

## Excellent Integrated System Limited

Stocking Distributor

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[Vishay Semiconductor/Diodes Division](#)  
[BAS81-GS08](#)

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www.vishay.com

## BAS81, BAS82, BAS83

Vishay Semiconductors

### 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
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT

#### MECHANICAL DATA

**Case:** MiniMELF SOD-80

**Weight:** approx. 31 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

- 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
BAS81	$V_R = 40\text{ V}$	BAS81-GS18 or BAS81-GS08	Single diode	Tape and reel
BAS82	$V_R = 50\text{ V}$	BAS82-GS18 or BAS82-GS08	Single diode	Tape and reel
BAS83	$V_R = 60\text{ V}$	BAS83-GS18 or BAS83-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		BAS81	$V_R$	40	V
		BAS82	$V_R$	50	V
		BAS83	$V_R$	60	V
Peak forward surge current	$t_p = 1\text{ s}$		$I_{FSM}$	500	mA
Repetitive peak forward current			$I_{FRM}$	150	mA
Forward continuous current			$I_F$	30	mA

THERMAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^\circ\text{C}$ , 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	$R_{thJA}$	320	K/W	
Junction temperature		$T_j$	125	$^\circ\text{C}$	
Storage temperature range		$T_{stg}$	- 65 to + 150	$^\circ\text{C}$	



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<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , 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)

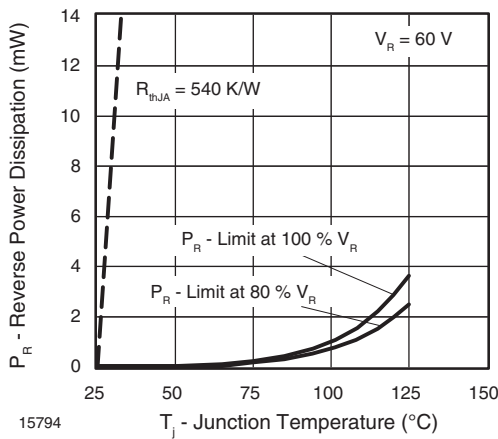


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

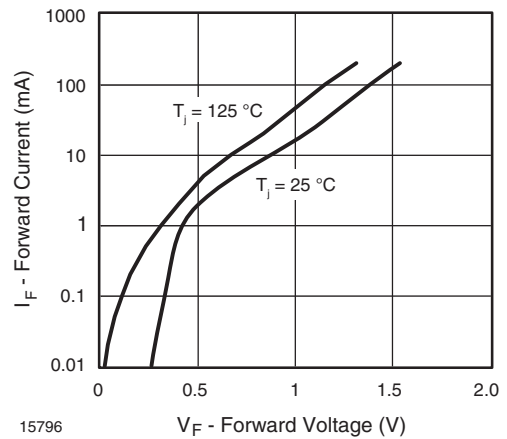


Fig. 3 - Forward Current vs. Forward Voltage

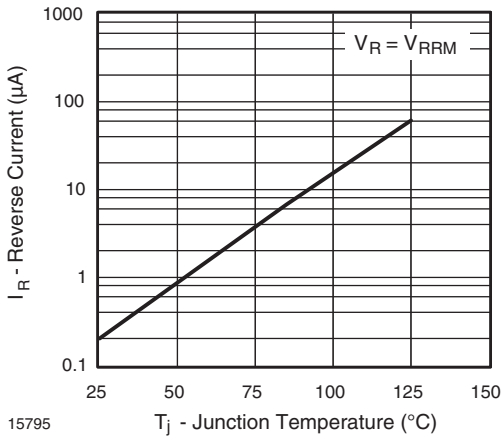


Fig. 2 - Reverse Current vs. Junction Temperature

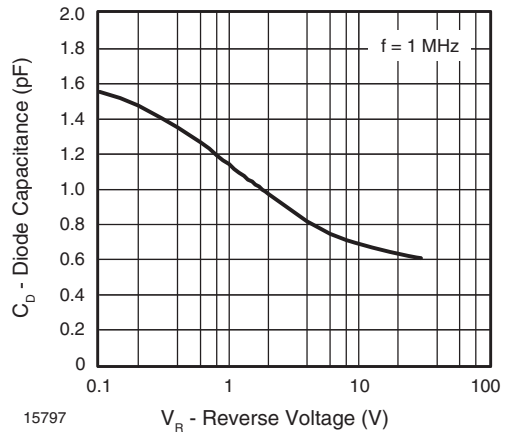


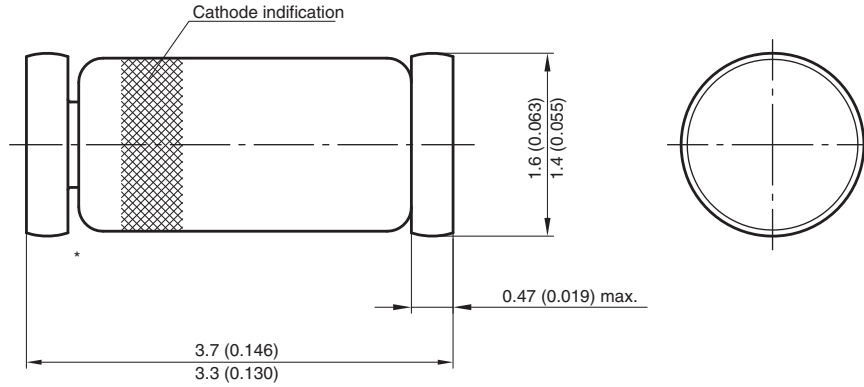
Fig. 4 - Diode Capacitance vs. Reverse Voltage



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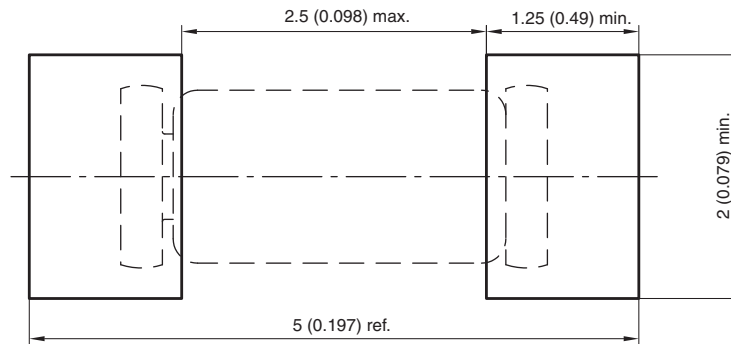
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**PACKAGE DIMENSIONS** in millimeters (inches): **MiniMELF SOD-80**



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

Foot print recommendation:



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 96 12070



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