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 guardring 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 °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 s, δ < 0.5	I_{FRM}	350	mA
Surge forward current (1)	t_p = 10 ms	I_{FSM}	750	mA
Power dissipation (1)	T_{amb} = 65 °C	P_{tot}	200	mW

Note

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

THERMAL CHARACTERISTICS (T_{amb} = 25 °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	°C
Ambient operating temperature range		T_{amb}	- 65 to + 125	°C
Storage temperature range		T_{stg}	- 65 to + 150	°C

Note

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

ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

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

Note

(1) Pulse test, t_p = 300 µs

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

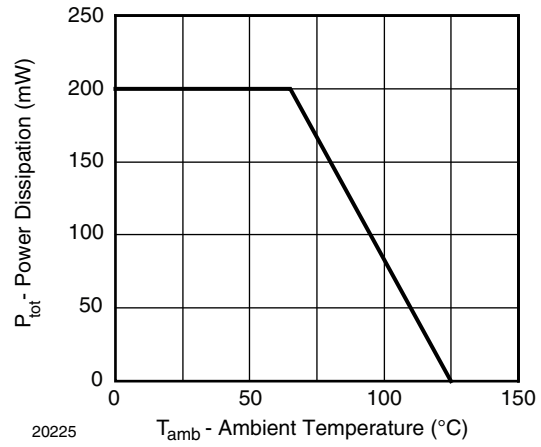


Fig. 1 - Admissible Power Dissipation vs. Ambient Temperature

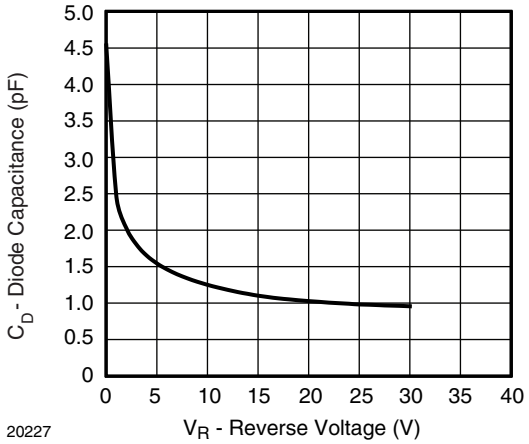


Fig. 4 - Typical Capacitance vs. Reverse Voltage

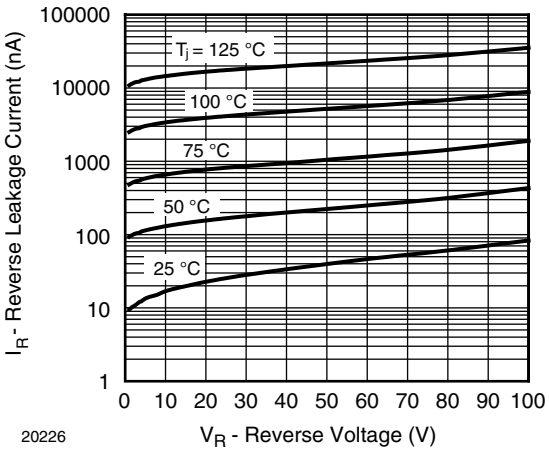


Fig. 2 - Typical Reverse Characteristics

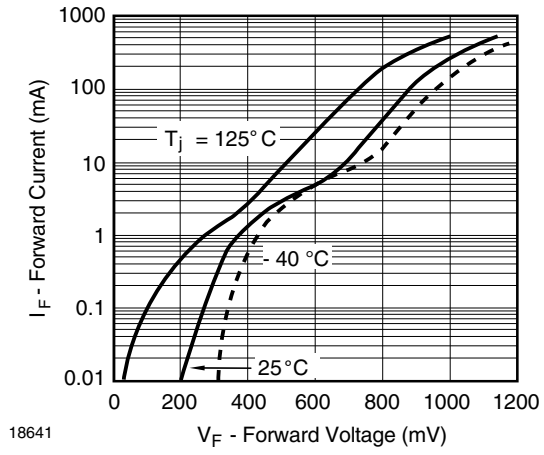
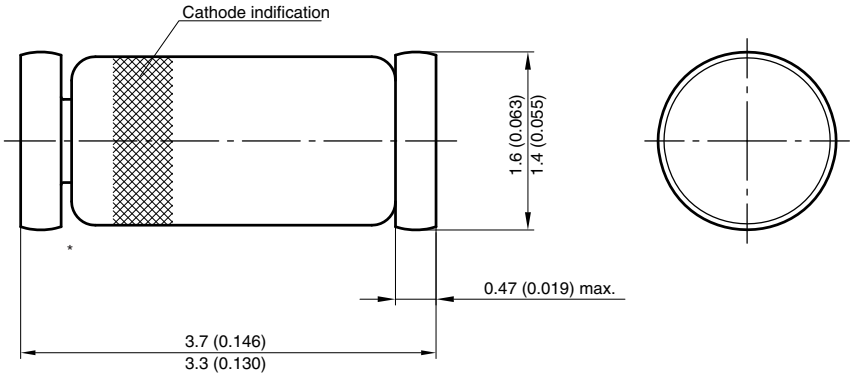


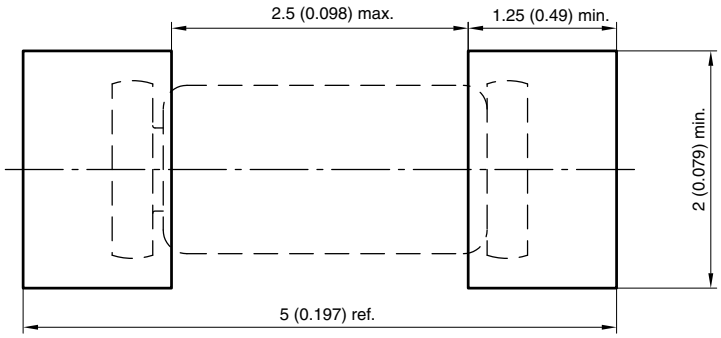
Fig. 3 - Typical Forward Characteristics

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



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

Foot print recommendation:



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