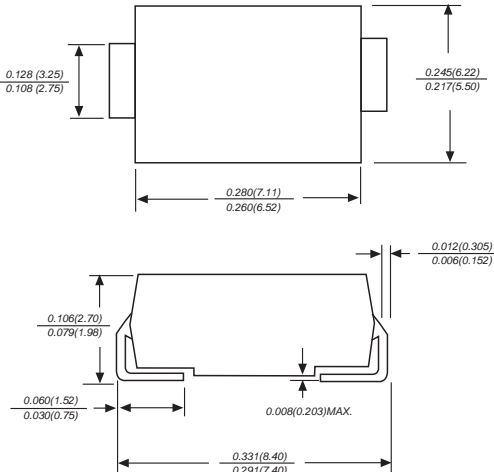


**I. General Purpose Rectifier**

**5.0A Surface Mount Silicon Rectifier  
S5A~S5M**

**(Package: SMC (DO-214AB))**

<p><b><u>FEATURES</u></b></p> <ul style="list-style-type: none"> <li>• The plastic package carries Underwriters Laboratory Flammability Classification 94V-0</li> <li>• For surface mounted applications</li> <li>• Low reverse leakage</li> <li>• Built-in strain relief, ideal for automated placement</li> <li>• High forward surge current capability</li> <li>• High temperature soldering guaranteed : 250 /10 seconds at terminals</li> </ul> <p><b><u>MECHANICAL DATA</u></b></p> <ul style="list-style-type: none"> <li>• Case : JEDEC DO-214AB molded plastic body</li> <li>• Terminals : Solder plated, solderable per MIL-STD-750, Method 2026</li> <li>• Polarity : Color band denotes cathode end</li> <li>• Mounting Position : Any</li> <li>• Weight : 0.220 grams</li> </ul>	 <p style="text-align: center;">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%.

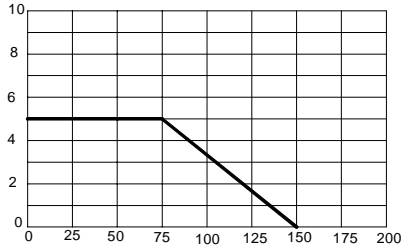
Characteristic	Symbol	S5A	S5B	S5D	S5G	S5J	S5K	S5M	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified 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							$\mu A$
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

## Ratings and Characteristic Curves of S5A~S5M

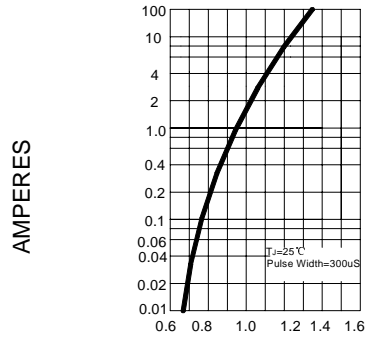
AVERAGE FORWARD RECTIFIED CURRENT  
AMPERES

**FIG.1 – FORWARD DERATING CURVE**



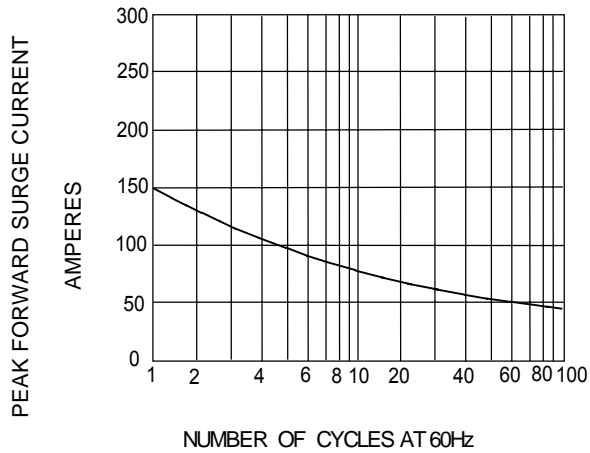
AMBIENT TEMPERATURE, °C

**FIG.2 – TYPICAL FORWARD CHARACTERISTICS**



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

**FIG.3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**

