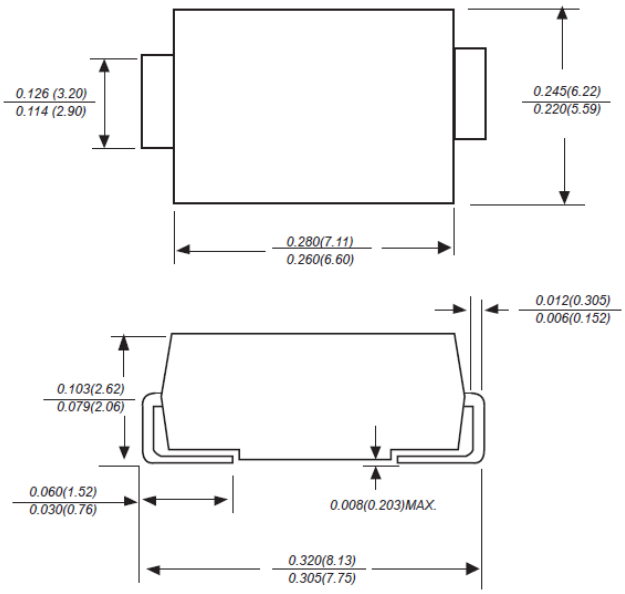
S5A THRU S5M

Surface Mount General Rectifiers
Reverse Voltage - 50 to 1000 V
Forward Current - 5 A

SMC (DO-214AB)

Features
- The plastic package carries Underwrites Laboratory flammability classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability



Dimensions in inches and (millimeters)

Mechanical Data
- **Case:** JEDEC DO-214AB molded plastic body
- **Terminals:** Plated axial leads, 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 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	S5A	S5B	S5D	S5G	S5J	S5K	S5M	Units
	Marking	S5A	S5B	S5D	S5G	S5J	S5K	S5M	-
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Current at T_L = 110 °C	$I_{F(AV)}$	5							A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Maximum Forward Voltage at I_F = 5 A	V_F	1							V
Maximum DC Reverse Current at T_a = 25 °C at Rated DC Blocking Voltage at T_a = 100 °C	I_R	5 100							μA
Typical Junction Capacitance [1]	C_j	120							pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	80							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	- 65 to + 150							°C

[1] Measured at 1 MHz and applied reverse voltage of 4 V D.C.
[2] P.C.B mounted with 0.4 X 0.4" (10 X 10 mm) copper pad areas

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FIG. 1- FORWARD CURRENT DERATING CURVE

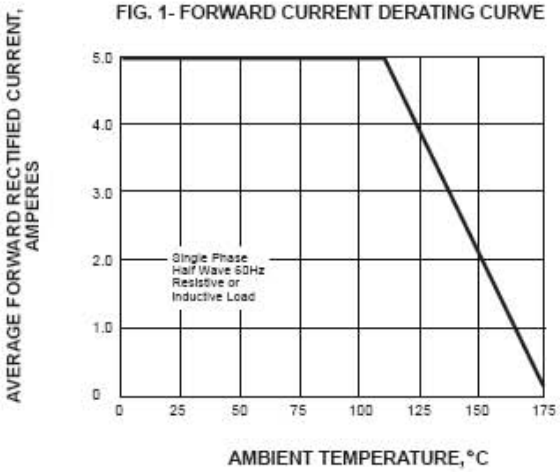

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

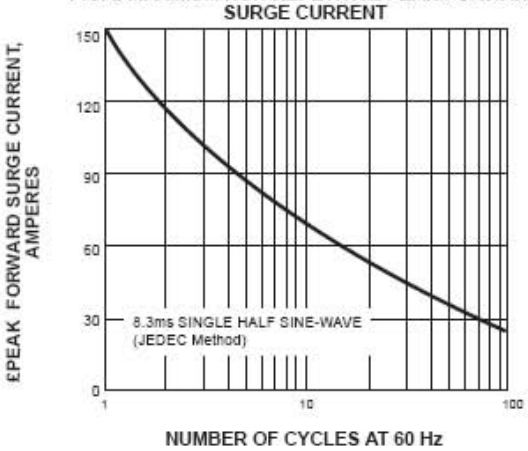

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

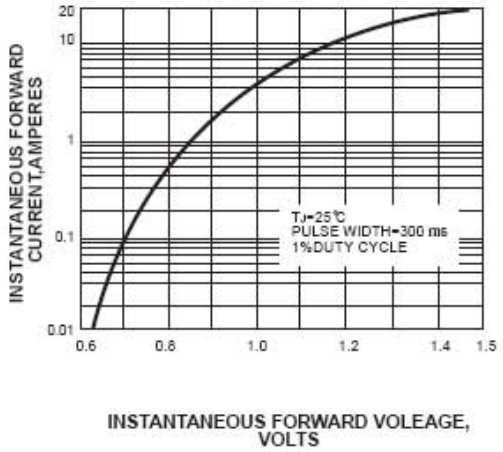

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

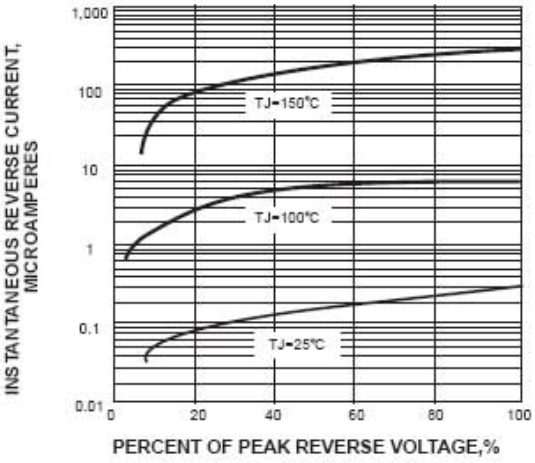

FIG. 5-TYPICAL JUNCTION CAPACITANCE

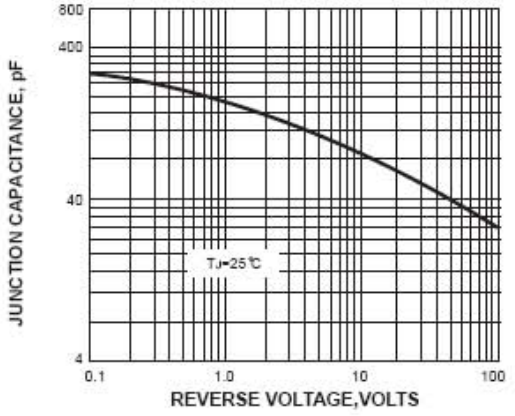

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE