

# Schottky Barrier Diode

## Features

1. High reliability
2. Very low forward voltage
3. Small surface mounting type

## Applications

Applications where a very low forward voltage is required

## Absolute Maximum Ratings

$T_j=25^{\circ}\text{C}$

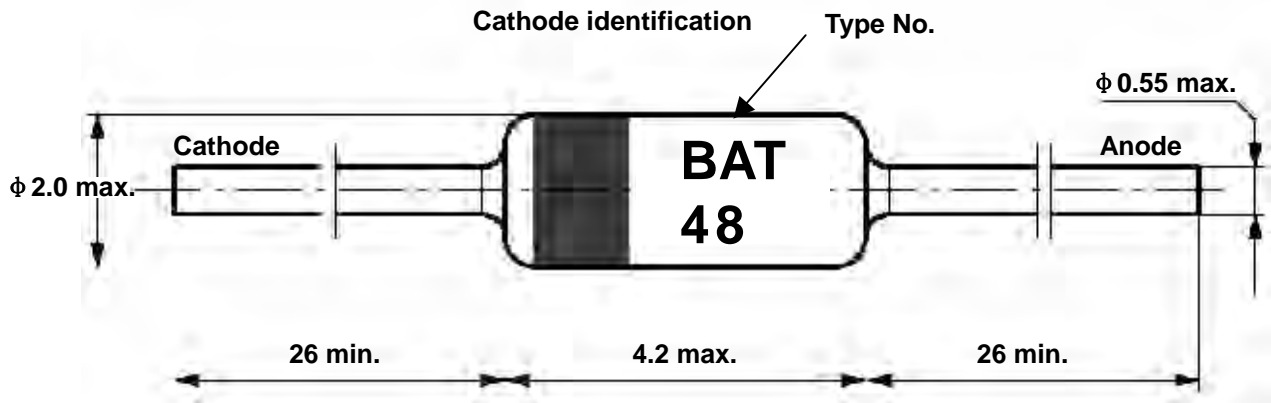
| Parameter                           | Test Conditions                                       | Symbol    | Value    | Unit               |
|-------------------------------------|---|-----------|----------|--------------------|
| Repetitive peak reverse voltage     |   | $V_{RRM}$ | 40       | V                  |
| Forward continuous current          | $T_{amb}=25^{\circ}\text{C}$                          | $I_F$     | 350      | mA                 |
| Repetitive peak forward current     | $T_{amb}=25^{\circ}\text{C}$ , $t_p \leq 1\text{ s}$  | $I_{FRM}$ | 1        | A                  |
| Surge forward current               | $t_p \leq 10\text{ms}$ , $T_{amb}=25^{\circ}\text{C}$ | $I_{FSM}$ | 7.5      | A                  |
| Power dissipation                   | $T_{amb}=65^{\circ}\text{C}$                          | $P_{tot}$ | 330      | mW                 |
| Maximum junction temperature        |   | $T_j$     | 125      | $^{\circ}\text{C}$ |
| Ambient operating temperature range |   | $T_A$     | -65~+125 | $^{\circ}\text{C}$ |
| Storage temperature range           |   | $T_{stg}$ | -65~+150 | $^{\circ}\text{C}$ |

## Maximum Thermal Resistance

$T_j=25^{\circ}\text{C}$

| Parameter        | Test Conditions             | Symbol     | Value | Unit                        |
|------------------|-----------------------------|------------|-------|-----------------------------|
| Junction ambient | on PC board 50mm×50mm×1.6mm | $R_{thJA}$ | 300   | $^{\circ}\text{C}/\text{W}$ |

