SS5817D THRU SS5819D

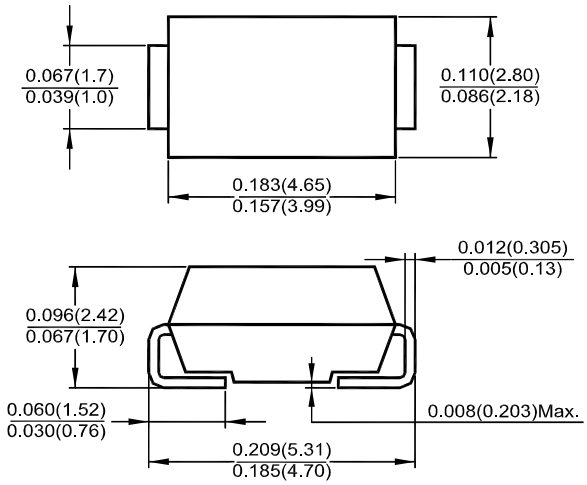
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

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

SMA (DO-214AC)



Dimensions in inches and (millimeters)

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

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	SS5817D	SS5818D	SS5819D	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 °C	$I_{F(AV)}$	1			A
Peak Forward Surge Current 8.3 mS Single Half Sine-wave Superimposed on Rated Load (JEDEC Method) at T_L = 70 °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 at T_a = 25 °C / at T_a =100 °C	I_R	0.5 / 10			mA
Typical Junction Capacitance [1]	C_j	110			pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	88			°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	- 65 to + 125			°C

[1] Measured at 1 MHz and reverse voltage of 4 V.

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

FIG.1-FORWARD CURRENT DERATING CURVE

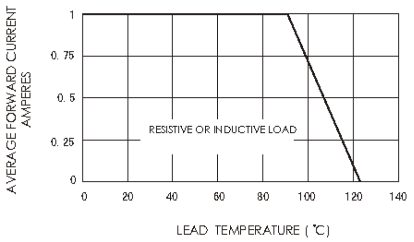


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

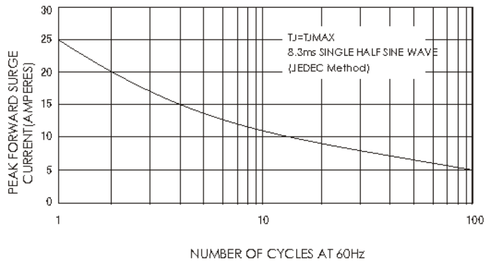


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

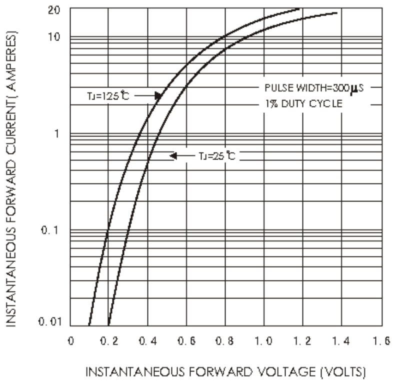


FIG.4-TYPICAL REVERSE CHARACTERISTICS

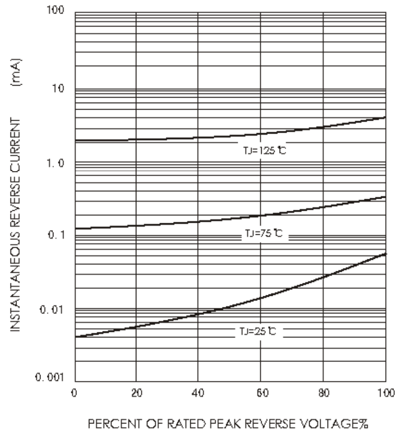


FIG.5-TYPICAL JUNCTION CAPACITANCE

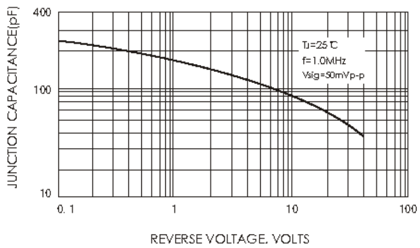


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE