

## Axial lead diode

### Fast silicon rectifier diodes

BA 157...BA 159

Forward Current: 1 A

Reverse Voltage: 400 to 1000 V

### Features

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

### Mechanical Data

- Plastic case DO-41 / DO-204AL
- Weight approx.: 0.4 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 5000 pieces per ammo

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

2)  $I_F = 1 \text{ A}$ ,  $T_j = 25 \text{ °C}$

3)  $T_A = 25 \text{ °C}$

| Type   | Repetitive peak reverse voltage<br>$V_{RRM}$<br>V | Surge peak reverse voltage<br>$V_{RSM}$<br>V | Max. reverse recovery time<br>$I_F = 0,5 \text{ A}$<br>$I_R = 1 \text{ A}$<br>$I_{RR} = 0,25 \text{ A}$<br>$t_{rr}$<br>ns | Max. forward voltage<br>$V_F^{2)}$ |
|--------|---|--|---|------------------------------------|
| BA 157 | 400   | 400  | 300   | 1,3                                |
| BA 158 | 600   | 600  | 300   | 1,3                                |
| BA 159 | 1000  | 1000   | 300   | 1,3                                |

### Absolute Maximum Ratings

$T_c = 25 \text{ °C}$ , unless otherwise specified

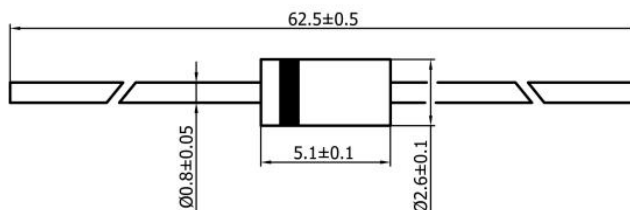
| Symbol    | Conditions   | Values     | Units            |
|-----------|--|------------|------------------|
| $I_{FAV}$ | Max. averaged fwd. current, R-load, $T_A = 50 \text{ °C}^1)$ | 1          | A                |
| $I_{FRM}$ | Repetitive peak forward current $f > 15 \text{ Hz}^1)$       | 10         | A                |
| $I_{FSM}$ | Peak forward surge current 50 Hz half sinus-wave $^3)$       | 35         | A                |
| $i^2t$    | Rating for fusing, $t < 10 \text{ ms}^3)$                    | 6          | A <sup>2</sup> s |
| $R_{thA}$ | Max. thermal resistance junction to ambient $^1)$            | 45         | K/W              |
| $R_{thT}$ | Max. thermal resistance junction to terminals $^1)$          | -          | K/W              |
| $T_j$     | Operating junction temperature                               | -50...+150 | °C               |
| $T_s$     | Storage temperature  | -50...+175 | °C               |

### Characteristics

$T_c = 25 \text{ °C}$ , unless otherwise specified

| Symbol    | Conditions  | Values | Units |
|-----------|---|--------|-------|
| $I_R$     | Maximum leakage current, $T_j = 25 \text{ °C}$ ; $V_R = V_{RRM}$  | <5     | μA    |
|           | $T_j = 125 \text{ °C}$ ; $V_R = V_{RRM}$  | <100   | μA    |
| $C_j$     | Typical junction capacitance (at MHz and applied reverse voltage of V)  | -      | pF    |
| $Q_{rr}$  | Reverse recovery charge ( $U_R = V$ ; $I_F = A$ ; $dI_F/dt = A/ms$ )  | -      | μC    |
| $E_{RSM}$ | Non repetitive peak reverse avalanche energy ( $I_R = \text{mA}$ ; $T_j = \text{°C}$ ; inductive load switched off) | -      | mJ    |

Dimensions in mm



case: DO-41 / DO-204AL

