



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



