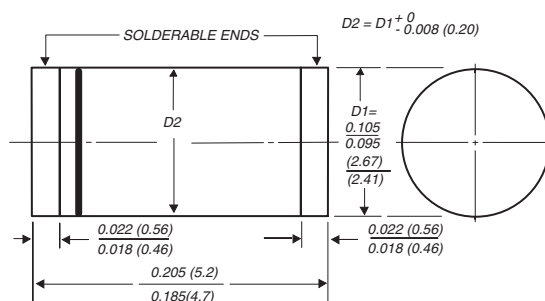


**Surface Mount Schottky Barrier Rectifiers****Reverse Voltage** 20 to 40V
Forward Current 1.0A**Features**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications

Mechanical Data**Case:** JEDEC DO-204 AL molded plastic body, glass body or glass MELF body**Terminals:** Plated leads, solderable per MIL-STD-750, Method 2026

High temperature soldering guaranteed: 250°C/10 seconds at terminals

Polarity: Color band denotes cathode end**Weight:** 0.135g**MELF**

Dimensions in inches and (millimeters)

Maximum Ratings and Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	SM5817	SM5818	SM5819	Unit
* 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 non-repetitive peak reverse voltage	V_{RSM}	24	36	48	V
* Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_L=90^\circ\text{C}$	$I_{F(AV)}$	1.0			A
* Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_L=70^\circ\text{C}$	I_{FSM}	25			A
Typical thermal resistance – junction-to-ambient (Note 2) – junction-to-lead	$R_{\theta JA}$ $R_{\theta JL}$	50 15			$^\circ\text{C/W}$
*Storage temperature range	T_J, T_{STG}	-65 to +125			$^\circ\text{C}$

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	SM5817	SM5818	SM5819	Unit
* Maximum instantaneous forward voltage at 1.0 (Note 1)	V_F	0.450	0.550	0.600	V
* Maximum average reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage (Note 1) $T_A = 100^\circ\text{C}$	I_R	1.0 10			mA
Typical junction capacitance at 4.0V, 1.0MHz	C_J	110			pF

*JEDEC registered values

Notes: (1) Pulse test: 300 μ s pulse width, 1% duty cycle

(2) Thermal resistance from junction to lead vertical P.C.B. mounted, 0.375" (9.5mm) lead length with 1.5 x 1.5" (38 x 38mm) copper pads



Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

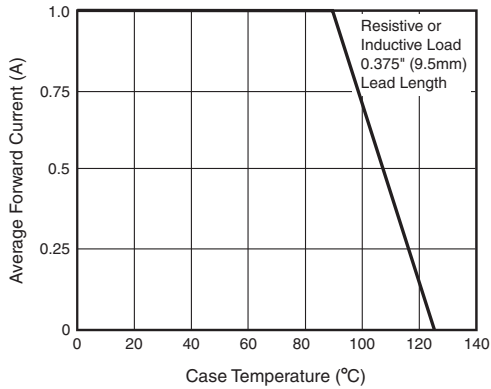


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

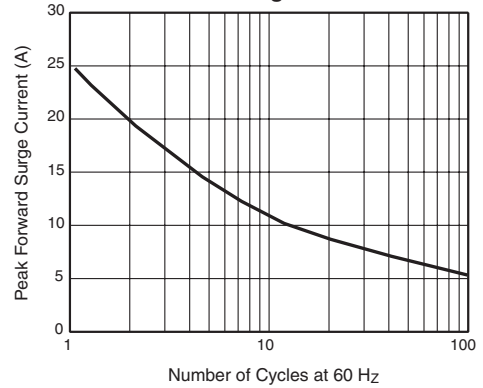


Fig. 3 - Typical Instantaneous Forward Characteristics

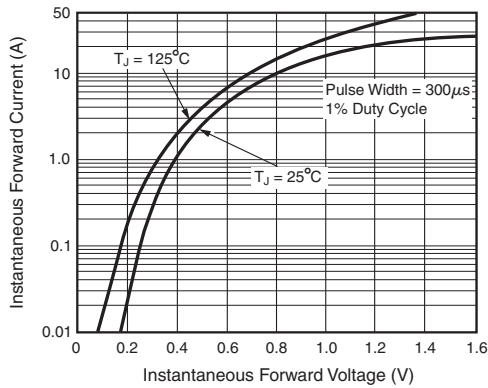


Fig. 4 - Typical Reverse Characteristics

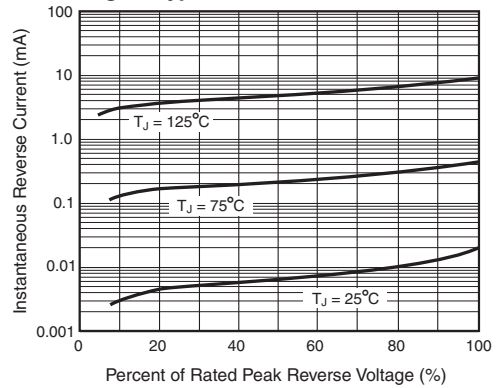


Fig. 5 - Typical Junction Capacitance

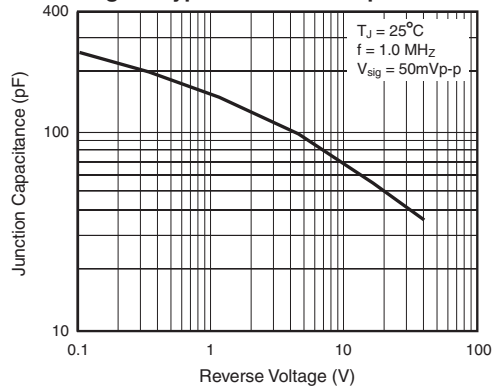


Fig. 6 - Typical Transient Thermal Impedance

