

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 $T_T = 100^\circ\text{C}$

2) $I_F = 1 \text{ A}$, $T_J = 25^\circ\text{C}$

3) $T_A = 25^\circ\text{C}$

4) Mounted on P.C. board with 25 mm² copper pads at each terminal

Type	Polarity color band	Repetitive peak reverse voltage	Surge peak reverse voltage	Maximum forward voltage $T_J = 25^\circ\text{C}$ $I_F = 1 \text{ A}$	Maximum reverse recovery time $I_F = -1 \text{ A}$ $I_R = -1 \text{ A}$ $I_{RR} = -1 \text{ A}$ t_{rr} ns
		V_{RRM} V	V_{RSM} V	$V_F^{(2)}$ V	
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

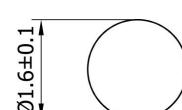
$T_A = 25^\circ\text{C}$, unless otherwise specified

Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, $T_T = 75^\circ\text{C}$	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_{Ft}	Rating for fusing, $t < 10 \text{ ms}^3)$	2	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

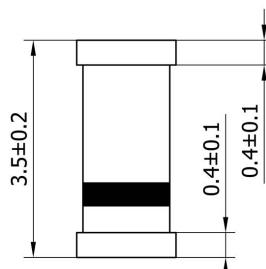
Characteristics

$T_A = 25^\circ\text{C}$, unless otherwise specified

Symbol	Conditions	Values	Units
I_R	Maximum leakage current, $T_j = 25^\circ\text{C}$; $V_R = V_{RRM}$ $T_j = 100^\circ\text{C}$; $V_R = V_{RRM}$	0,5 5,0	mA 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 ($I_R = \text{mA}$; $T_j = {}^\circ\text{C}$; inductive load switched off)	-	mJ



Dimensions in mm



case: MiniMelf / SOD80

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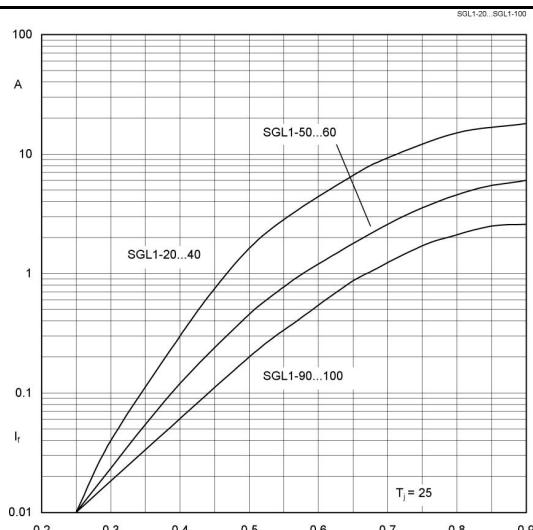


Fig. 1 Forward characteristic (typical values)

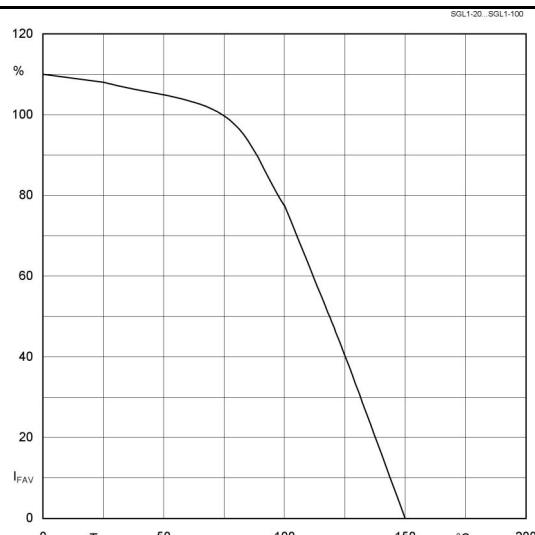


Fig. 2 Rated forward current vs. temp. of the terminals ⁴⁾