



## Surface mount diode

### Standard silicon rectifier diodes

#### SM 5059...SM 5063

**Forward Current: 2 A**

**Reverse Voltage: 200 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  $T_T = 50^\circ\text{C}$

2)  $I_F = 2\text{ A}$ ,  $T_j = 25^\circ\text{C}$

3)  $T_A = 25^\circ\text{C}$

4) Mounted on P.C. board with 50 mm<sup>2</sup> 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 $T_j = 25^\circ\text{C}$ $I_F = 2\text{ A}$ $V_F^{(2)}$ V	Maximum reverse recovery time $I_F = -\text{A}$ $I_R = -\text{A}$ $I_{RR} = -\text{A}$ $t_{rr}$ ns
SM 5059	-	200	200	1,1	-
SM 5060	-	400	400	1,1	-
SM 5061	-	600	600	1,1	-
SM 5062	-	800	800	1,1	-
SM 5063	-	1000	1000	1,1	-

#### Absolute Maximum Ratings

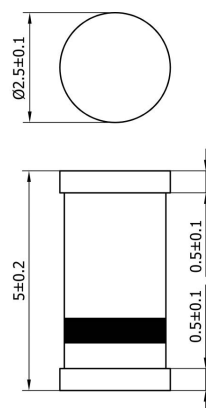
$T_A = 25^\circ\text{C}$ , unless otherwise specified

Symbol	Conditions	Values	Units
$I_{FAV}$	Max. averaged fwd. current, R-load, $T_T = 50^\circ\text{C}$	2	A
$I_{FRM}$	Repetitive peak forward current $f > 15\text{ Hz}^1)$	10	A
$I_{FSM}$	Peak fwd. surge current 50 Hz half sinus-wave <sup>3)</sup>	50	A
$I^2t$	Rating for fusing, $t < 10\text{ ms}^3)$	12,5	A <sup>2</sup> s
$R_{thA}$	Max. thermal resistance junction to ambient <sup>4)</sup>	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

$T_A = 25^\circ\text{C}$ , unless otherwise specified

Symbol	Conditions	Values	Units
$I_R$	Maximum leakage current, $T_j = 25^\circ\text{C}$ ; $V_R = V_{RRM}$ $T_j = 165^\circ\text{C}$ ; $V_R = V_{RRM}$	<5 <300	$\mu\text{A}$ $\mu\text{A}$
$C_j$	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 ( $I_R = \text{mA}$ ; $T_j = ^\circ\text{C}$ ; inductive load switched off)	-	mJ



Dimensions in mm

case: Melf / DO-213AB

