

## Surface mount diode

### Standard silicon rectifier diodes

#### S1 T ... S1 Y

**Forward Current: 1 A**

**Reverse Voltage: 1300 to 2000 V**

#### Features

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

#### Mechanical Data

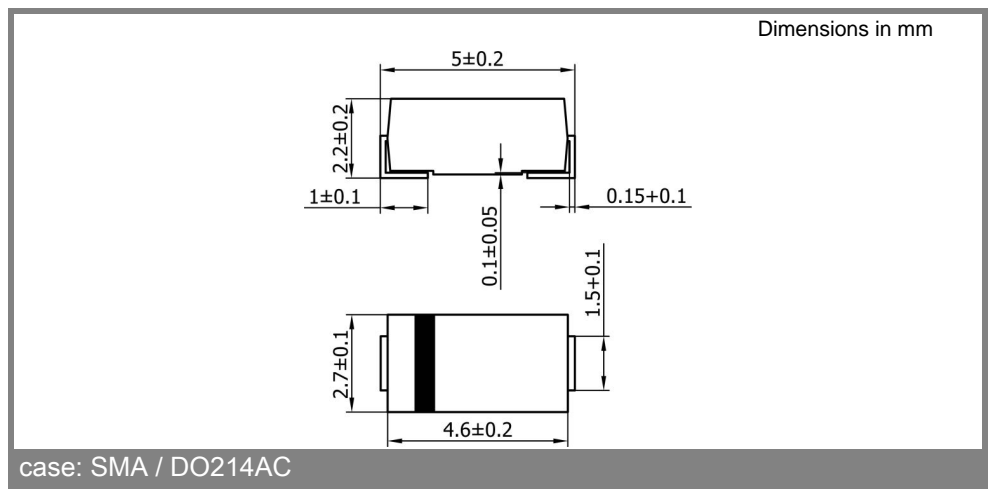
- Plastic case: SMA / DO-214AC
- Weight approx.: 0,07 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 7500 pieces per reel

- 1) Max. temperature of the terminals  $T_T = 100\text{ °C}$
- 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 mm<sup>2</sup> copper pads at each terminal

Type	Polarity color band	Repetitive peak reverse voltage	Surge peak reverse voltage	Maximum forward voltage $T_j = 25\text{ °C}$ $I_F = 1\text{ A}$	Maximum reverse recovery time $I_F = -\text{A}$ $I_R = -\text{A}$ $I_{RR} = -\text{A}$ $t_{rr}$ ns
		$V_{RRM}$ V	$V_{RSM}$ V	$V_F^{(2)}$ V	
S1 T	-	1300	1300	1,1	-
S1 W	-	1600	1600	1,1	-
S1 X	-	1800	1800	1,1	-
S1 Y	-	2000	2000	1,1	-

Absolute Maximum Ratings		$T_A = 25\text{ °C}$ , unless otherwise specified	
Symbol	Conditions	Values	Units
$I_{FAV}$	Max. averaged fwd. current, R-load, $T_T = 100\text{ °C}$ <sup>1)</sup>	1	A
$I_{FRM}$	Repetitive peak forward current $f > 15\text{ Hz}$ <sup>1)</sup>	6	A
$I_{FSM}$	Peak fwd. surge current 50 Hz half sinus-wave <sup>3)</sup>	30	A
$I^2t$	Rating for fusing, $t < 10\text{ ms}$ <sup>3)</sup>	4,5	A <sup>2</sup> s
$R_{thA}$	Max. thermal resistance junction to ambient <sup>4)</sup>	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		$T_A = 25\text{ °C}$ , unless otherwise specified	
Symbol	Conditions	Values	Units
$I_R$	Maximum leakage current, $T_j = 25\text{ °C}$ ; $V_R = V_{RRM}$ $T_j = 100\text{ °C}$ ; $V_R = V_{RRM}$	<5 <50	$\mu\text{A}$ $\mu\text{A}$
$C_j$	Typical junction capacitance (at MHz and applied reverse voltage of V)	-	pF
$Q_{rr}$	Reverse recovery charge ( $U_R = V$ ; $I_F = A$ ; $dI_F/dt = A/ms$ )	-	$\mu\text{C}$
$E_{RSM}$	Non repetitive peak reverse avalanche energy ( $I_R = \text{mA}$ ; $T_j = \text{°C}$ ; inductive load switched off)	-	mJ



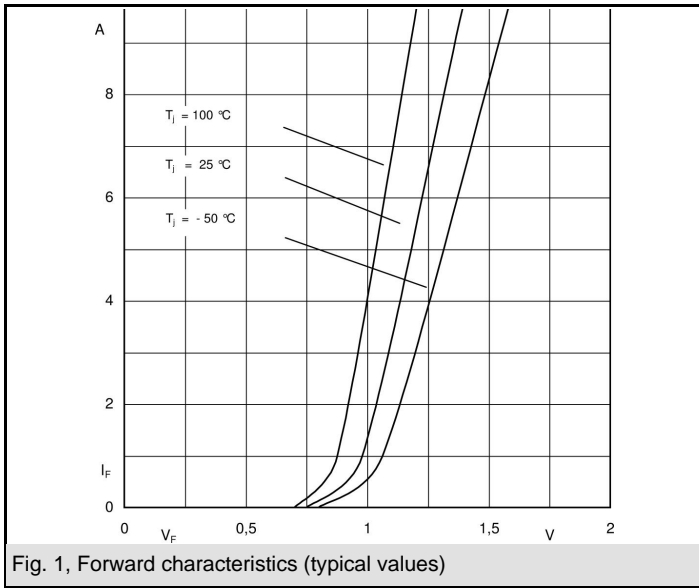


Fig. 1, Forward characteristics (typical values)

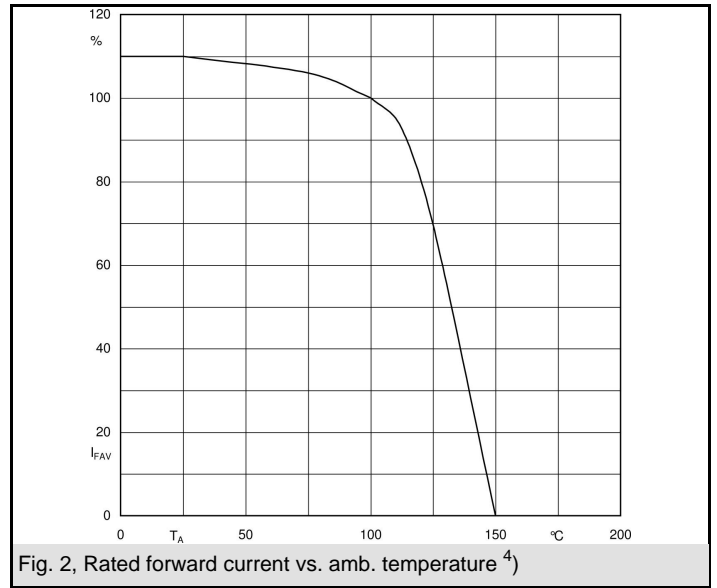


Fig. 2, Rated forward current vs. amb. temperature <sup>4)</sup>