# 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 (DO-204AH) case with type designation BAT41
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

## LINKS TO ADDITIONAL RESOURCES

3D Models

## 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 °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)

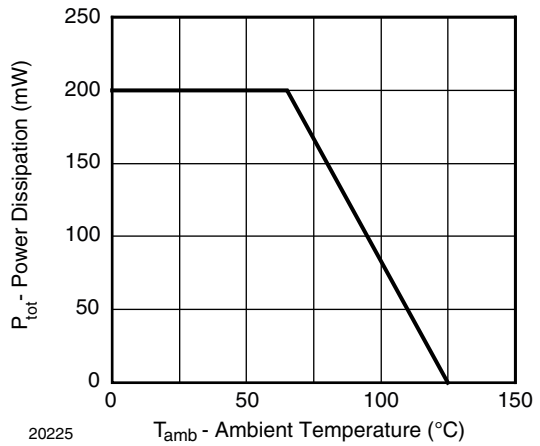



Fig. 1 - Admissible Power Dissipation vs. Ambient Temperature

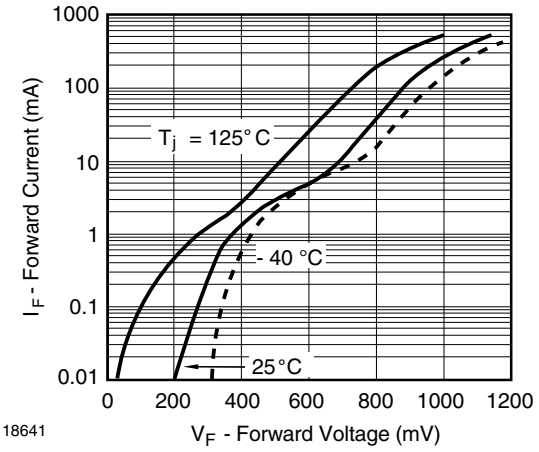



Fig. 3 - Typical Forward Characteristics

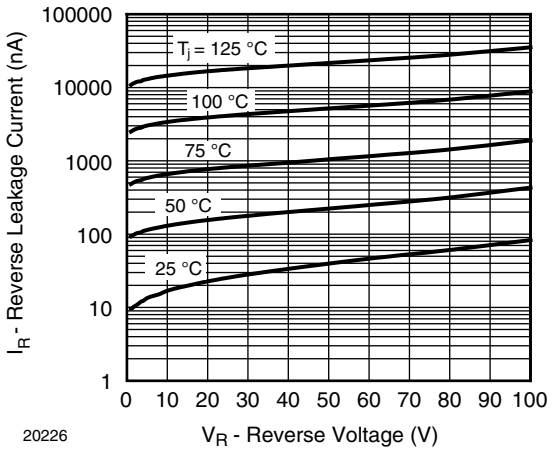



Fig. 2 - Typical Reverse Characteristics

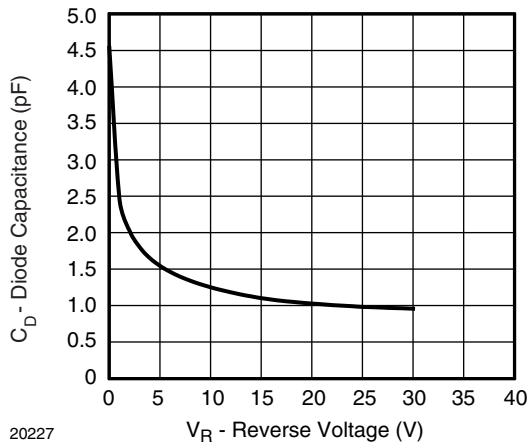
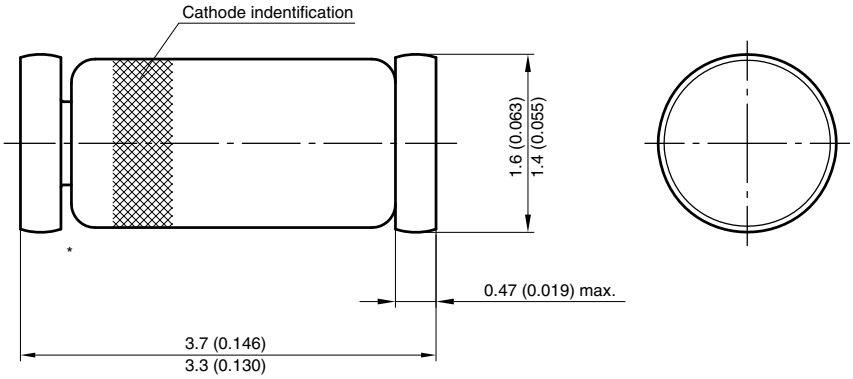
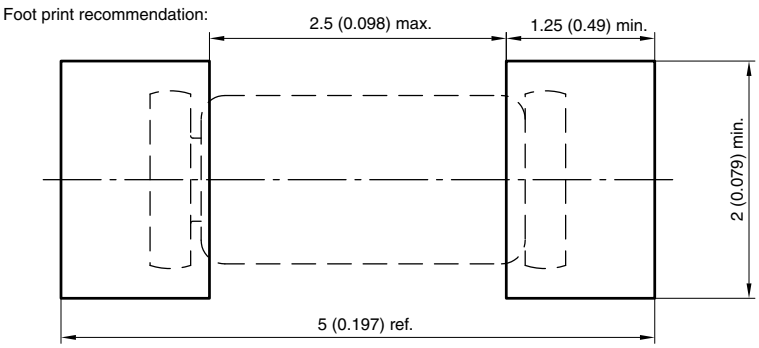



Fig. 4 - Typical Capacitance vs. Reverse Voltage

**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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