

## Axial lead diode

### Schottky barrier rectifiers diodes

#### SB 220...SB 2100

**Forward Current: 2 A**

**Reverse Voltage: 20 to 100 V**

### Features

- Max. solder temperature: 260°C
- Plastic material has UL classification 94V-0

### Mechanical Data

- Plastic case DO-15 / DO-204AC
- Weight approx.: 0,4 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 4000 pieces per ammo

1) Valid, if leads are kept at ambient temperature at a distance of 10 mm from case

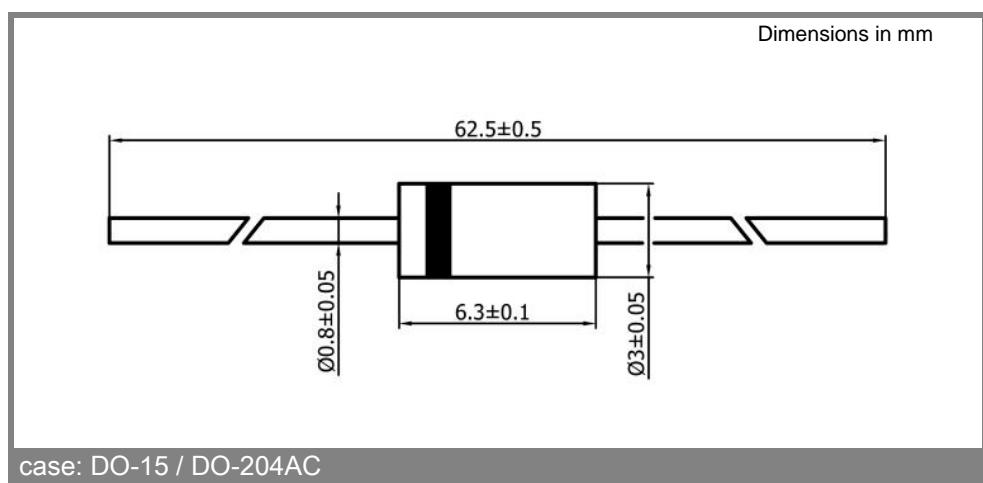
2)  $I_F = 2 \text{ A}$ ;  $T_j = 25^\circ\text{C}$

3)  $T_A = 25^\circ\text{C}$

| Type    | Repetitive peak reverse voltage<br>$V_{RRM}$<br>V | Surge peak reverse voltage<br>$V_{RSM}$<br>V | Max. reverse recovery time<br>$I_F = -A$<br>$I_R = -A$<br>$I_{RR} = -A$<br>$t_{rr}$<br>ns | Max. forward voltage<br>$V_F^2)$ |
|---------|---|--|---|----------------------------------|
| SB 220  | 20  | 20   | -   | 0,50                             |
| SB 230  | 30  | 30   | -   | 0,50                             |
| SB 240  | 40  | 40   | -   | 0,50                             |
| SB 250  | 50  | 50   | -   | 0,70                             |
| SB 260  | 60  | 60   | -   | 0,70                             |
| SB 290  | 90  | 90   | -   | 0,79                             |
| SB 2100 | 100   | 100  | -   | 0,79                             |

| Absolute Maximum Ratings |  | $T_c = 25^\circ\text{C}$ , unless otherwise specified |                  |
|--------------------------|--|---|------------------|
| Symbol                   | Conditions   | Values  | Units            |
| $I_{FAV}$                | Max. averaged fwd. current, R-load, $T_A = 50^\circ\text{C}$ <sup>1)</sup> | 2   | A                |
| $I_{FRM}$                | Repetitive peak forward current $f > 15 \text{ Hz}^1)$                     | 12  | A                |
| $I_{FSM}$                | Peak forward surge current 50 Hz half sinus-wave <sup>3)</sup>             | 50  | A                |
| $i^2t$                   | Rating for fusing, $t < 10 \text{ ms}$ <sup>3)</sup>                       | 12,5  | A <sup>2</sup> s |
| $R_{thA}$                | Max. thermal resistance junction to ambient <sup>1)</sup>                  | 45  | K/W              |
| $R_{thT}$                | Max. thermal resistance junction to terminals <sup>1)</sup>                | 15  | K/W              |
| $T_j$                    | Operating junction temperature   | -50...+150  | °C               |
| $T_s$                    | Storage temperature  | -50...+175  | °C               |

| Characteristics |   | $T_c = 25^\circ\text{C}$ , unless otherwise specified |       |
|-----------------|---|---|-------|
| Symbol          | Conditions  | Values  | Units |
| $I_R$           | Maximum leakage current, $T_j = 25^\circ\text{C}$ ; $V_R = V_{RRM}$   | <0,5  | mA    |
|                 | $T_j = 100^\circ\text{C}$ ; $V_R = V_{RRM}$   | <5,0  | mA    |
| $C_J$           | Typical junction capacitance<br>(at MHz and applied reverse voltage of V)   | -   | pF    |
| $Q_{rr}$        | Reverse recovery charge<br>( $U_R = V$ ; $I_F = A$ ; $dI_F/dt = A/\text{ms}$ )  | -   | μC    |
| $E_{RSM}$       | Non repetitive peak reverse avalanche energy<br>( $I_R = \text{mA}$ ; $T_j = {}^\circ\text{C}$ ; inductive load switched off) | -   | mJ    |



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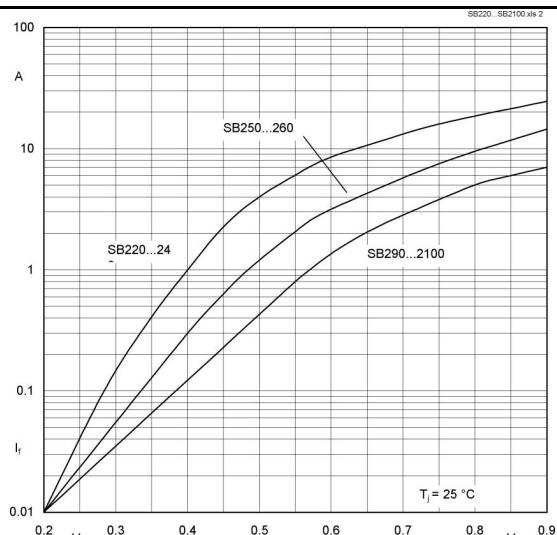


Fig. 1 Forward characteristic ( typical values )

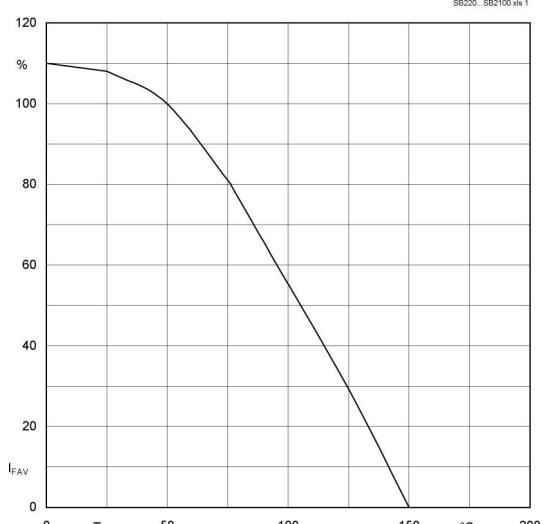


Fig. 2 Rated forward current vs. ambient temperature <sup>1)</sup>