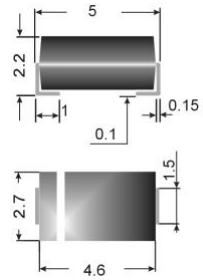
S1A...S1M



Surface mount diode

Standard silicon rectifier diodes

S1A...S1M

Forward Current: 1 A

Reverse Voltage: 50 to 1000 V

Features

- Max. solder temperature: 260°C
- Plastic material has UL classification 94V-0

Mechanical Data

- Plastic case SMA / DO-214AC
- Weight approx.: 0,07 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 7500 pieces per reel

1) Max. temperature of the terminals T_T = 100 °C
2) I_F = 1 A, Tj = 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 = 1,0 A V_F 2) V	Maximum reverse recovery time I_F = - A I_R = - A I_{RR} = - A t_{rr} ns
S1A	-	50	50	1,1	-
S1B	-	100	100	1,1	-
S1D	-	200	200	1,1	-
S1G	-	400	400	1,1	-
S1J	-	600	600	1,1	-
S1K	-	800	800	1,1	-
S1M	-	1000	1000	1,1	-

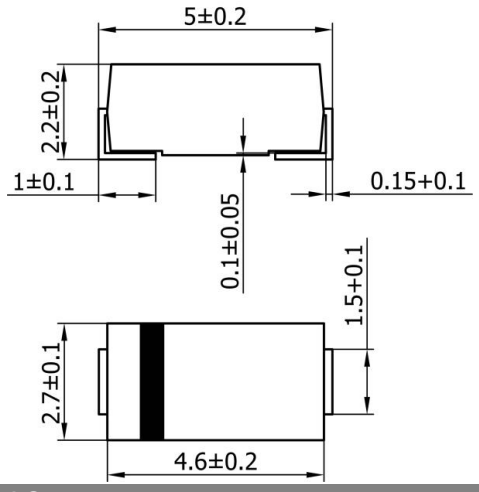
Absolute Maximum Ratings T_c = 25 °C, unless otherwise specified

Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, T_T = 100 °C	1	A
I_{FRM}	Repetitive peak forward current f > 15 Hz[1])	6	A
I_{FSM}	Peak fwd. surge current 50 Hz half sinus-wave 3)	30	A
I^2t	Rating for fusing, t < 10 ms 3)	4,5	A²s
R_{thA}	Max. thermal resistance junction to ambient 4)	70	K/W
R_{thT}	Max. thermal resistance junction to terminals	30	K/W
T_j	Operating junction temperature	- 50 ... + 150	°C
T_s	Storage temperature	- 50 ... + 150	°C

Characteristics T_c = 25 °C, unless otherwise specified

Symbol	Conditions	Values	Units
I_R	Maximum leakage current, T_j = 25 °C; V_R = V_{RRM}	<5	µA
	T_j = 100 °C; V_R = V_{RRM}	<50	µA
C_J	Typical junction capacitance (at MHz and applied reverse voltage of V)	-	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: SMA / DO-214AC

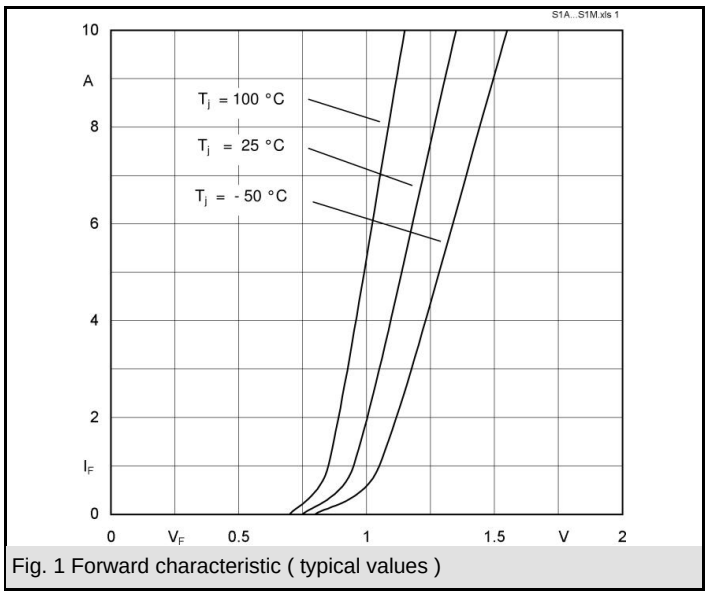


Fig. 1 Forward characteristic (typical values)

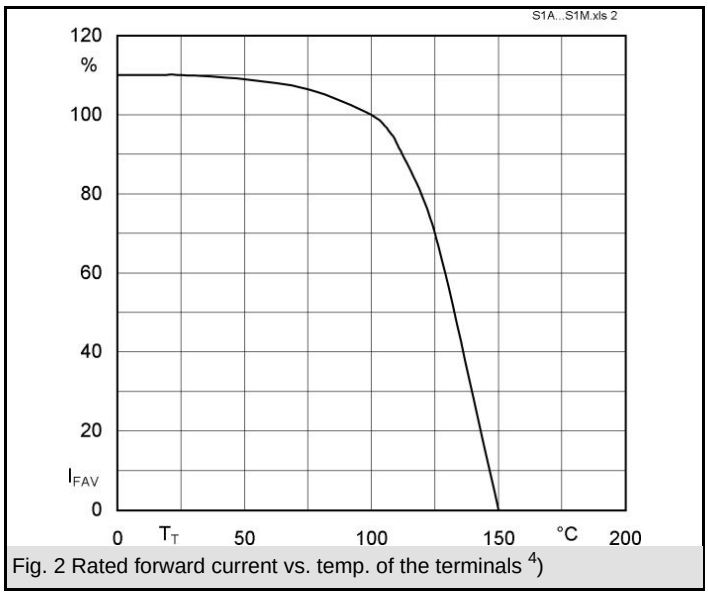


Fig. 2 Rated forward current vs. temp. of the terminals [4])

