



Surface mount diode

Schottky barrier rectifiers diodes

SM 5817...SM 5819

Forward Current: 1 A

Reverse Voltage: 20 to 40 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 $T_T = 100\text{ °C}$

2) $I_F = 3\text{ A}$, $T_j = 25\text{ °C}$

3) $T_A = 25\text{ °C}$

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 $T_j = 25\text{ °C}$ $I_F = 1\text{ A}$ $V_F^{(2)}$ V	Maximum reverse recovery time $I_F = -A$ $I_R = -A$ $I_{RR} = -A$ t_{rr} ns
SM 5817	-	20	20	0,75	-
SM 5818	-	30	30	0,875	-
SM 5819	-	40	40	0,9	-

Absolute Maximum Ratings		$T_c = 25\text{ °C}$, unless otherwise specified	
Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, $T_T = 100\text{ °C}$	1	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 ³⁾	30	A
I^2t	Rating for fusing, $t < 10\text{ ms}^{(3)}$	4,5	A ² s
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...+150	°C
T_s	Storage temperature	-50...+150	°C

Characteristics		$T_c = 25\text{ °C}$, unless otherwise specified	
Symbol	Conditions	Values	Units
I_R	Maximum leakage current, $T_j = 25\text{ °C}$; $V_R = V_{RRM}$	<1	mA
	$T_j = 100\text{ °C}$; $V_R = V_{RRM}$	<10	mA
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 ($I_R = mA$; $T_j = \text{°C}$; inductive load switched off)	-	mJ



