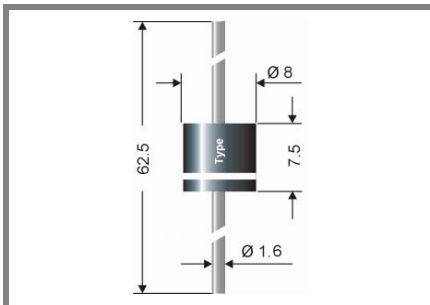


# SBH 1520TL...SBH 1560TL



## Axial lead diode

## High temperature schottky barrier diodes

### SBH 1520TL...SBH 1560TL

**Forward Current: 15 A**

**Reverse Voltage: 20 to 60 V**

Preliminary Data

### Features

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

### Mechanical Data

- Plastic case: 8 x 7,5 [mm]
- Weight approx.: 2,0 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 500 pieces per ammo or 1000 pieces per reel

- 1) Valid, if leads are kept at  $T_A$  at a distance of 0 mm from case
- 2)  $I_F = 5 A$ ,  $V_F < 0,56 V$  @  $I_F = 15 A$  (SBH1520TL...45TL),  $T_A = 25 °C$
- 3)  $T_A = 25 °C$
- 4) Thermal resistance from junction to lead/terminal at a distance 0 mm from case
- 5) Max. junction temperature  $T_j \leq 200 °C$  in reverse mode  $V_R \leq 50\% V_{RRM}$  and in bypass mode / DC forward mode

| 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>$V_F^{2)}$ |
|------------|---|--|--|------------------------------------|
| SBH 1520TL | 20  | 20   | -  | 0,48                               |
| SBH 1530TL | 30  | 30   | -  | 0,48                               |
| SBH 1540TL | 40  | 40   | -  | 0,48                               |
| SBH 1545TL | 45  | 45   | -  | 0,48                               |
| SBH 1550TL | 50  | 50   | -  | 0,6                                |
| SBH 1560TL | 60  | 60   | -  | 0,6                                |

### Absolute Maximum Ratings

$T_A = 25 °C$ , unless otherwise specified

| Symbol    | Conditions  | Values   | Units            |
|-----------|---|--|------------------|
| $I_{FAV}$ | Max. averaged fwd. current, R-load, $T_A = 75 °C$ <sup>1)</sup> | 15   | A                |
| $I_{FRM}$ | Repetitive peak forward current $f > 15 Hz$ <sup>1)</sup>       | 60   | A                |
| $I_{FSM}$ | Peak forward surge current 50 Hz half sinus-wave <sup>3)</sup>  | 380  | A                |
| $i^2t$    | Rating for fusing, $t < 10 ms$ <sup>3)</sup>                    | 720  | A <sup>2</sup> s |
| $R_{thA}$ | Max. thermal resistance junction to ambient <sup>1)</sup>       |  | K/W              |
| $R_{thL}$ | Max. thermal resistance junction to terminals <sup>4)</sup>     | 1,8  | K/W              |
| $T_j$     | Operating junction temperature                                  | - 50 ... + 185 ( $T_j \leq 200 °C$ in reverse mode $V_R \leq 50\% V_{RRM}$ <sup>5)</sup> ) | °C               |
| $T_s$     | Storage temperature   | - 50 ... + 200   | °C               |

### Characteristics

$T_A = 25 °C$ , unless otherwise specified

| Symbol    | Conditions  | Values | Units   |
|-----------|---|--------|---------|
| $I_R$     | Maximum leakage current, $T_j = 25 °C$ ; $V_R = V_{RRM}$  | <50    | $\mu A$ |
|           | $T_j = 100 °C$ ; $V_R = V_{RRM}$  | <5     | mA      |
| $C_j$     | Typical junction capacitance (at MHz and applied reverse voltage of V)                                | -      | pF      |
| $Q_{rr}$  | Reverse recovery charge ( $U_R = V$ ; $I_F = A$ ; $dI_F/dt = A/ms$ )                                  | -      | $\mu C$ |
| $E_{RSM}$ | Non repetitive peak reverse avalanche energy ( $I_R = mA$ ; $T_j = °C$ ; inductive load switched off) | -      | mJ      |

