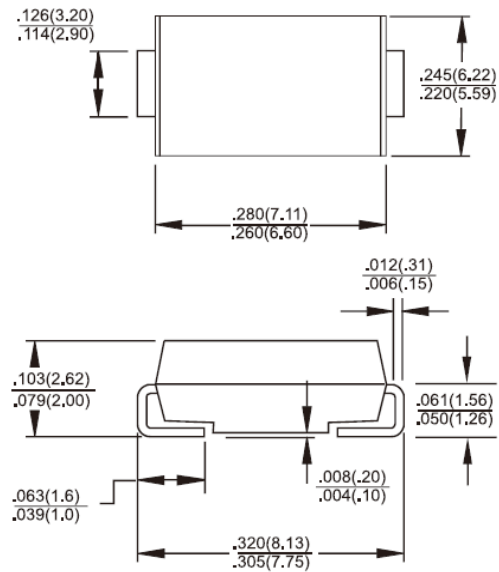


**SMC/DO-214AB**

**Features**

- ✧ For surface mounted application
- ✧ Glass passivated junction chip.
- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ Easy pick and place
- ✧ High surge current capability
- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✧ High temperature soldering: 260°C/10 seconds at terminals
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.


**Dimensions in inches and (millimeters)**
**Marking Diagram**


- S5X = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

**Mechanical Data**

- ✧ Case: Molded plastic
- ✧ Terminals: Pure tin plated, lead free.
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 16mm tape per EIA STD RS-481
- ✧ Weight: 0.21 grams

**Maximum Ratings and Electrical Characteristics**

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	S5A	S5B	S5D	S5G	S5J	S5K	S5M	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	100							A
Maximum Instantaneous Forward Voltage (Note 1) @ 5 A	$V_F$	1.15							V
Maximum DC Reverse Current @ $T_A=25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125\text{ }^\circ\text{C}$	$I_R$	10 250							uA uA
Typical Reverse Recovery Time (Note 2)	$T_{rr}$	1.5							uS
Typical Junction Capacitance (Note 3)	$C_j$	60							pF
Typical Thermal Resistance	$R_{\theta JL}$ $R_{\theta JA}$	13 47							$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	- 55 to + 150							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 55 to + 150							$^\circ\text{C}$

Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle

 2. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$ 

 3. Measured at 1 MHz and Applied  $V_R=4.0$  Volts

## RATINGS AND CHARACTERISTIC CURVES (S5A THRU S5M)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

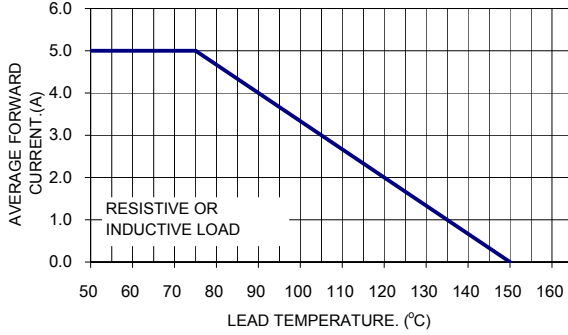


FIG.2- TYPICAL REVERSE CHARACTERISTICS

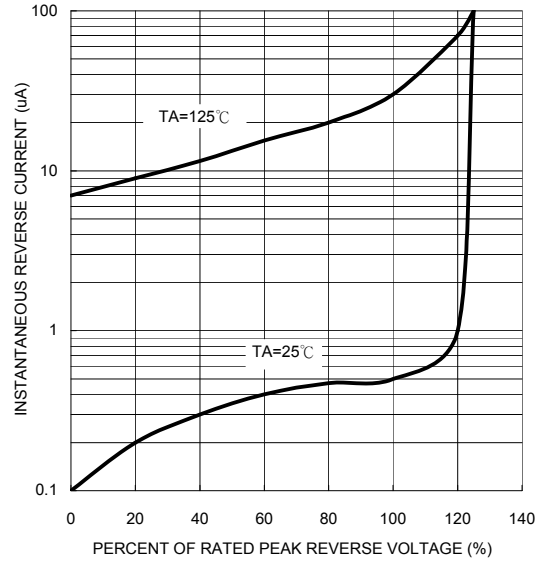


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

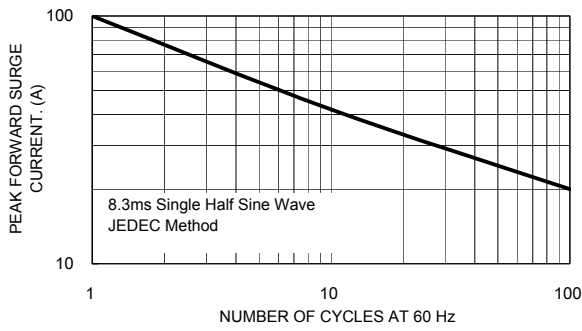


FIG.5- TYPICAL FORWARD CHARACTERISTICS

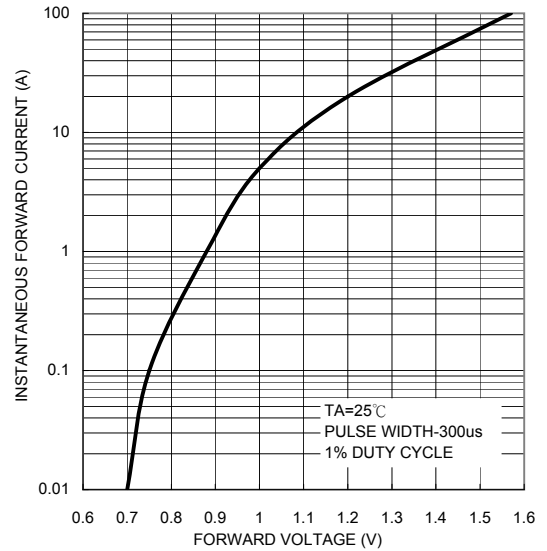


FIG.4- TYPICAL JUNCTION CAPACITANCE

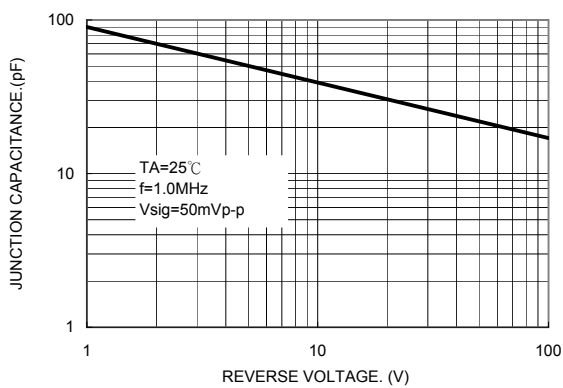


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

