

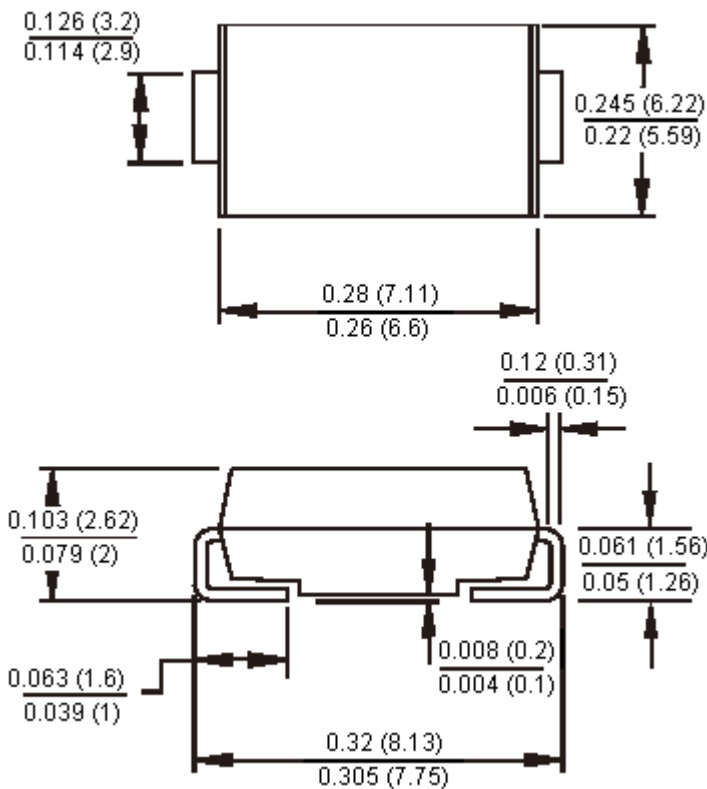


**Features:**

- For surface mounted application.
- Glass passivated junction chip.
- Low forward voltage drop.
- High current capability.
- Easy pick and place.
- High surge current capability.
- High temperature soldering : 260°C / 10 s at terminals.

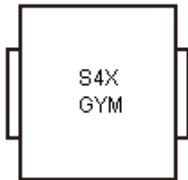


**SMC/DO-214AB**



Dimensions : Inches (Millimetres)

**Marking Diagram**



- S4X = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

## Mechanical Data:

Case : Moulded plastic.  
 Terminals : Pure tin plated, lead free.  
 Polarity : Indicated by cathode band.  
 Weight : 0.21 g.

## 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%.

Description	Symbol	S4G	S4M	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	400	1,000	V
Maximum RMS Voltage	V <sub>RMS</sub>	280	700	
Maximum DC Blocking Voltage	V <sub>DC</sub>	400	1,000	
Maximum Average Forward Rectified Current at T <sub>L</sub> = 75°C	I <sub>F (AV)</sub>	4		A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	100		
Maximum Instantaneous Forward Voltage at 4 A	V <sub>F</sub>	1.15		V
Maximum DC Reverse Current at T <sub>A</sub> = 25°C at Rated DC Blocking Voltage (Note 1) at T <sub>A</sub> = 125°C	I <sub>R</sub>	10 250		µA
Maximum Reverse Recovery Time (Note 4)	T <sub>rr</sub>	1.5		µS
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	60		pF
Typical Thermal Resistance (Note 3)	R <sub>θJL</sub> R <sub>θJA</sub>	13 47		°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150		°C
Storage Temperature Range	T <sub>STG</sub>			

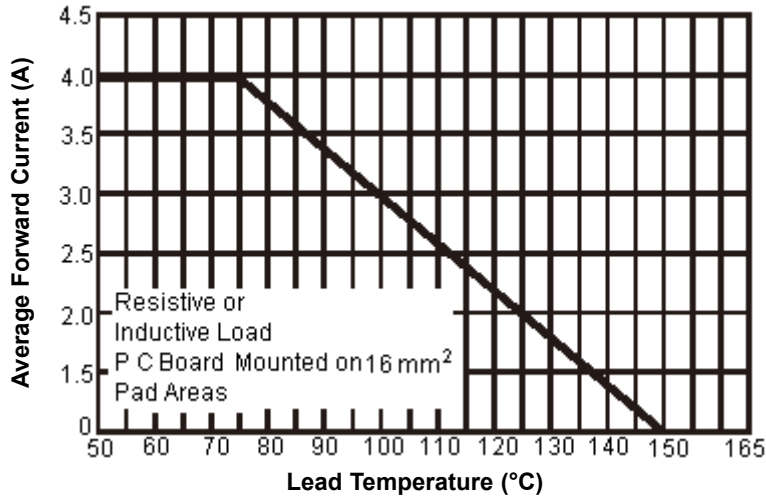
**Notes:** 1. Pulse test with  $PW = 300 \mu\text{s}$ , 1% duty cycle.  
 2. Measured at 1 MHz and applied  $V_R = 4$  Volts.  
 3. Measured on P C board with  $0.6 \times 0.6''$  ( $16 \times 16$  mm) copper pad areas.  
 4. Reverse recovery test conditions :  $I_F = 0.5$  A,  $I_R = 1$  A,  $I_{RR} = 0.25$  A.

