



## Surface mount diode

## Schottky barrier rectifiers diodes

### SMS 220...SMS 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 Melf / DO-213AB
- Weight approx.: 0,12 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 5000 pieces per reel

1) Max. temperature of the terminals  $T_T = 100\text{ °C}$

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

3)  $T_A = 25\text{ °C}$

4) Mounted on P.C. board with 50 mm<sup>2</sup> copper pads at each terminal

| Type     | Polarity color band | Repetitive peak reverse voltage<br>$V_{RRM}$<br>V | Surge peak reverse voltage<br>$V_{RSM}$<br>V | Maximum forward voltage<br>$T_j = 25\text{ °C}$<br>$I_F = 2\text{ A}$<br>$V_F^{(2)}$<br>V | Maximum reverse recovery time<br>$I_F = -\text{A}$<br>$I_R = -\text{A}$<br>$I_{RR} = -\text{A}$<br>$t_{rr}$<br>ns |
|----------|---------------------|---|--|---|---|
| SMS 220  | -                   | 20  | 20   | 0,5   | -   |
| SMS 230  | -                   | 30  | 30   | 0,5   | -   |
| SMS 240  | -                   | 40  | 40   | 0,5   | -   |
| SMS 250  | -                   | 50  | 50   | 0,7   | -   |
| SMS 260  | -                   | 60  | 60   | 0,7   | -   |
| SMS 290  | -                   | 90  | 90   | 0,79  | -   |
| SMS 2100 | -                   | 100   | 100  | 0,79  | -   |

### Absolute Maximum Ratings $T_c = 25\text{ °C}$ , unless otherwise specified

| Symbol    | Conditions  | Values     | Units            |
|-----------|---|------------|------------------|
| $I_{FAV}$ | Max. averaged fwd. current, R-load, $T_T = 100\text{ °C}$   | 2          | A                |
| $I_{FRM}$ | Repetitive peak forward current $f > 15\text{ Hz}^1)$       | 12         | A                |
| $I_{FSM}$ | Peak fwd. surge current 50 Hz half sinus-wave <sup>3)</sup> | 50         | A                |
| $I^2t$    | Rating for fusing, $t < 10\text{ ms}^3)$                    | 12,5       | A <sup>2</sup> s |
| $R_{thA}$ | Max. thermal resistance junction to ambient <sup>4)</sup>   | 45         | K/W              |
| $R_{thT}$ | Max. thermal resistance junction to terminals               | 10         | K/W              |
| $T_j$     | Operating junction temperature                              | -50...+150 | °C               |
| $T_s$     | Storage temperature   | -50...+150 | °C               |

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

| Symbol    | Conditions  | Values | Units |
|-----------|---|--------|-------|
| $I_R$     | Maximum leakage current, $T_j = 25\text{ °C}$ ; $V_R = V_{RRM}$   | <0,5   | mA    |
|           | $T_j = 100\text{ °C}$ ; $V_R = V_{RRM}$   | <10,0  | mA    |
| $C_j$     | Typical junction capacitance<br>(at MHz and applied reverse voltage of V)                                       | -      | pF    |
| $Q_{rr}$  | Reverse recovery charge<br>( $U_R = V$ ; $I_F = A$ ; $dI_F/dt = A/ms$ )   | -      | μC    |
| $E_{RSM}$ | Non repetitive peak reverse avalanche energy<br>( $I_R = mA$ ; $T_j = \text{°C}$ ; inductive load switched off) | -      | mJ    |



