

I. General Purpose Rectifier

4.0A Surface Mount Silicon Rectifier S4A~S4M

(Package: SMC (DO-214AB))

<p>FEATURES</p> <ul style="list-style-type: none"> • The plastic package carries Underwriters 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 • High temperature soldering guaranteed : 250 /10 seconds at terminals <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : JEDEC DO-214AB molded plastic body • Terminals : Solder plated, solderable per MIL-STD-750, Method 2026 • Polarity : Color band denotes cathode end • Mounting Position : Any • Weight : 0.220 grams 	<p>Case: SMC Dimensions in inches and (millimeters)</p>
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Ratings & Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic	Symbol	S4A	S4B	S4D	S4G	S4J	S4K	S4M	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current at $T_L = 75$	I_O	4.0							Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100.0							Amps
Maximum instantaneous forward voltage at 4.0 A	V_F	1.15							Volts
Maximum DC reverse current $T_a = 25$ at rated DC blocking voltage $T_a = 100$	I_R	10.0 250.0							μA
Typical junction capacitance (Note 1)	C_j	60.0							pF
Typical thermal resistance (Note 2)	R_{th-JA}	50.0							/ W
Operating junction and storage temperature range	T_j, T_{stg}	-65 to +175							

Notes:

1. Measured at 1MHz and applied reverse voltage of 4.0 V D.C.
2. P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

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Ratings and Characteristic Curves of S4A~S4M

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

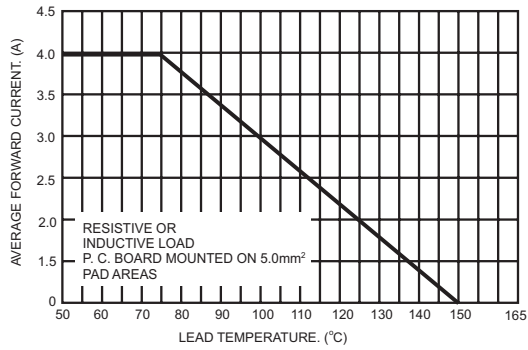


FIG.2 MAXIMUM NON REPETITIVE FORWARD SURGE CURRENT

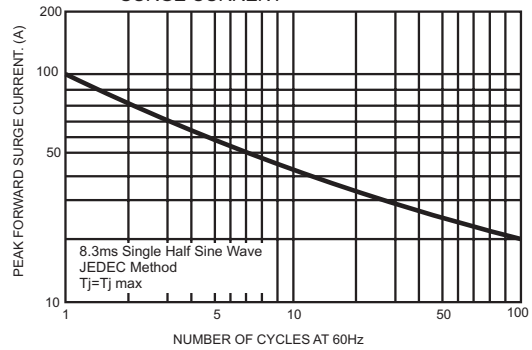


FIG.3 TYPICAL FORWARD CHARACTERISTICS

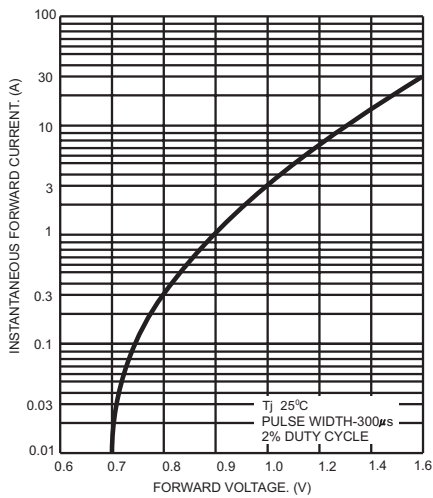


FIG.4 TYPICAL REVERSE CHARACTERISTICS

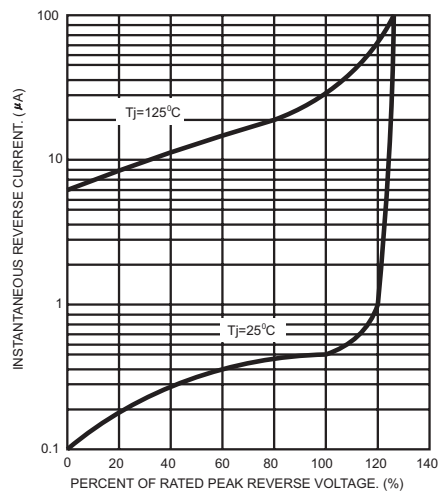


FIG.5 TYPICAL JUNCTION CAPACITANCE

