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## Vishay Semiconductors

# **Small Signal Schottky Diodes**



#### **LINKS TO ADDITIONAL RESOURCES**



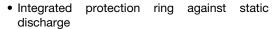
#### **MECHANICAL DATA**

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

#### **FEATURES**





- Low leakage current
- Low forward voltage drop
- · Very low switching time
- Material categorization: for definitions of compliance please see <a href="https://www.vishay.com/doc?99912">www.vishay.com/doc?99912</a>

#### **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 <sub>R</sub> = 40 V	BAS281-GS18 or BAS281-GS08	Single	Tape and reel		
BAS282	V <sub>R</sub> = 50 V	BAS282-GS18 or BAS282-GS08	Single	Tape and reel		
BAS283	V <sub>R</sub> = 60 V	BAS283-GS18 or BAS283-GS08	Single	Tape and reel		

ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	PART SYMBOL		UNIT	
		BAS281	$V_R$	40	V	
Reverse voltage		BAS282	$V_R$	50	V	
		BAS283	$V_R$	60	V	
Peak forward surge current	t <sub>p</sub> = 1 s		I <sub>FSM</sub>	500	mA	
Repetitive peak forward current			I <sub>FRM</sub>	150	mA	
Forward current			I <sub>F</sub>	30	mA	

THERMAL CHARACTERISTICS (T <sub>amb</sub> = 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 <sub>thJA</sub>	320	K/W		
Junction temperature		Tj	125	°C		
Storage temperature range		T <sub>stg</sub>	-65 to +150	°C		

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<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
	I <sub>F</sub> = 0.1 mA	V <sub>F</sub>			330	mV
Forward voltage	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	$V_R = V_{Rmax.}$	I <sub>R</sub>			200	nA
Diode capacitance	$V_R = 1 V$ , $f = 1 MHz$	C <sub>D</sub>			1.6	pF

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

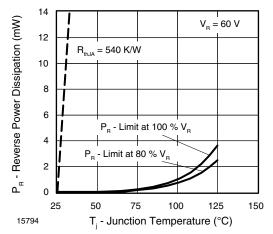


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

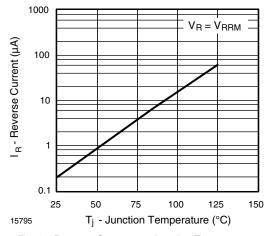


Fig. 2 - Reverse Current vs. Junction Temperature

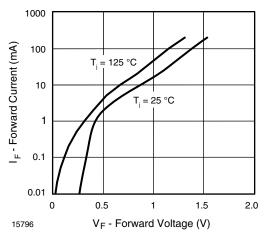


Fig. 3 - Forward Current vs. Forward Voltage

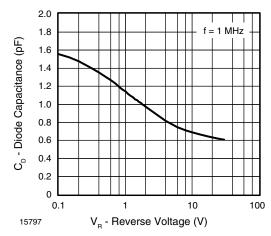


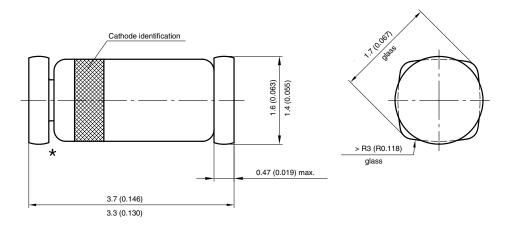
Fig. 4 - Diode Capacitance vs. Reverse Voltage



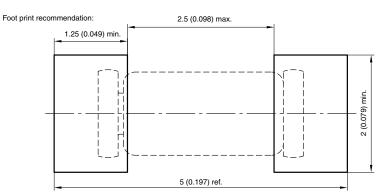
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### PACKAGE DIMENSIONS in millimeters (inches): QuadroMELF (SOD-80)



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



Created - Date: 03.November.2003 Rev. 11 - Date: 07.June 2006 Document no.:6.560-5006.01-4

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