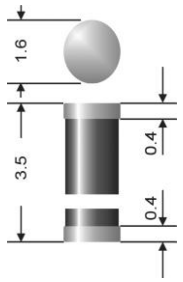
SGL 1-20 ... SGL 1-100



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 lable 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

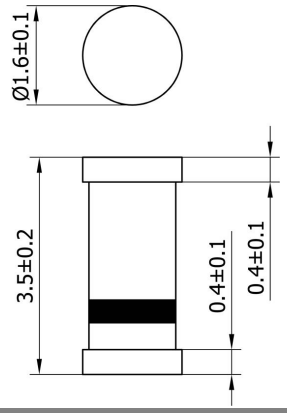
1) Max. temperature of the terminals T_T = 100 °C
2) I_F = 1 A, T_J = 25 °C
3) T_A = 25 °C
4) Mounted on P.C. board with 25 mm² copper pads at each terminal

Type	Polarity color band	Repetitive peak reverse voltage V_{RRM} V	Surge peak reverse voltage V_{RSM} V	Maximum forward voltage T_j = 25 °C I_F = 1 A V_F 2) V	Maximum reverse recovery time I_F = - A I_R = - A I_{RR} = - 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_A = 25 °C, unless otherwise specified	
Symbol	**Conditions**	**Values**	**Units**
I_{FAV}	Max. averaged fwd. current, R-load, T_T = 75 °C	1	A
I_{FRM}	Repetitive peak forward current f > 15 Hz[1])	10	A
I_{FSM}	Peak fwd. surge current 50 Hz half sinus-wave [3])	20	A
I^2t	Rating for fusing, t < 10 ms [3])	2	A^2s
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 °C, unless otherwise specified	
Symbol	**Conditions**	**Values**	**Units**
I_R	Maximum leakage current, T_j = 25 °C; $V_R = V_{RRM}$	0,5	mA
	T_j = 100 °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/ms)	-	µC
E_{RSM}	Non repetitive peak reverse avalanche energy (I_R = mA; T_j = °C; inductive load switched off)	-	mJ

Dimensions in mm



case: MiniMelf / SOD80

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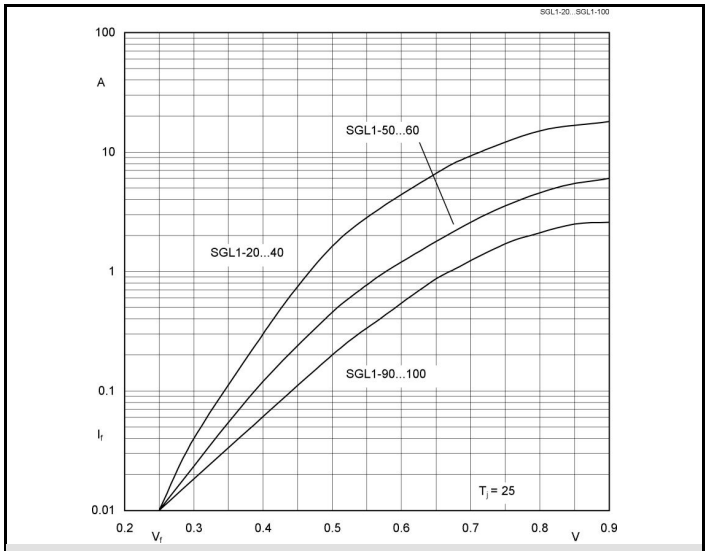

Fig. 1 Forward characteristic (typical values)

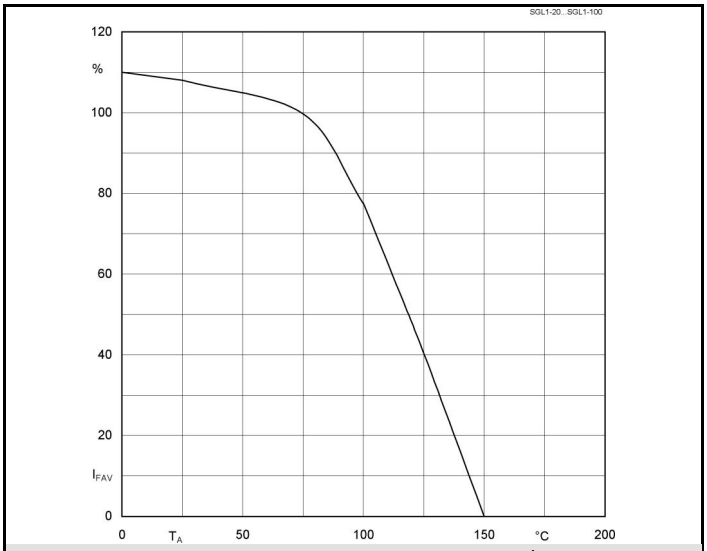

Fig. 2 Rated forward current vs. temp. of the terminals [4])

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