

## Small Signal Schottky Diode



### FEATURES

- For general purpose applications
- This diode features low turn-on voltage and high breakdown voltage
- This device is protected by a PN junction guarding against excessive voltage, such as electrostatic discharges
- This diode is also available in the DO-35 (DO-204AH) case with type designation BAT41
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


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### LINKS TO ADDITIONAL RESOURCES



### 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

### PARTS TABLE

PART	ORDERING CODE	INTERNAL CONSTRUCTION	REMARKS
LL41	LL41-GS18 or LL41-GS08	Single	Tape and reel

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		$V_{RRM}$	100	V
Forward continuous current <sup>(1)</sup>		$I_F$	100	mA
Repetitive peak forward current <sup>(1)</sup>	$t_p < 1\text{ s}, \delta < 0.5$	$I_{FRM}$	350	mA
Surge forward current <sup>(1)</sup>	$t_p = 10\text{ ms}$	$I_{FSM}$	750	mA
Power dissipation <sup>(1)</sup>	$T_{amb} = 65\text{ }^{\circ}\text{C}$	$P_{tot}$	200	mW

#### Note

<sup>(1)</sup> Valid provided that electrodes are kept at ambient temperature

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air		$R_{thJA}$	300 <sup>(1)</sup>	K/W
Junction temperature		$T_j$	125	$^{\circ}\text{C}$
Ambient operating temperature range		$T_{amb}$	-65 to +125	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	-65 to +150	$^{\circ}\text{C}$

#### Note

<sup>(1)</sup> Valid provided that electrodes are kept at ambient temperature

ELECTRICAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage <sup>(1)</sup>	I <sub>R</sub> = 100 μA	V <sub>(BR)</sub>	100	110		V
Leakage current <sup>(1)</sup>	V <sub>R</sub> = 50 V, T <sub>J</sub> = 25 °C	I <sub>R</sub>			100	nA
	V <sub>R</sub> = 50 V, T <sub>J</sub> = 100 °C	I <sub>R</sub>			20	μA
Forward voltage <sup>(1)</sup>	I <sub>F</sub> = 1 mA	V <sub>F</sub>		400	450	mV
	I <sub>F</sub> = 200 mA	V <sub>F</sub>			1000	mV
Diode capacitance	V <sub>R</sub> = 1 V, f = 1 MHz	C <sub>D</sub>		2		pF

