

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 case with type designation BAT41
- AEC-Q101 qualified
- Material categorization: For definitions of compliance please see 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

PARTS TABLE

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

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

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

Note

⁽¹⁾ Valid provided that electrodes are kept at ambient temperature

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air		R_{thJA}	300 ⁽¹⁾	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

⁽¹⁾ Valid provided that electrodes are kept at ambient temperature

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

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage ⁽¹⁾	$I_R = 100\text{ }\mu\text{A}$	$V_{(BR)}$	100	110		V
Leakage current ⁽¹⁾	$V_R = 50\text{ V}, T_j = 25^{\circ}\text{C}$	I_R			100	nA
	$V_R = 50\text{ V}, T_j = 100^{\circ}\text{C}$	I_R			20	μA
Forward voltage ⁽¹⁾	$I_F = 1\text{ mA}$	V_F		400	450	mV
	$I_F = 200\text{ mA}$	V_F			1000	mV
Diode capacitance	$V_R = 1\text{ V}, f = 1\text{ MHz}$	C_D		2		pF

Note

⁽¹⁾ Pulse test, $t_p = 300\text{ }\mu\text{s}$

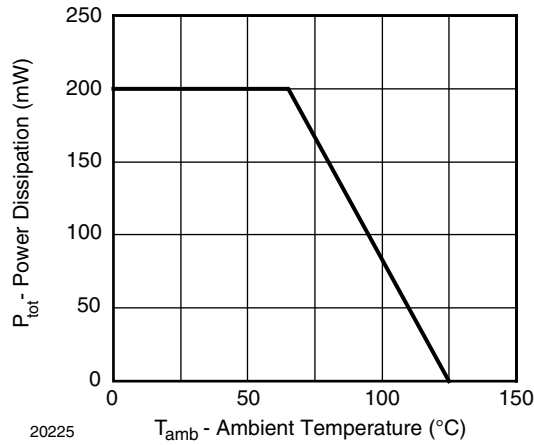
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Admissible Power Dissipation vs. Ambient Temperature

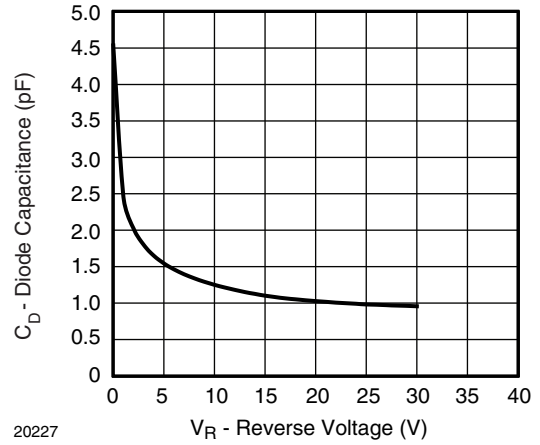


Fig. 4 - Typical Capacitance vs. Reverse Voltage

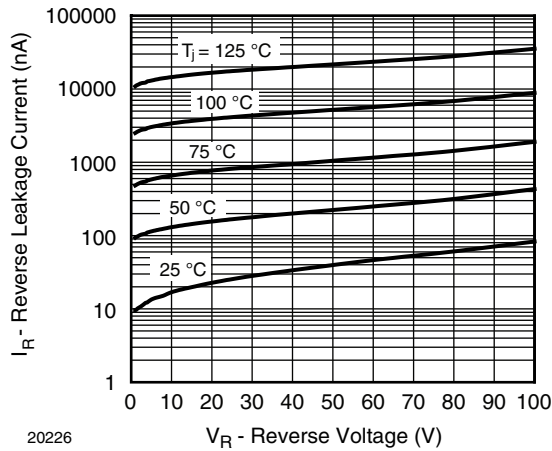


Fig. 2 - Typical Reverse Characteristics

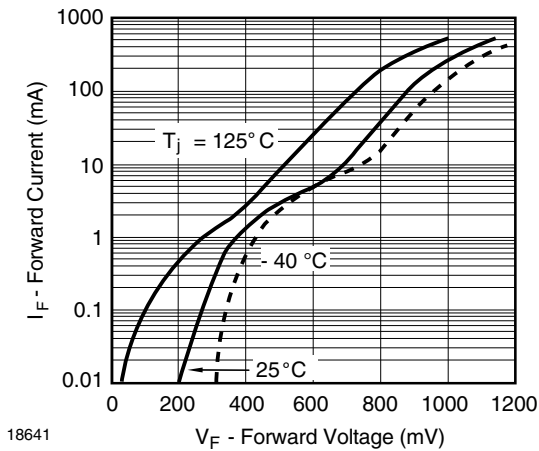
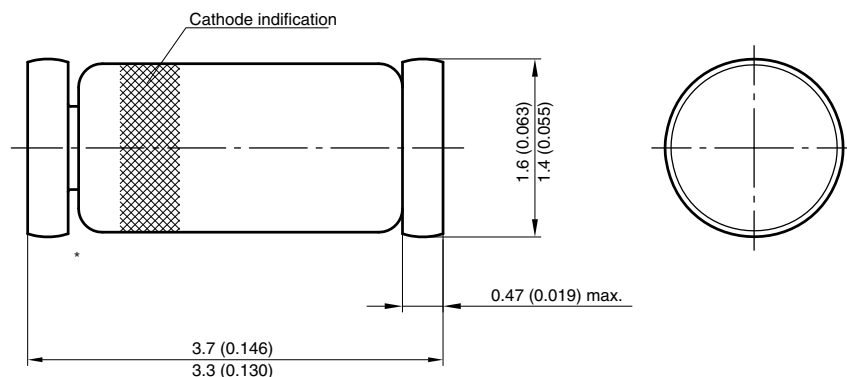
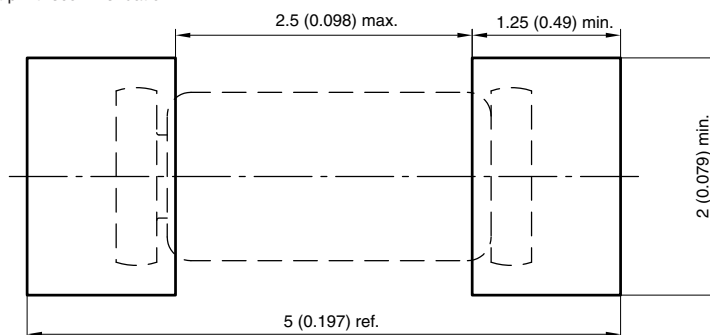


Fig. 3 - Typical Forward Characteristics

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


Foot print recommendation:



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