# Surface Mount Rectifiers

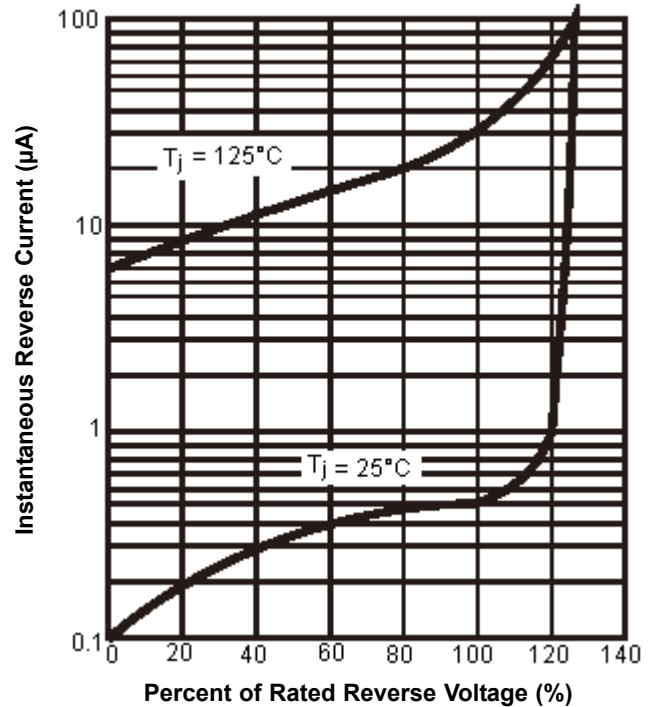


## Ratings and Characteristic Curves (S4G thru S4M)

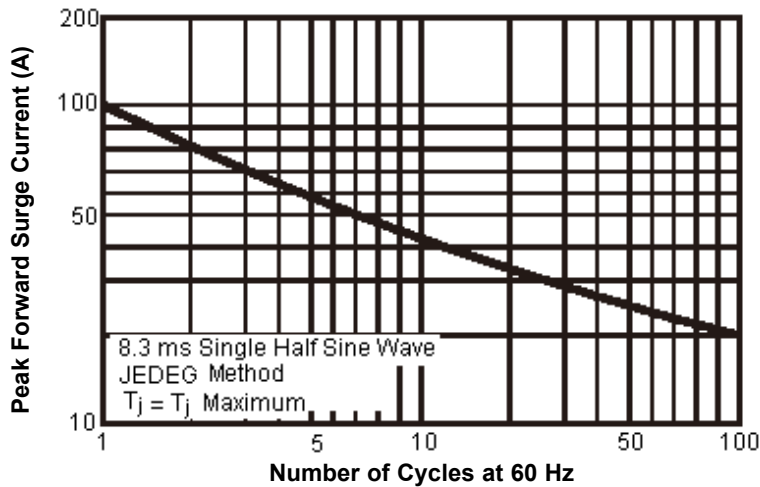
Maximum Forward Current Derating Curve



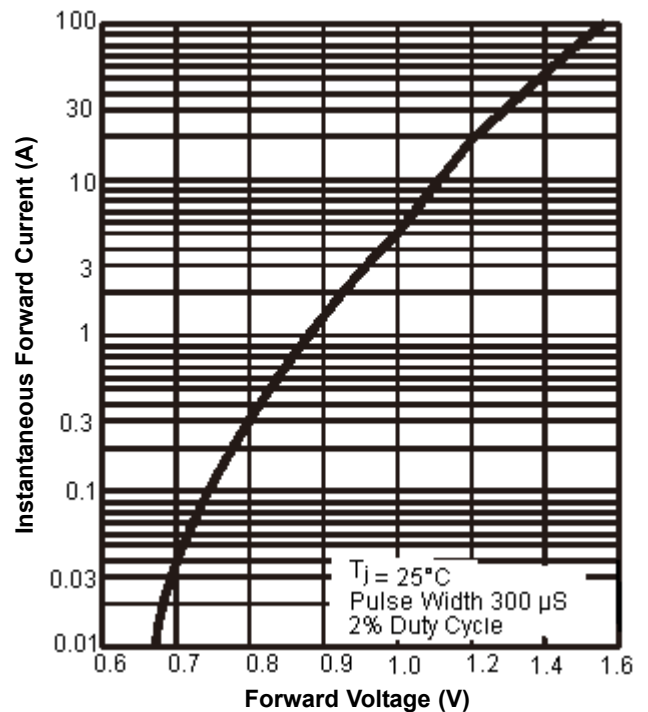
Typical Reverse Characteristics



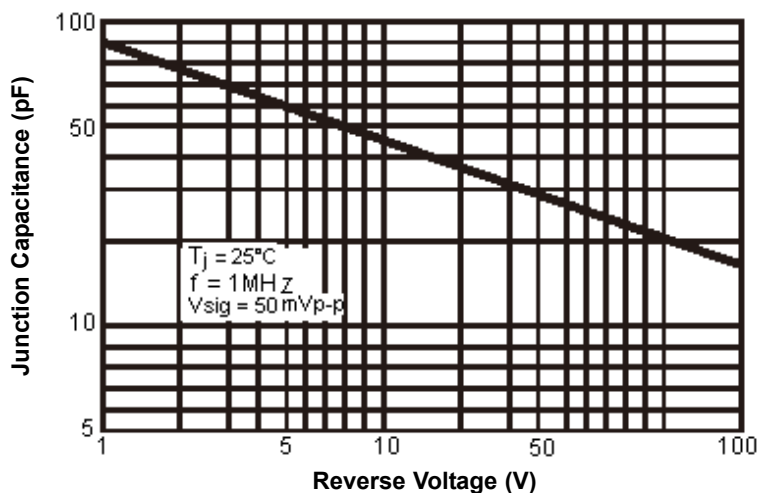
Maximum Non-Repetitive Forward Surge Current



