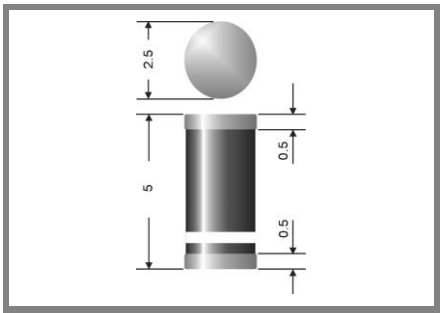
SM 513, SM 516, SM 518, SM 2000



Surface mount diode

Standard silicon rectifier diodes

SM 513, SM 516, SM 518, SM 2000

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 Melf / DO-213AB
- Weight approx. 0,12 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 5000 pieces per reel

1) Max. temperature of the terminals T_T = 75 °C
2) I_F = 1 A, Tj = 25 °C
3) T_A = 25 °C
4) Mounted on P.C. board with 25 mm^2 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
SM 513	-	1300	1300	1,1	-
SM 516	-	1600	1600	1,1	-
SM 518	-	1800	1800	1,1	-
SM 2000	-	2000	2000	1,1	-

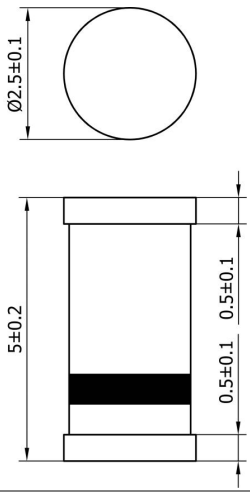
Absolute Maximum Ratings T_c = 25 °C, unless otherwise specified

Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, T_T = 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)	40	A
I^2t	Rating for fusing, t < 10 ms 3)	8	A²s
R_{thA}	Max. thermal resistance junction to ambient 4)	45	K/W
R_{thT}	Max. thermal resistance junction to terminals	10	K/W
T_j	Operating junction temperature	-50...+175	°C
T_s	Storage temperature	-50...+175	°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: Melf / DO-213AB

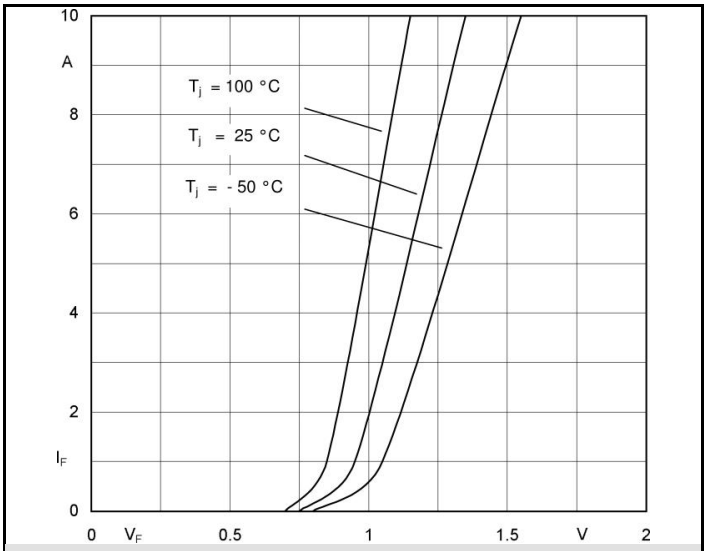


Fig. 1 Forward characteristics (typical values)

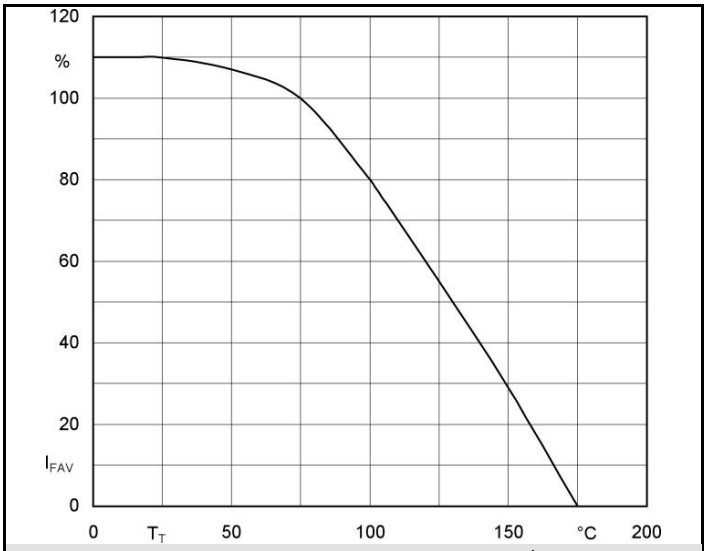


Fig. 2 Rated forward current vs. temp. of the terminals [4])

