



Surface mount diode

Schottky barrier rectifiers diodes

SGL 1-20...SGL 1-100

Forward Current: 1 A

Reverse Voltage: 20 to 100 V

Features

- Max. solder temperature: 260°C
- Plastic material has UL classification 94V-0
- One gray ring denotes "cathode" and "Schottky-Rectifier"
- The type numbers are noted only on the label on the reel

Mechanical Data

- Plastic case MiniMelf / DO-213AA / SOD80
- Weight approx.: 0,04 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 2500, 10000 pieces per reel

- 1) Max. temperature of the terminals $T_T = 100\text{ °C}$
- 2) $I_F = 1\text{ A}$, $T_j = 25\text{ °C}$
- 3) $T_A = 25\text{ °C}$
- 4) Mounted on P.C. board with 25 mm² copper pads at each terminal

| Type | Polarity color band | Repetitive peak reverse voltage V_{RRM} V | Surge peak reverse voltage V_{RSM} V | Maximum forward voltage $T_j = 25\text{ °C}$ $I_F = 1\text{ A}$ $V_F^{(2)}$ V | Maximum reverse recovery time $I_F = -\text{A}$ $I_R = -\text{A}$ $I_{RR} = -\text{A}$ t_{rr} ns |
|-----------|---------------------|---|--|---|---|
| SGL 1-20 | - | 20 | 20 | 0,5 | - |
| SGL 1-30 | - | 30 | 30 | 0,5 | - |
| SGL 1-40 | - | 40 | 40 | 0,5 | - |
| SGL 1-50 | - | 50 | 50 | 0,67 | - |
| SGL 1-60 | - | 60 | 60 | 0,67 | - |
| SGL 1-90 | - | 90 | 90 | 0,72 | - |
| SGL 1-100 | - | 100 | 100 | 0,72 | - |

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

| Symbol | Conditions | Values | Units |
|-----------|---|------------|------------------|
| I_{FAV} | Max. averaged fwd. current, R-load, $T_T = 75\text{ °C}$ | 1 | A |
| I_{FRM} | Repetitive peak forward current $f > 15\text{ Hz}^1)$ | 10 | A |
| I_{FSM} | Peak fwd. surge current 50 Hz half sinus-wave ³⁾ | 20 | A |
| I^2t | Rating for fusing, $t < \text{ms}^3)$ | | A ² s |
| R_{thA} | Max. thermal resistance junction to ambient ⁴⁾ | 150 | K/W |
| R_{thT} | Max. thermal resistance junction to terminals | 60 | 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 |
| | $T_j = 100\text{ °C}$; $V_R = V_{RRM}$ | 5,0 | mA |
| C_j | Typical junction capacitance (at 1 MHz and applied reverse voltage of 6 V) | 40 | pF |
| Q_{rr} | Reverse recovery charge ($U_R = V$; $I_F = A$; $dI_F/dt = A/\text{ms}$) | - | µC |
| E_{RSM} | Non repetitive peak reverse avalanche energy ($I_R = \text{mA}$; $T_j = \text{°C}$; inductive load switched off) | - | mJ |



