

I. General Purpose Rectifier

5.0A Surface Mount Silicon Rectifier S5A~S5M

(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 °C ambient temperature unless otherwise specified.

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

Characteristic	Symbol	S5A	S5B	S5D	S5G	S5J	S5K	S5M	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	5.0							Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0							Amps
Maximum instantaneous forward voltage at 5.0 A	V_F	1.20							Volts
Maximum DC reverse current $T_a = 25$ at rated DC blocking voltage $T_a = 100$	I_R	10.0 400.0							μA
Typical junction capacitance (Note 1)	C_j	80.0							pF
Typical thermal resistance (Note 2)	Rth-JA	15.0							/ W
Operating junction and storage temperature range	T_j, T_{stg}	-55 to +155							

Notes:

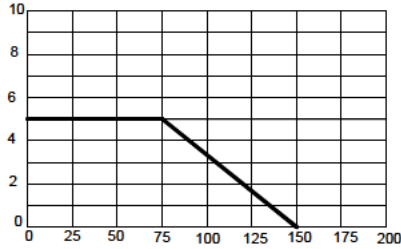
1. Measured at 1MHz and applied reverse voltage of 4.0 V D.C.
2. P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

<http://patron-components.com/>

Ratings and Characteristic Curves of S5A~S5M

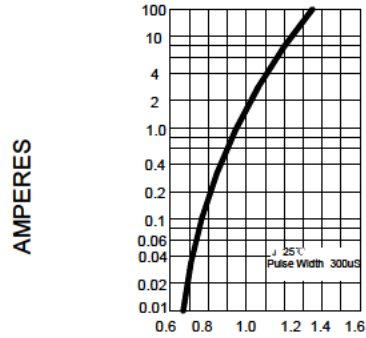
AVERAGE FORWARD RECTIFIED CURRENT
AMPERES

FIG.1 – FORWARD DERATING CURVE



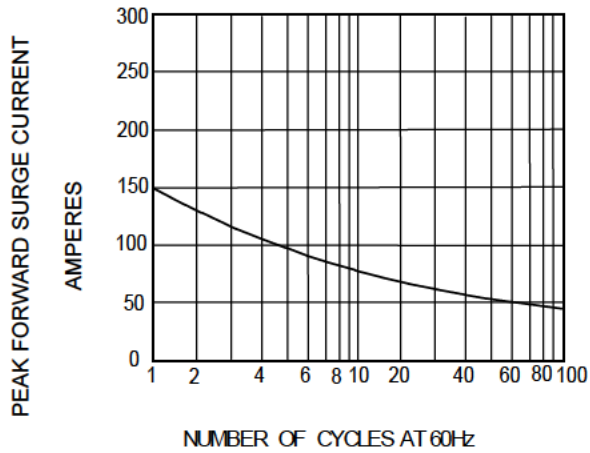
AMBIENT TEMPERATURE, °C

FIG.2 – TYPICAL FORWARD CHARACTERISTICS



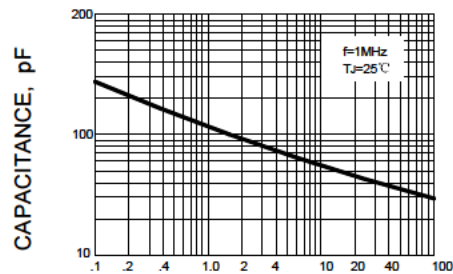
INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.3 –MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT



NUMBER OF CYCLES AT 60Hz

FIG.4 – TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS