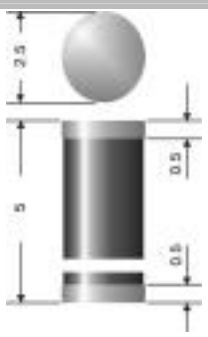
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SM 4001...SM 4007

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Surface mount diode

Standard silicon rectifier diodes

SM 4001...SM 4007

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 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 mm² copper pads at each terminal

Type	Polarity color band	Repetitive peak reverse voltage	Surge peak reverse voltage	Maximum forward voltage	Maximum reverse recovery time
				T_j = 25 °C	
				I_F = 1 A	I_F = - A
					I_R = - A
					I_{RR} = - A
		V_{RRM}	V_{RSM}	V_F [2]	t_{rr}
		V	V	V	ns
SM 4001	-	50	50	1,1	-
SM 4002	-	100	100	1,1	-
SM 4003	-	200	200	1,1	-
SM 4004	-	400	400	1,1	-
SM 4005	-	600	600	1,1	-
SM 4006	-	800	800	1,1	-
SM 4007	-	1000	1000	1,1	-

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

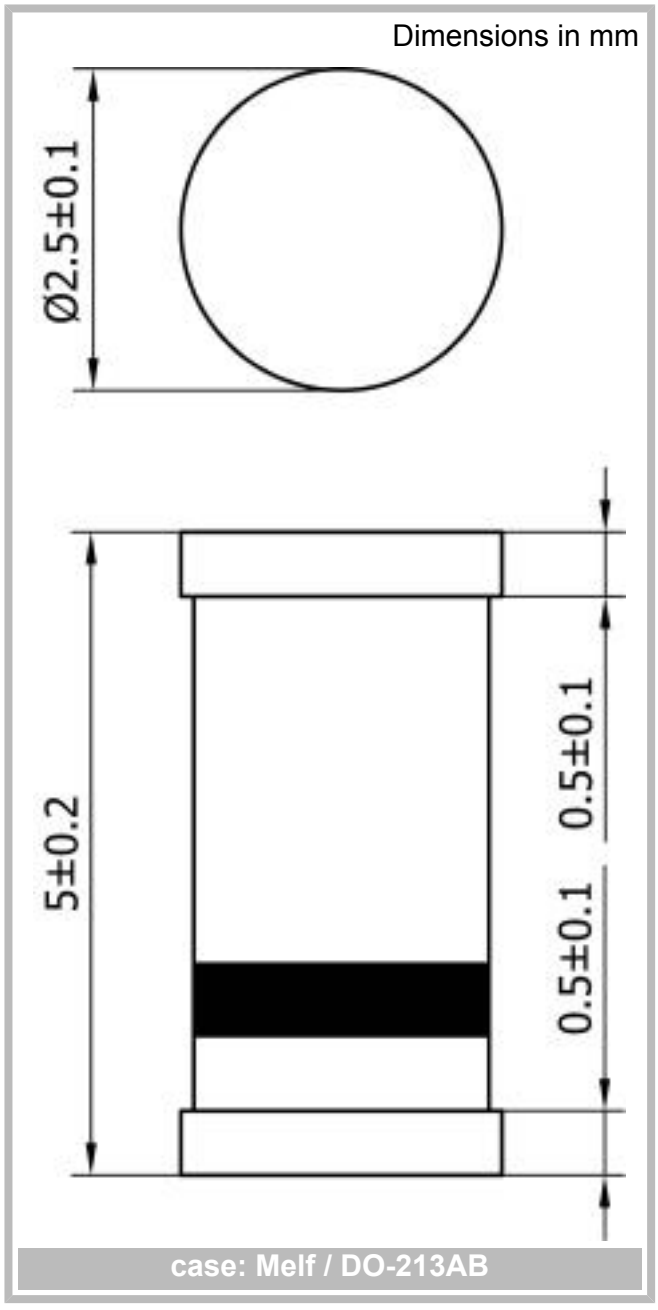
Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, T_T = 75 °C	1	A
I_{FRM}	Repetitive peak forward current f > 15 Hz [1])	10	A
I_{FSM}	Peak fwd. surge current 50 Hz half sinus-wave [3])	40	A
I^2t	Rating for fusing, t < 10 ms [3])	8	A^2s
R_{thA}	Max. thermal resistance junction 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

Cases / Circuits



Diagrams

diagramme/21/sm4001_01.tifFig. 1 Forward characteristics (typical values)
diagramme/21/sm4001_02.tifFig. 2 Rated forward current vs. temp. of the terminals

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