

# SS5817 THRU SS5819

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 20 to 40 V

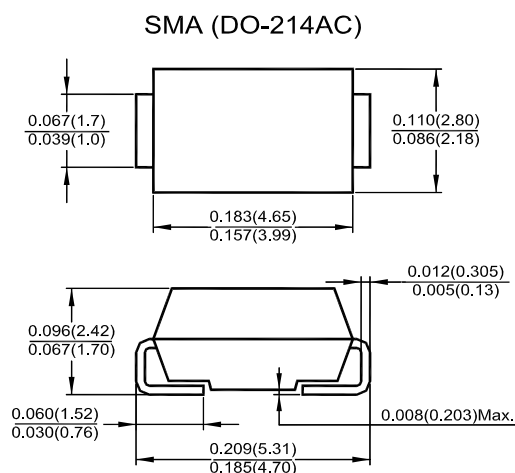
Forward Current - 1 A

### Features

- Plastic package has Underwriters Laboratory Classification 94V-0
- Metal silicon junction, majority carrier conduction
- For surface mount applications
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, Low forward voltage drop
- High surge capability

### Mechanical Data

- **Case:** SMA (DO-214AC) molded plastic case
- **Terminals:** Solder plate, solderable per MIL-STD -750, method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any



Dimensions in inches and (millimeters)

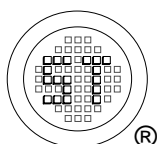
### Maximum Ratings and Electrical Characteristics

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

Parameter	Symbols	SS5817	SS5818	SS5819	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 0.375" (9.5 mm) Load Length at $T_L = 90^\circ\text{C}$	$I_{(AV)}$	1			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
Maximum Instantaneous Forward Voltage at 1 A	$V_F$	0.45	0.55	0.6	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage	$I_R$	0.5			mA
		10			mA
Typical Junction Capacitance <sup>1)</sup>	$C_J$	110			pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	88			°C/W
Operating and Storage Temperature Range	$T_J, T_S$	- 65 to + 125			°C

<sup>1)</sup> Measured at 1 MHz and reverse voltage of 4 volts.

<sup>2)</sup> Thermal Resistance (from Junction to Ambient) Vertical P.C.B Mounted, with 1.5 X 1.5" (38 X 38 mm) copper pads.



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FIG.1-FORWARD CURRENT DERATING CURVE

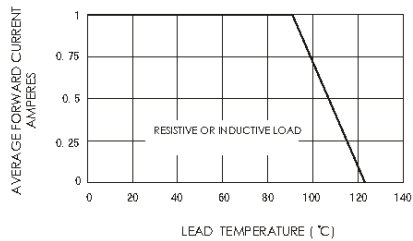


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

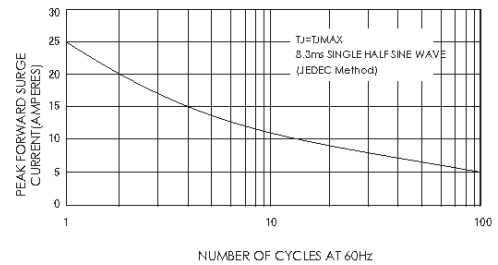


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

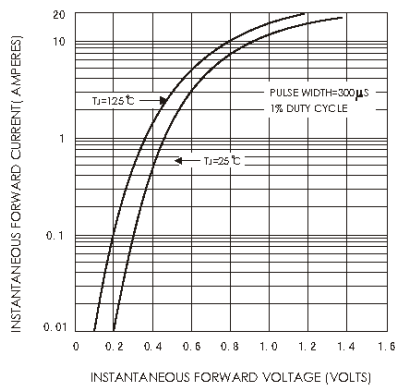


FIG.4-TYPICAL REVERSE CHARACTERISTICS

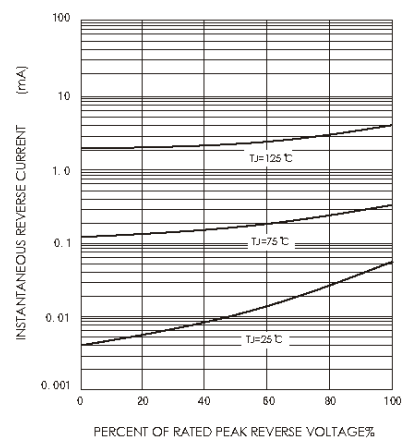


FIG.5-TYPICAL JUNCTION CAPACITANCE

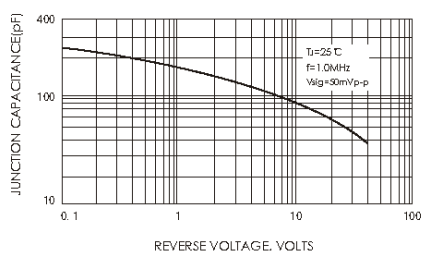
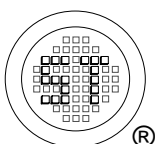
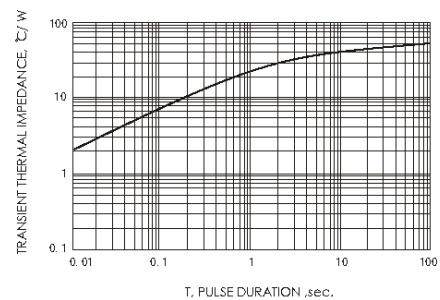


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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