

SM5817 THRU SM5819

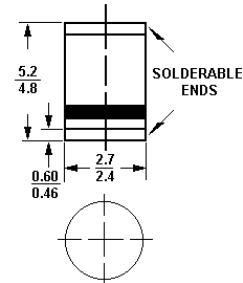
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 20 to 40 V

Forward Current - 1 A

Features

- Fast switching
- Glass passivated device
- Ideal for surface mounted applications
- Low leakage current
- Metallurgically bonded construction



Plastic case MELF (DO-213AB)
Dimensions in millimeters

Mechanical data

- **Case:** MELF (DO-213AB) molded plastic
- **Mounting position:** Any

Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	SM5817	SM5818	SM5819	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	V
Maximum RMS Voltage	V_{RMS}	14	21	28	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	V
Maximum Average Forward Rectified Current at $T_A = 90\text{ }^\circ\text{C}$	$I_{F(AV)}$	1			A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	25			A
Maximum Instantaneous Forward Voltage at 1 A DC	V_F	0.45	0.55	0.6	V
Maximum Instantaneous Forward Voltage at 3.1 A DC	V_F	0.75	0.875	0.9	V
Maximum Average Reverse Current at Rated DC Blocking Voltage at $T_A = 25\text{ }^\circ\text{C}$ at $T_A = 100\text{ }^\circ\text{C}$	I_R	1 10			mA
Typical Thermal Resistance ¹⁾	$R_{\theta JA}$	80			$^\circ\text{C/W}$
Typical Junction Capacitance ²⁾	C_J	110			pF
Operating and Storage Temperature Range	T_j, T_{stg}	- 65 to + 125			$^\circ\text{C}$

¹⁾ Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.5" (12.7 mm) Lead Length.

²⁾ Measured at 1 MHz and applied reverse voltage of 4 volts.

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FIG.1 – FORWARD DERATING CURVE

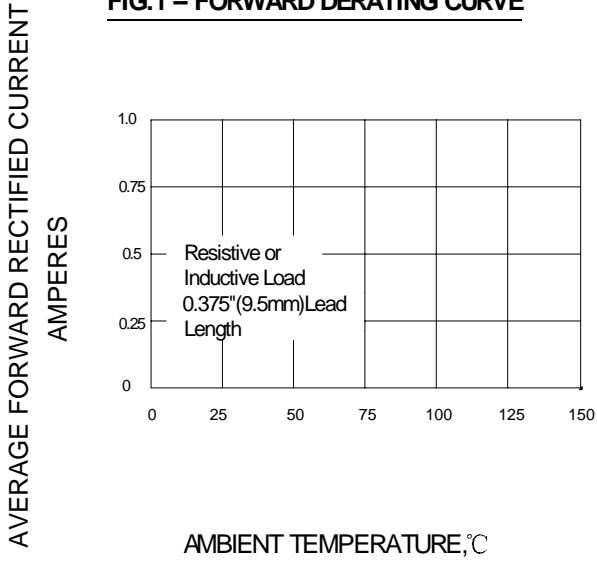


FIG.2 – PEAK FORWARD SURGE CURRENT

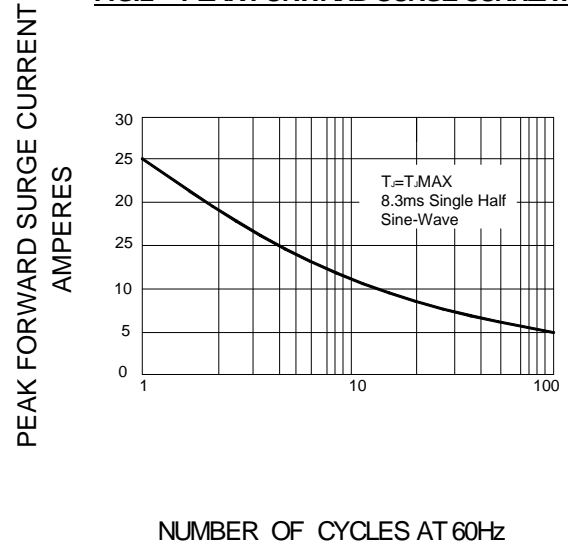


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

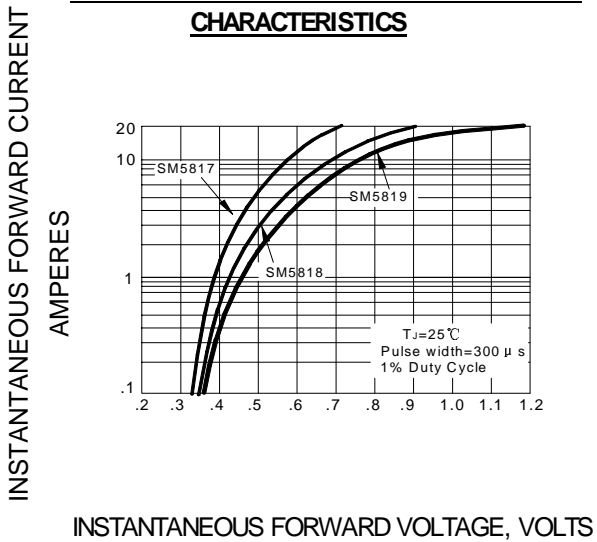
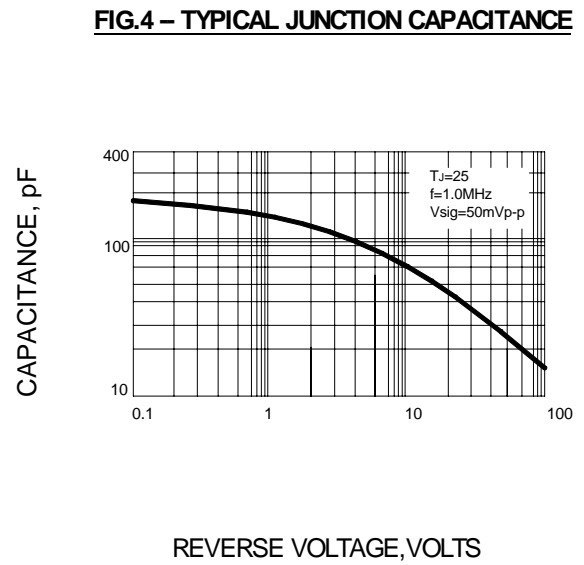


FIG.4 – TYPICAL JUNCTION CAPACITANCE



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!