

### SMALL SIGNAL SCHOTTKY DIODE

**VOLTAGE : 40 V**

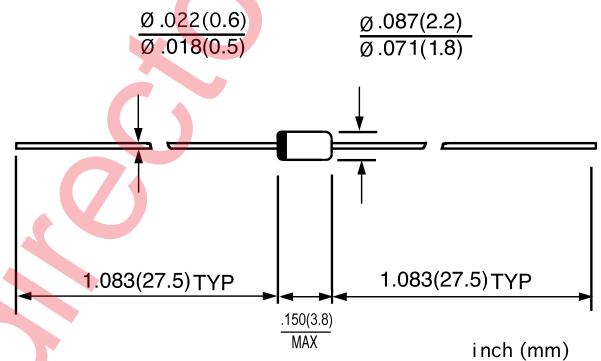
#### FEATURES

For general purpose applications  
 These diodes feature very low turn-on voltage and fast switching. These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges.  
 This diode is also available in the Mini-MELF

#### MECHANICAL DATA

Case: DO-35, glass case  
 Polarity: Color band denotes cathode  
 Weight: 0.005 ounces, 0.13 grams

DO - 35



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

#### MAXIMUM RATINGS

|  |                 | BAT48             | UNITS |
|--|-----------------|-------------------|-------|
| Peak reverse voltage                       | $V_R$           | 40                | V     |
| Forward continuous current                 | $I_F$           | 350 <sup>1)</sup> | m A   |
| Surge forward current at $t_p < 10$ ms     | $I_{FSM}$       | 7.5 <sup>1)</sup> | A     |
| Power dissipation                          | $P_{tot}$       | 330 <sup>1)</sup> | mW    |
| Thermal resistance junction to ambient air | $R_{\theta JA}$ | 300 <sup>1)</sup> | /W    |
| Junction temperature                       | $T_j$           | -55 --- + 125     |       |
| Storage temperature range                  | $T_{STG}$       | -55 --- + 150     |       |

<sup>1)</sup>Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature.

## ELECTRICAL CHARACTERISTICS

|   |             | MIN                        | TYP                        | MAX  | UNITS         |
|---|-------------|----------------------------|----------------------------|--|---------------|
| Reverse breakover voltage<br>at $I_R=100\mu\text{A}$  | $V_{(BR)R}$ | 40                         | -                          | -  | V             |
| Forward voltage pulse test $t_p < 300\mu\text{s}, \delta < 2\%$<br>@ $I_F=0.1\text{mA}$<br>@ $I_F=1.0\text{mA}$<br>@ $I_F=10\text{mA}$<br>@ $I_F=50\text{mA}$<br>@ $I_F=200\text{mA}$<br>@ $I_F=500\text{mA}$               | $V_F$       | -<br>-<br>-<br>-<br>-<br>- | -<br>-<br>-<br>-<br>-<br>- | 0.25<br>0.30<br>0.40<br>0.50<br>0.75<br>0.90 | V             |
| Leakage current pulse test $t_p < 300\mu\text{s}, \delta < 2\%$<br>@ $V_R=10\text{V}$<br>@ $V_R=10\text{V}, T_J=60$<br>@ $V_R=20\text{V}$<br>@ $V_R=20\text{V}, T_J=60$<br>@ $V_R=40\text{V}$<br>@ $V_R=40\text{V}, T_J=60$ | $I_R$       | -<br>-<br>-<br>-<br>-<br>- | -<br>-<br>-<br>-<br>-<br>- | 2.0<br>15<br>5.0<br>25<br>25<br>50           | $\mu\text{A}$ |
| Junction capacitance at $V_R=1\text{V}$ $f=1\text{MHz}$   | $C_J$       | -                          | 12                         | -  | pF            |

<sup>1</sup>Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature(DO-35).

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