

## Vishay Semiconductors

# **Small Signal Schottky Diode**



### **DESIGN SUPPORT TOOLS** click logo to get started

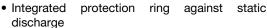


#### **MECHANICAL DATA**

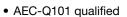
Case: QuadroMELF (SOD-80)
Weight: approx. 34 mg
Cathode band color: black
Packaging codes/options:

GS18/10K per 13" reel (8 mm tape), 10K/box GS08/2.5K per 7" reel (8 mm tape), 12.5K/box

#### **FEATURES**







 Material categorization: for definitions of compliance please see www.vishay.com/doc?99912





#### **APPLICATIONS**

Applications where a very low forward voltage is required

PARTS TABLE					
PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS	
BAS286	BAS286-GS18 or BAS286-GS08	Single	-	Tape and reel	

ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °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 <sub>FSM</sub>	5	Α	
Repetitive peak forward current	t <sub>p</sub> ≤ 1 s	I <sub>FRM</sub>	500	mA	
Forward continuous current		I <sub>F</sub>	200	mA	
Average forward current		I <sub>FAV</sub>	200	mA	

THERMAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT		
Thermal resistance 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		

<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> = 0.1mA	V <sub>F</sub>			300	mV
	I <sub>F</sub> = 1 mA	V <sub>F</sub>			380	mV
Forward voltage	I <sub>F</sub> = 10 mA	V <sub>F</sub>			450	mV
	I <sub>F</sub> = 30 mA	$V_{F}$			600	mV
	I <sub>F</sub> = 100 mA	V <sub>F</sub>			900	mV
Reserve current	V <sub>R</sub> = 40 V	I <sub>R</sub>			5	μA
Diode capacitance	V <sub>R</sub> = 1 V, f = 1 MHz	C <sub>D</sub>			8	pF

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

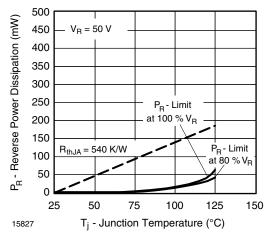


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

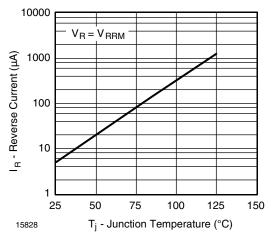


Fig. 2 - Reverse Current vs. Junction Temperature

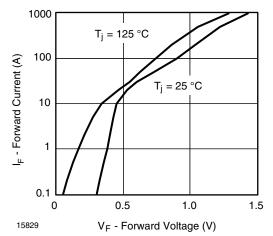


Fig. 3 - Forward Current vs. Forward Voltage

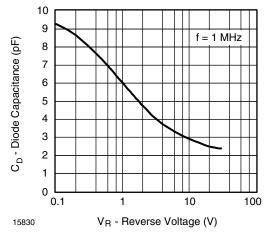
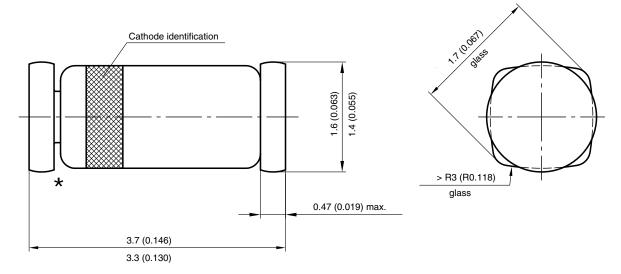


Fig. 4 - Diode Capacitance vs. Reverse Voltage

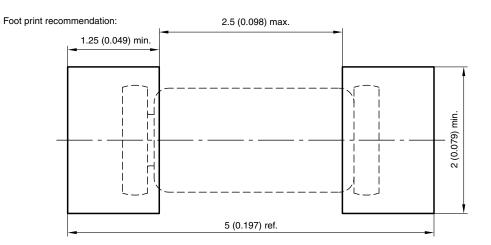


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### PACKAGE DIMENSIONS in millimeters (inches): QuadroMELF (SOD-80)



★ 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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