



**TAYCHIPST**

**SURFACE MOUNT GLASS PASSIVATED RECTIFIER**

**S5A THRU S5M**

**50V-1000V 5.0A**

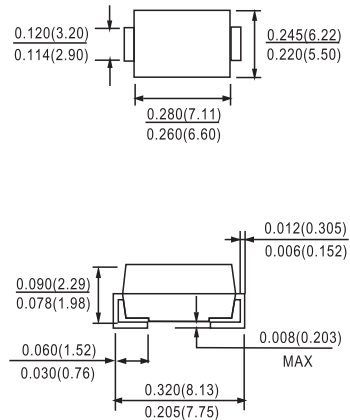
**FEATURES**

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop
- Surge Overload Rating to 100A Peak
- Low Power Loss
- Built-in Strain Relief
- Plastic Case Material has UL Flammability Classification Rating 94V-O

**Mechanical Data**

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**

DO-214AB(SMC)



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

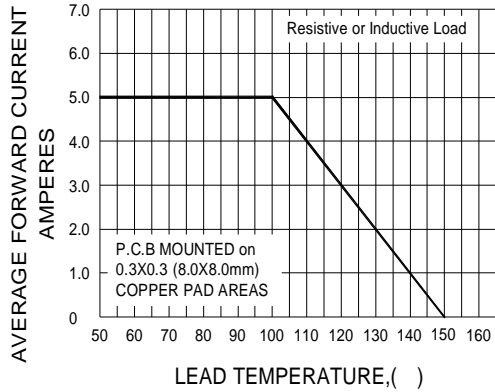
Ratings at 25 °C ambient temperature unless otherwise specified

	SYMBOLS	S5A	S5B	S5D	S5G	S5J	S53K	S5M	UNIT
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 $T_L=100$ (NOTE 3)	$I_{(AV)}$	5.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method) $T_L=100$	$I_{FSM}$	100							Amps
Maximum Instantaneous Forward Voltage at 5.0A	$V_F$	1.15							Volts
Maximum DC Reverse Current at rated DC Blocking Voltage	$T_A = 25$	10.0							A
	$T_A = 125$								
Typical Reverse Recovery Time (NOTE 1)	$t_{rr}$	2.5							s
Typical junction capacitance (NOTE 2)	$C_J$	60							pF
Typical Thermal Resistance (NOTE 3)	$R_{\theta JL}$	47							/W
	$R_{\theta JA}$	13							
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							

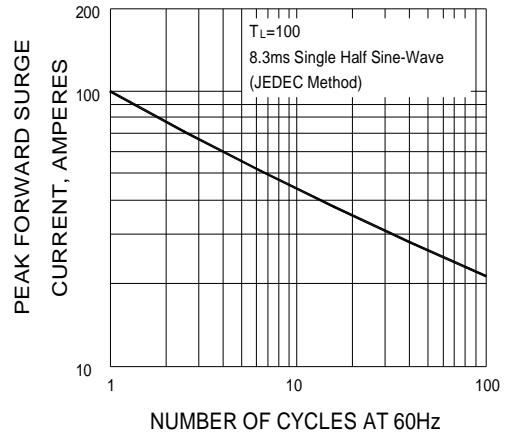
**Notes:**

1. Reverse recovery test conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{rr} = 0.25A$
2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts
3. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with 0.3×0.3" (8.0 × 8.0mm) copper pad areas.

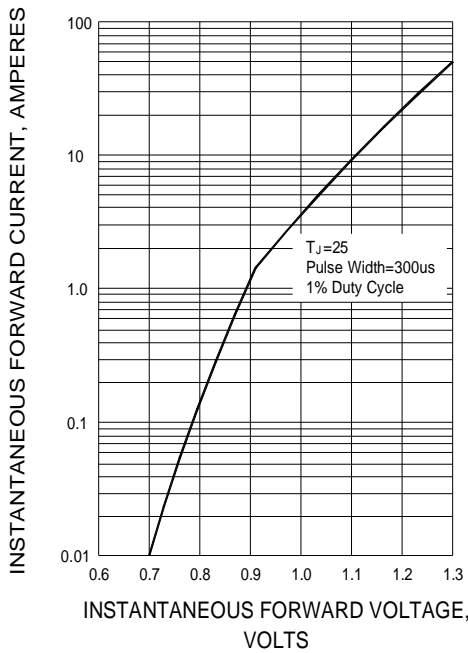
F1G.1-FORWARD CURRENT DERATING CURVE



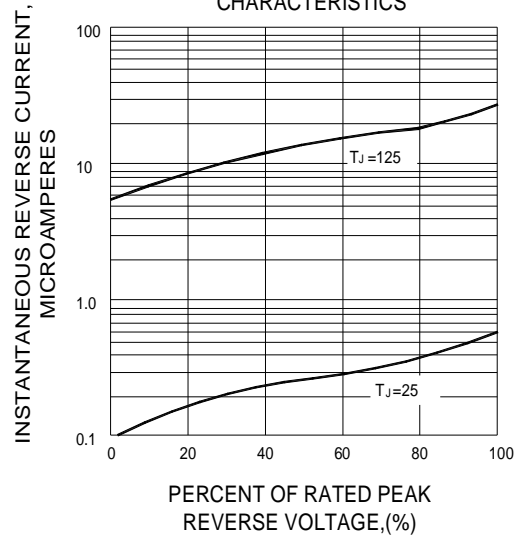
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



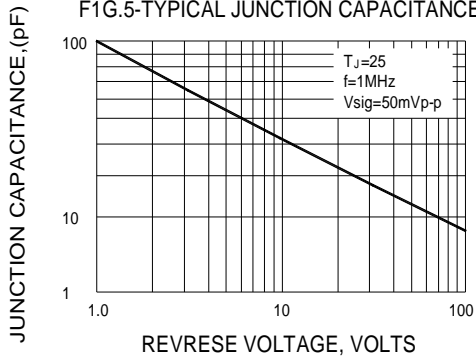
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE



F1G.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

