281-GS08	Single diode	Tape and reel
BAS282	$V_R = 50\text{ V}$	BAS282-GS18 or BAS282-GS08	Single diode	Tape and reel
BAS283	$V_R = 60\text{ V}$	BAS283-GS18 or BAS283-GS08	Single diode	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 ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 0.1\text{ mA}$	V_F			330	mV
	$I_F = 1\text{ mA}$	V_F			410	mV
	$I_F = 15\text{ mA}$	V_F			1000	mV
Reverse current	$V_R = V_{Rmax.}$	I_R			200	nA
Diode capacitance	$V_R = 1\text{ V}, f = 1\text{ MHz}$	C_D			1.6	pF

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

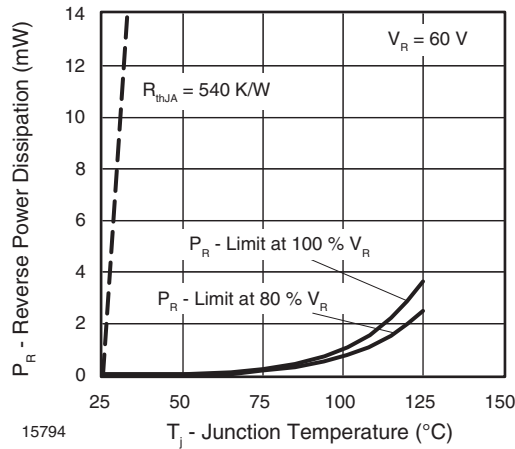


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

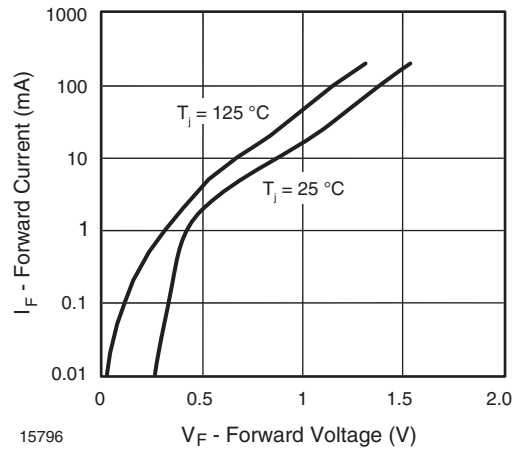


Fig. 3 - Forward Current vs. Forward Voltage

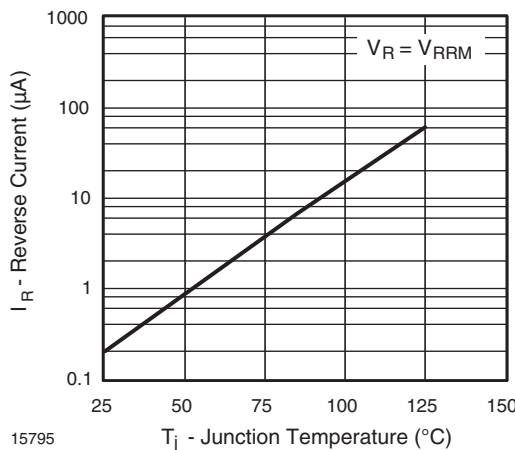


Fig. 2 - Reverse Current vs. Junction Temperature

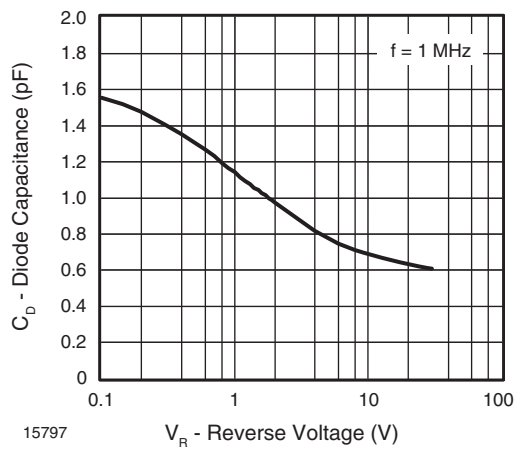
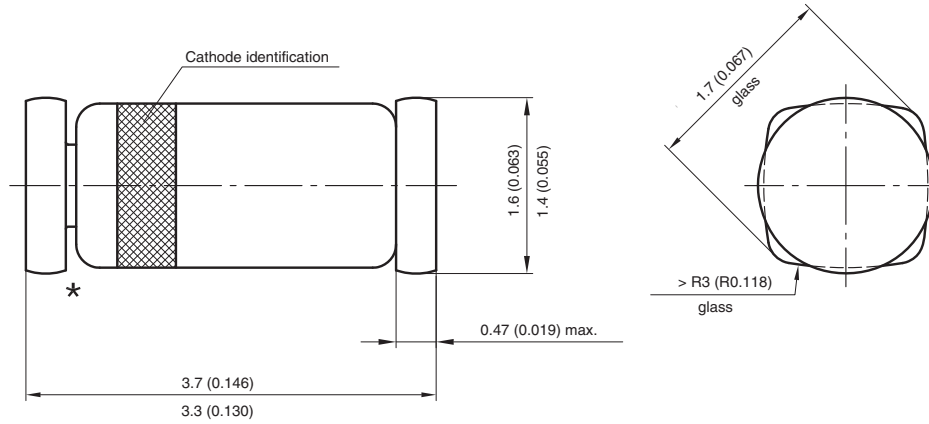


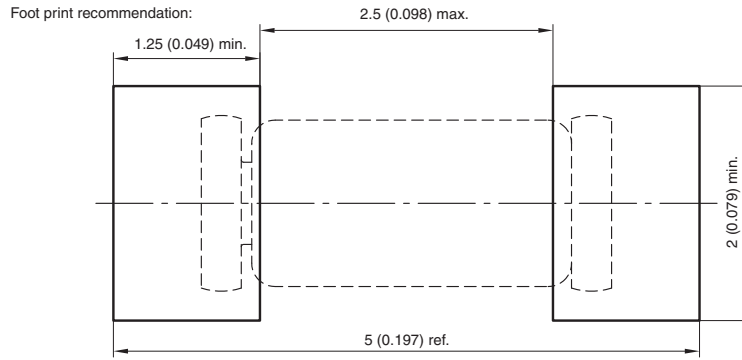
Fig. 4 - Diode Capacitance vs. Reverse Voltage



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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