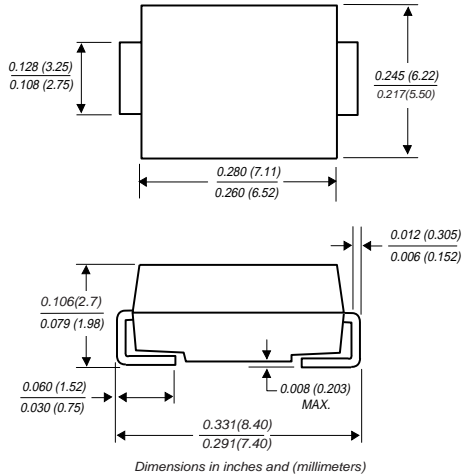


# S5A THRU S5M

## GENERAL PURPOSE SILICON RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 5.0 Amperes

### DO-214AB



### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### 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  
**Weight:** 0.22 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	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 0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$	$I_{(AV)}$	5.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	120							Amps
Maximum instantaneous forward voltage at 5.0A	$V_F$	1.2							Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	10.0 400							$\mu\text{A}$
Typical junction capacitance (NOTE 1)	$C_J$	80							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	15							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +155							$^\circ\text{C}$

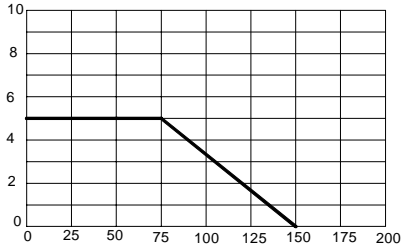
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

# RATINGS AND CHARACTERISTIC CURVES S5A THRU S5M

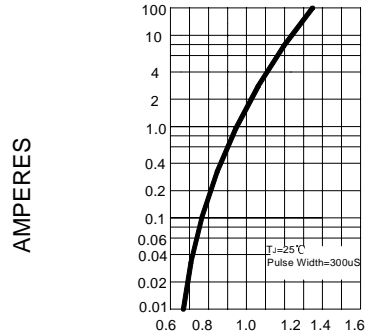
AVERAGE FORWARD RECTIFIED CURRENT  
AMPERES

**FIG.1 – FORWARD DERATING CURVE**



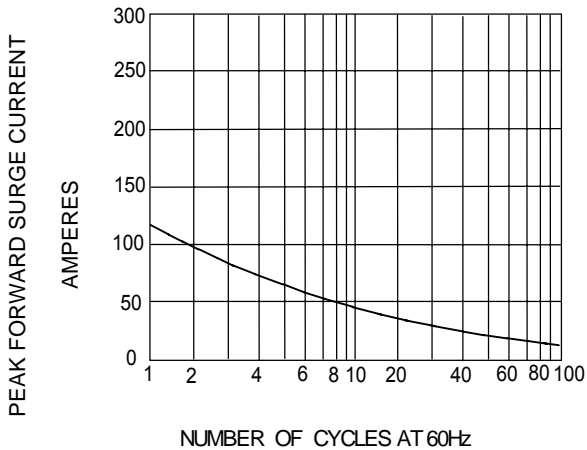
AMBIENT TEMPERATURE, °C

**FIG.2 – TYPICAL FORWARD CHARACTERISTICS**



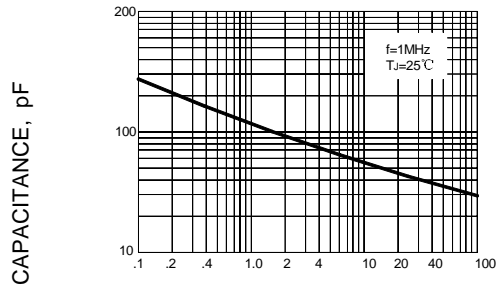
INSTANTANEOUS FORWARD VOLTAGE, VOLTS

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



NUMBER OF CYCLES AT 60Hz

**FIG.4 – TYPICAL JUNCTION CAPACITANCE**



REVERSE VOLTAGE, VOLTS