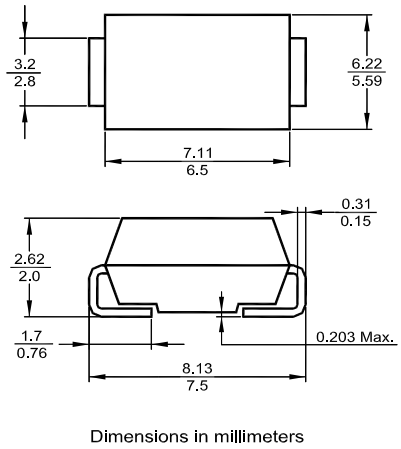
S3AC THRU S3MC

Surface Mount General Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 3 A

SMC (DO-214AB)



Dimensions in millimeters

Features

- The plastic package carries UL flammability classification 94 V-0
- High forward surge current capability
- Low reverse current

Mechanical Data

- Case: SMC (DO-214AB) molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, method
- Polarity: color band denotes cathode end

Maximum Ratings and Characteristics

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

Parameter	Symbols	S3AC	S3BC	S3DC	S3GC	S3JC	S3KC	S3MC	Units
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 = 75 °C	$I_{F(AV)}$	3							A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	100							A
Maximum Forward Voltage at I_F = 3 A	V_F	1.15							V
Maximum DC Reverse Current at T_A = 25 °C at Rated DC Blocking Voltage at T_A = 125 °C	I_R	10 250							μA
Typical Junction Capacitance [1]	C_J	60							pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	53							°C/W
Typical Thermal Resistance [2]	$R_{\theta JL}$	16							°C/W
Operating and Storage Temperature Range	T_j , T_{stg}	- 55 to + 150							°C

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

[2] P.C.B mounted with 0.27" X 0.27" (7 X 7 mm) copper pad areas

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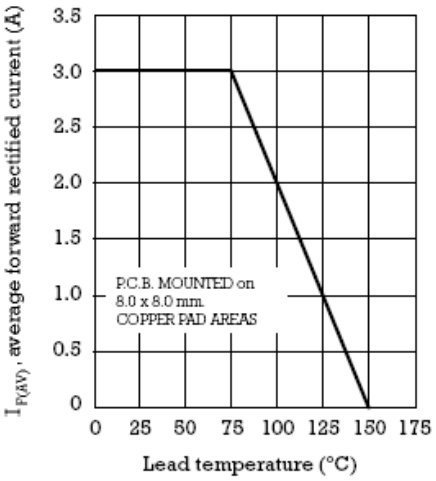
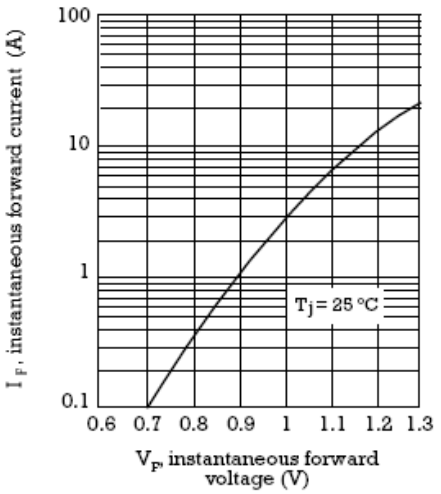
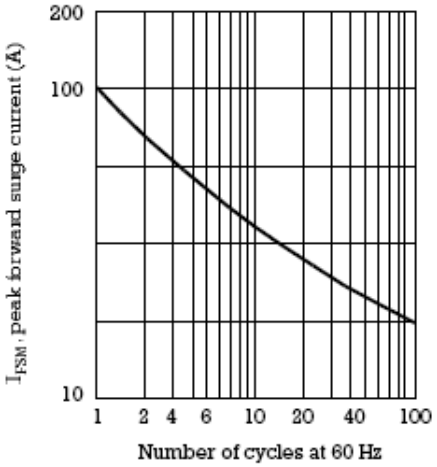
FORWARD CURRENT DERATING CURVE



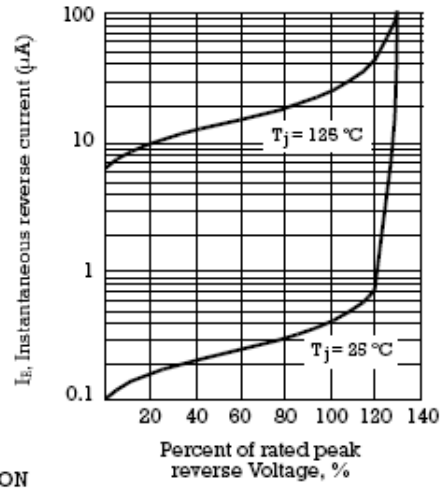
TYPICAL FORWARD CHARACTERISTIC



MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT



TYPICAL REVERSE CHARACTERISTIC



TYPICAL JUNCTION CAPACITANCE