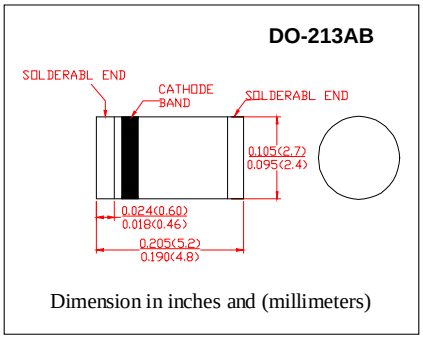
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

SM5817 - SM5819

VOLTAGE RANGE - 20 to 40 V
CURRENT - 1 A

FEATURES

- Fast switching
- Low forward voltage drop.
- Low power loss , high efficiency
- High surge capability
- High reliability
- High current capability
- Plastic package has underwrites laboratory flammability classification 94v-0
- High temperature soldering guaranteed: 250 ^{O}C/10 seconds at terminals .



Dimension in inches and (millimeters)

MECHANICAL DATA

- Case: molded plastic
- Polarity: Color band indicate cathode
- Mounting Position: Any.
- Weight: 0.12 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

		SYMBOLS	SM5817	SM5818	SM5819	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	20	30	40	Volts
Maximum RMS Voltage		V_{RMS}	14	21	28	Volts
Maximum DC Blocking Voltage		V_{DC}	20	30	40	Volts
Maximum Average Forward Rectified Current, at T_L=90 ^{o}C		$I_{(AV)}$	1.0			Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	25			Amps
Maximum Instantaneous Forward Voltage at 1.0A		V_F	0.450	0.550	0.600	Volts
Maximum DC Reverse Current at rated DC blocking voltage at (Note1)	T_A=25 ^{o}C	I_R	0.5			mA
	T_A=125 ^{o}C		10			
Typical Junction Capacitance (Note 2)		C_J	110			PF
Maximum Thermal Resistance		R_{QJL}(Note3) R_{QJA}(Note4)	30 80			°C/W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 to +125			^{o}C

NOTES:

1. Pulse test:300 µs pulse width 1% duty cycle
2. Measured at 1.0MHZ and applied reverse voltage of 4.0 volts DC.
3. Thermal resistance junction to terminal 6.0mm^2 copper pads to each terminal.
4. Thermal resistance junction to ambient 6.0mm^2 copper pads to each terminal.

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FIG.1–TYPICAL FORWARD CURRENT DERATING CURVE

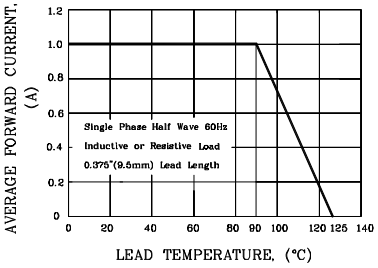

FIG.2–MAXIMUM NON–REPETITIVE PEAK FORWARD SURGE CURRENT

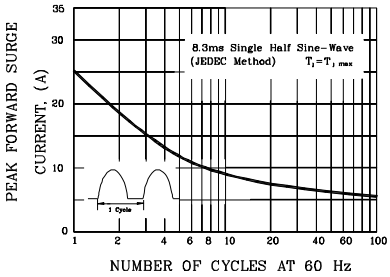

FIG.3–TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

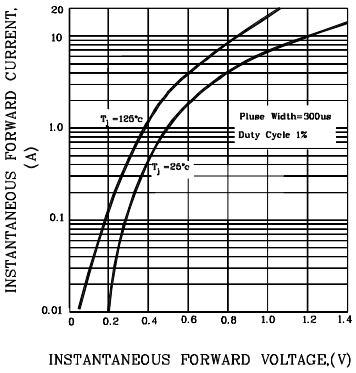

FIG.4–TYPICAL REVERSE CHARACTERISTICS

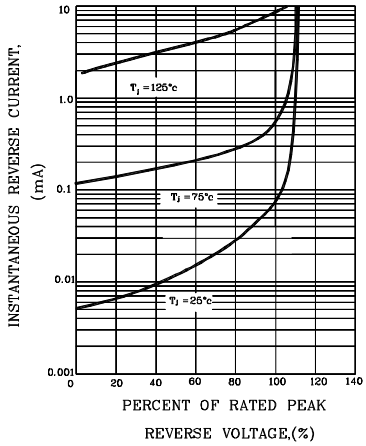

FIG.5–TYPICAL JUNCTION CAPACITANCE