### Dimensions in mm



Standard Glass Case  
JEDEC DO 35

**Characteristics** ( $T_j=25^\circ\text{C}$  unless otherwise specified)

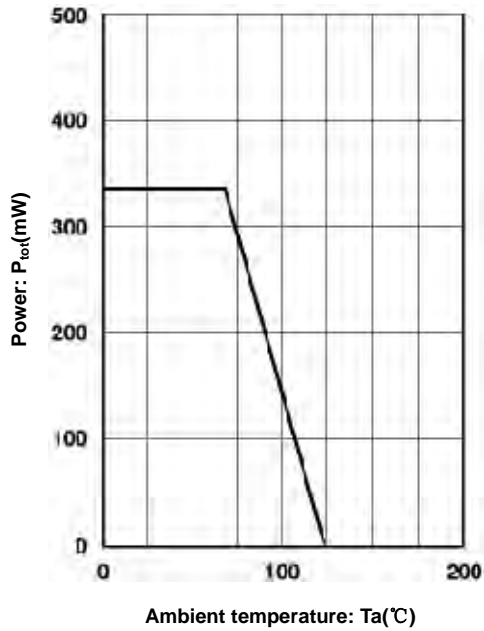


Figure 1. Admissible power dissipation vs. ambient temperature

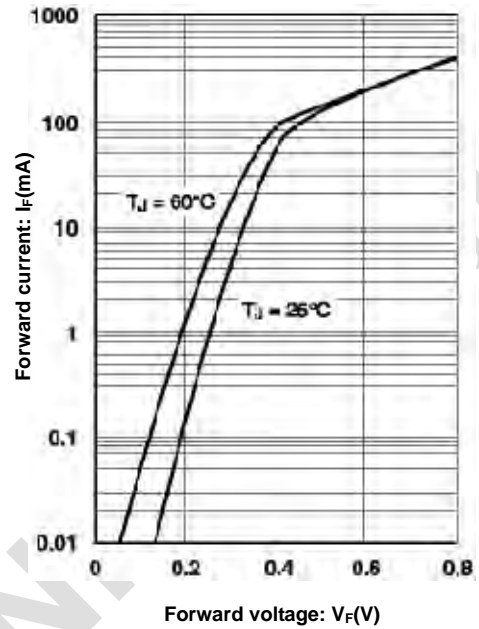


Figure 2. Forward characteristics

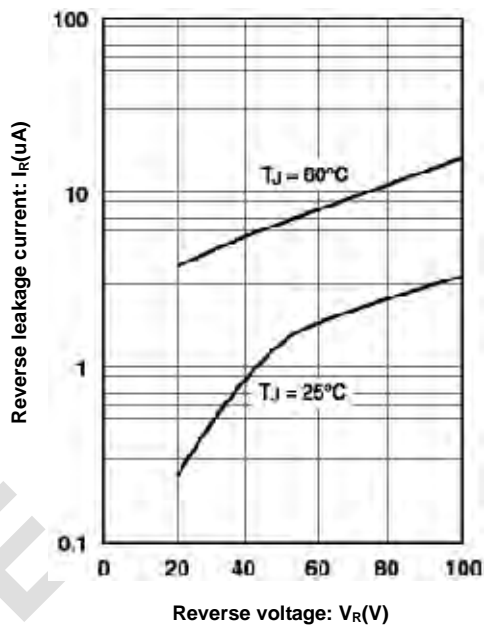


Figure 3. Typical reverse characteristics

## Electrical Characteristics

T<sub>j</sub>=25°C

| Parameter                                     | Symbol             | Test Conditions                           | Min | Typ | Max  | Unit |
|---|--------------------|---|-----|-----|------|------|
| Reverse breakdown voltage                     | V <sub>(BR)R</sub> | I <sub>R</sub> =10 μA (pulsed)            | 40  | -   | -    | V    |
| Leakage Current<br>Pulse test tp<300 μs, δ<2% | I <sub>R</sub>     | V <sub>R</sub> =10V                       | -   | -   | 2    | μA   |
|   |                    | V <sub>R</sub> =10V, T <sub>j</sub> =60°C | -   | -   | 15   | μA   |
|   |                    | V <sub>R</sub> =20V                       | -   | -   | 5    | μA   |
|   |                    | V <sub>R</sub> =20V, T <sub>j</sub> =60°C | -   | -   | 25   | μA   |
|   |                    | V <sub>R</sub> =40V                       | -   | -   | 25   | μA   |
|   |                    | V <sub>R</sub> =40V, T <sub>j</sub> =60°C | -   | -   | 50   | μA   |
| Forward voltage<br>Pulse test tp<300 μs, δ<2% | V <sub>F</sub>     | I <sub>F</sub> =0.1mA                     | -   | -   | 0.25 | V    |
|   |                    | I <sub>F</sub> =1mA                       | -   | -   | 0.30 | V    |
|   |                    | I <sub>F</sub> =10mA                      | -   | -   | 0.40 | V    |
|   |                    | I <sub>F</sub> =50mA                      | -   | -   | 0.50 | V    |
|   |                    | I <sub>F</sub> =200mA                     | -   | -   | 0.75 | V    |
|   |                    | I <sub>F</sub> =500mA                     | -   | -   | 0.90 | V    |
| Capacitance                                   | C <sub>tot</sub>   | V <sub>R</sub> =1V, f=1MHz                | -   | 12  | -    | pF   |