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Vishay Semiconductors

Small Signal Schottky Diode



LINKS TO ADDITIONAL RESOURCES



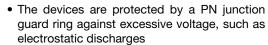
MECHANICAL DATA

Case: MiniMELF (SOD-80)
Weight: approx. 31 mg
Cathode band color: black
Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K/box 08/2.5K per 7" reel (8 mm tape), 12.5K/box

FEATURES

- For general purpose applications
- This diode features low turn-on voltage



 Material categorization: for definitions of compliance please see www.vishay.com/doc?99912





ROHS COMPLIANT HALOGEN FREE

APPLICATIONS

Applications where a very low forward voltage is required

| PARTS TABLE | | | |
|-------------|--------------------------|-----------------------|---------------|
| PART | ORDERING CODE | CIRCUIT CONFIGURATION | REMARKS |
| BAS85-M | BAS85-M-18 or BAS85-M-08 | Single | Tape and reel |

| ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified) | | | | | |
|---|--------------------------|------------------|-------|------|--|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT | |
| Continuous reverse voltage | | V_{R} | 30 | V | |
| Forward continuous current (1) | | I _F | 200 | mA | |
| Peak forward current (1) | | I _{FM} | 300 | mA | |
| Surge forward current (1) | t _p < 1 s | I _{FSM} | 600 | 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 (1) | | R _{thJA} | 430 | K/W | |
| Junction temperature | | Tj | 125 | °C | |
| Storage temperature range | | T _{stg} | -55 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 |
| Reverse breakdown voltage | I _R = 10 μA (pulsed) | V _(BR) | 30 | | | V |
| Leakage current | V _R = 25 V | I _R | | 0.2 | 2 | μΑ |
| | Pulse test $t_p < 300 \mu s$, $I_F = 0.1 \text{ mA}$ | V_{F} | | | 240 | mV |
| | Pulse test $t_p < 300 \mu s$, $I_F = 1 mA$ | V_{F} | | | 320 | mV |
| Forward voltage | Pulse test $t_p < 300 \mu s$, $I_F = 10 mA$ | V_{F} | | | 400 | mV |
| | Pulse test $t_p < 300 \mu s$, $I_F = 30 \text{ mA}$ | V _F | | 500 | | mV |
| | Pulse test $t_p < 300 \mu s$, $I_F = 100 \text{ mA}$ | V_{F} | | | 800 | mV |
| Diode capacitance | V _R = 1 V, f = 1 MHz | C _D | | | 10 | рF |
| Reverse recovery time | $I_F = 10 \text{ mA}, I_R = 10 \text{ mA}, I_R = 1 \text{ mA}$ | t _{rr} | | | 5 | ns |



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

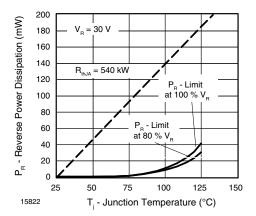


Fig. 1 - Max. Reverse Power Dissipation vs. Junction Temperature

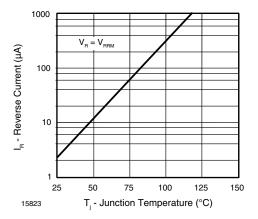


Fig. 2 - Reverse Current vs. Junction Temperature

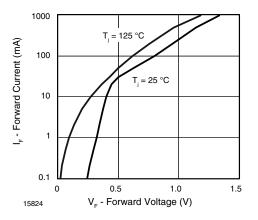


Fig. 3 - Forward Current vs. Forward Voltage

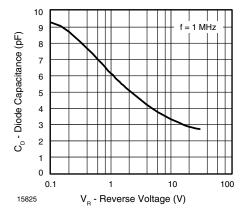
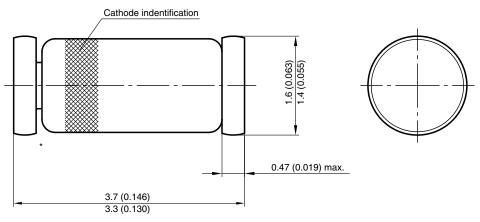


Fig. 4 - Diode Capacitance vs. Reverse Voltage

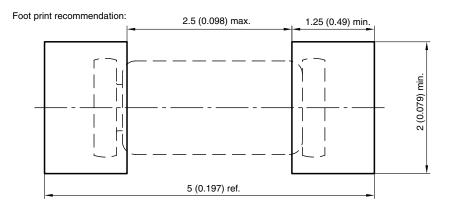


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PACKAGE DIMENSIONS in millimeters (inches): MiniMELF (SOD-80)



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



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