

Vishay Semiconductors

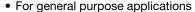
Small Signal Schottky Diode

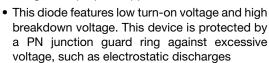


DESIGN SUPPORT TOOLS click logo to get started



FEATURES







HALOGEN

FREE

 This diode is also available in a MiniMELF case with type designation LL41

AEC-Q101 qualified

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

MECHANICAL DATA

Case: DO-35 (DO-204AH)
Weight: approx. 125 mg
Cathode Band Color: black
Packaging Codes/Options:

TR/10K per 13" reel (52 mm tape), 50K/box TAP/10K per ammopack (52 mm tape), 50K/box

| PARTS TABLE | | | | | | |
|-------------|-----------------------|-----------------------|--------------|------------------------|--|--|
| PART | ORDERING CODE | CIRCUIT CONFIGURATION | TYPE MARKING | REMARKS | | |
| BAT41 | BAT41-TR or BAT41-TAP | Single | BAT41 | Tape and reel/ammopack | | |

| 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) | $t_p < 1 \text{ s, } \delta < 0.5$ | 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 | Valid provided that electrodes are kept at ambient temperature | R _{thJA} | 300 | K/W | |
| Junction temperature | | Tj | 125 | °C | |
| Ambient operating temperature range | | T _{amb} | -65 to +125 | °C | |
| Storage temperature range | | T _{sta} | -65 to +150 | °C | |

| ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified) | | | | | | |
|--|--|-------------------|------|------|------|------|
| PARAMETER | TEST CONDITION | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Reverse breakdown voltage (1) | I _R = 100 μA | V _(BR) | 100 | 110 | | V |
| Leakage current (1) | $V_R = 50 \text{ V}, T_j = 25 ^{\circ}\text{C}$ | I _R | | | 100 | nA |
| Leakage current (**) | $V_R = 50 \text{ V}, T_j = 100 ^{\circ}\text{C}$ | I _R | | | 20 | μΑ |
| Forward voltage (1) | I _F = 1 mA | V_{F} | | 400 | 450 | mV |
| Forward voltage (**) | $I_F = 200 \text{ mA}$ | V_{F} | | | 1000 | mV |
| Diode capacitance | $V_R = 1 V, f = 1 MHz$ | C_D | | 2 | | pF |

Note

⁽¹⁾ Pulse test, $t_p = 300 \mu s$



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

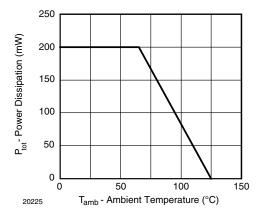


Fig. 1 - Admissible Power Dissipation vs. Ambient Temperature

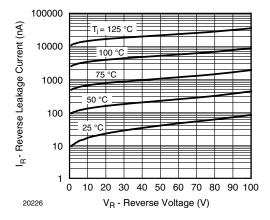


Fig. 2 - Typical Reverse Characteristics

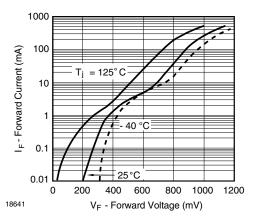


Fig. 3 - Typical Forward Characteristics

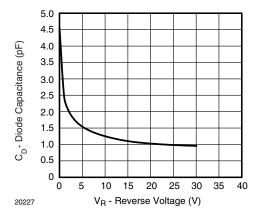
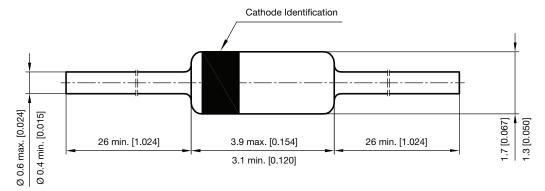


Fig. 4 - Typical Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): DO-35 (DO-204AH)



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Vishay

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