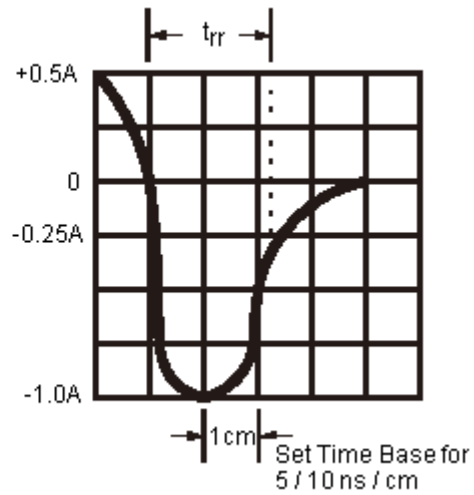
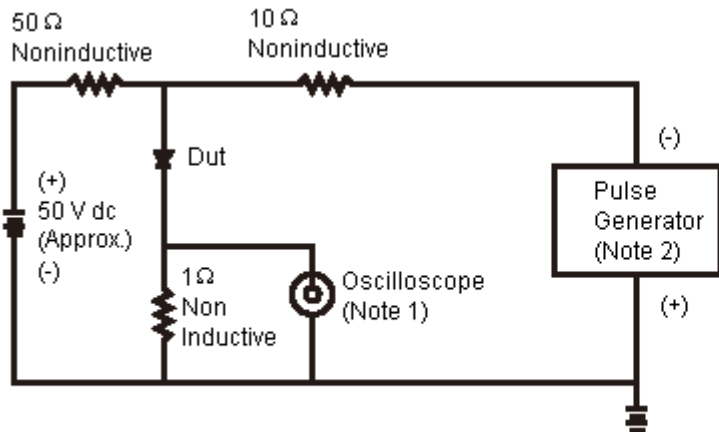
Typical Forward Characteristics



Typical Junction Capacitance



## Reverse Recovery Time Characteristic and Test Circuit Diagram



- Notes :**
1. Rise time = 7 ns maximum input impedance = 1 megohm 22 pf.
  2. Rise time = 10 ns maximum source impedance = 50 ohms.

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