**Note**

<sup>(1)</sup> Pulse test, t<sub>p</sub> = 300 μs

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

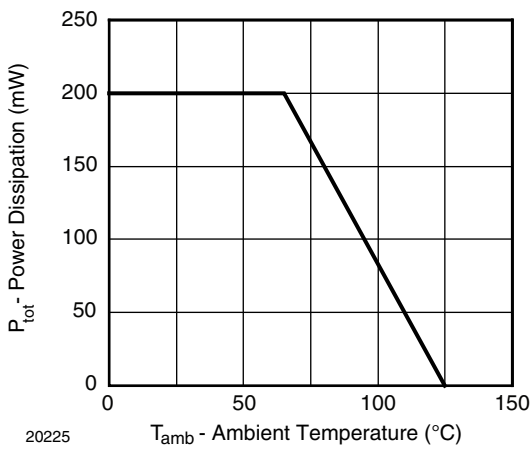


Fig. 1 - Admissible Power Dissipation vs. Ambient Temperature

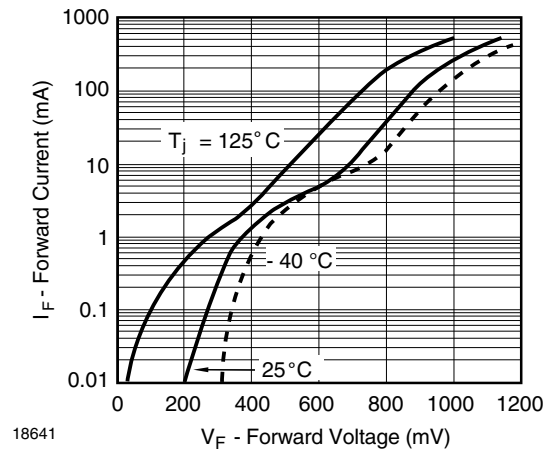


Fig. 3 - Typical Forward Characteristics

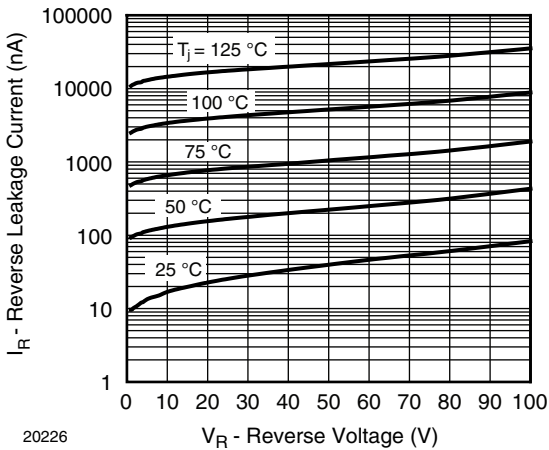


Fig. 2 - Typical Reverse Characteristics

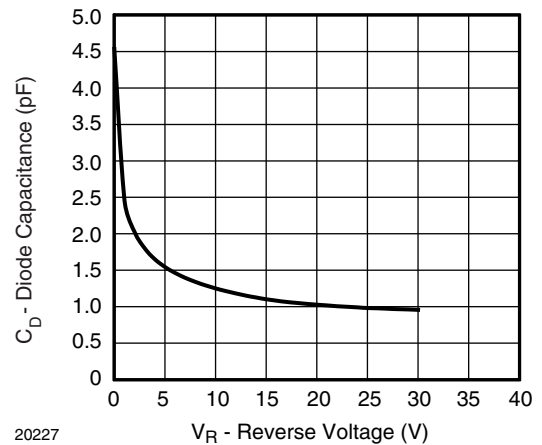
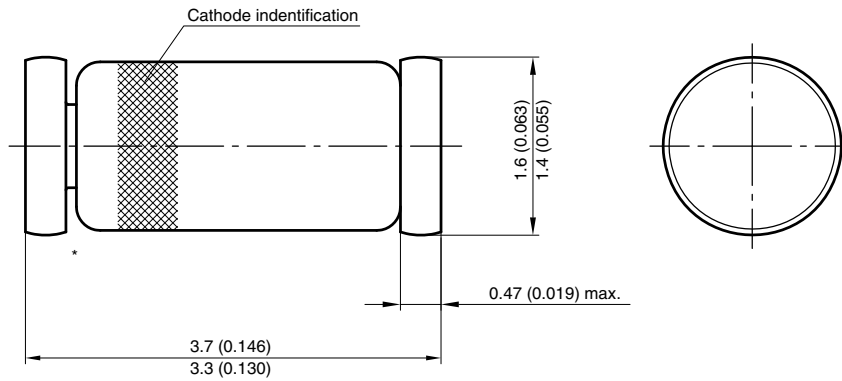
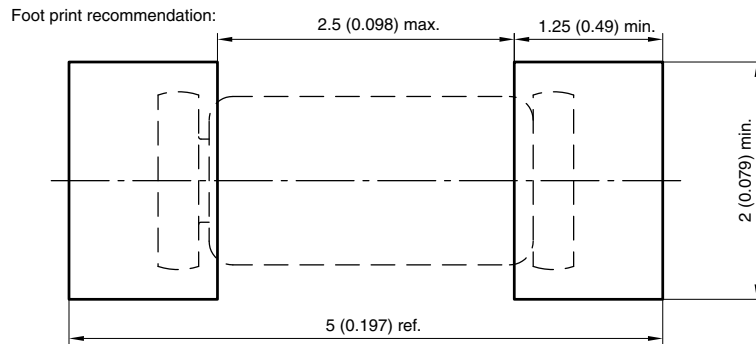


Fig. 4 - Typical Capacitance vs. Reverse Voltage

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



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



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