

Surface Mount Rectifiers

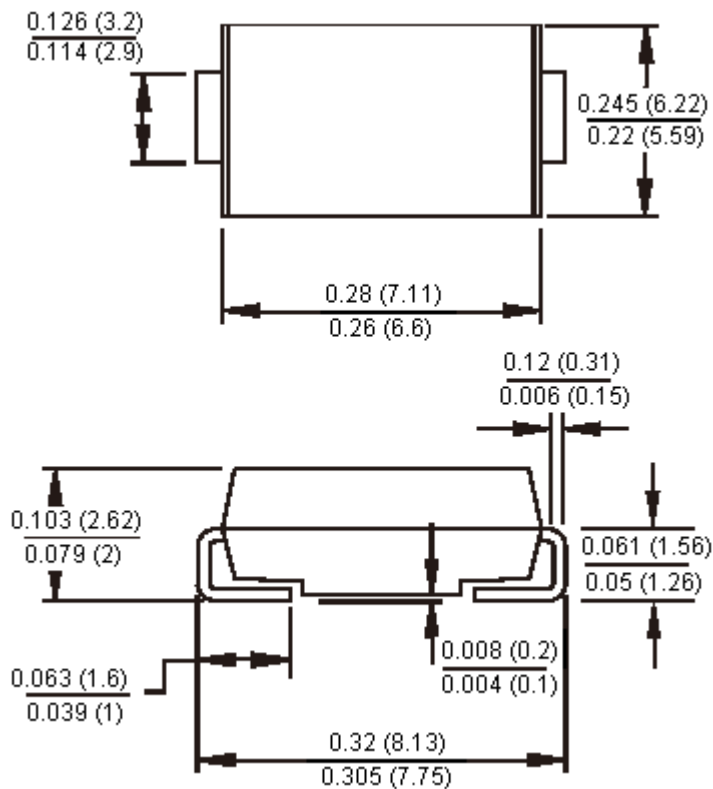


Features:

- 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.

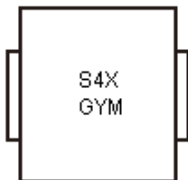


SMC/DO-214AB



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

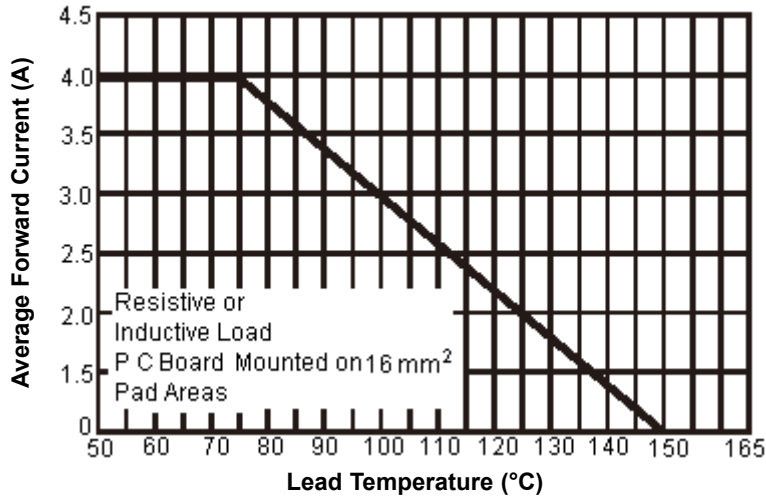
Rating at 25°C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

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

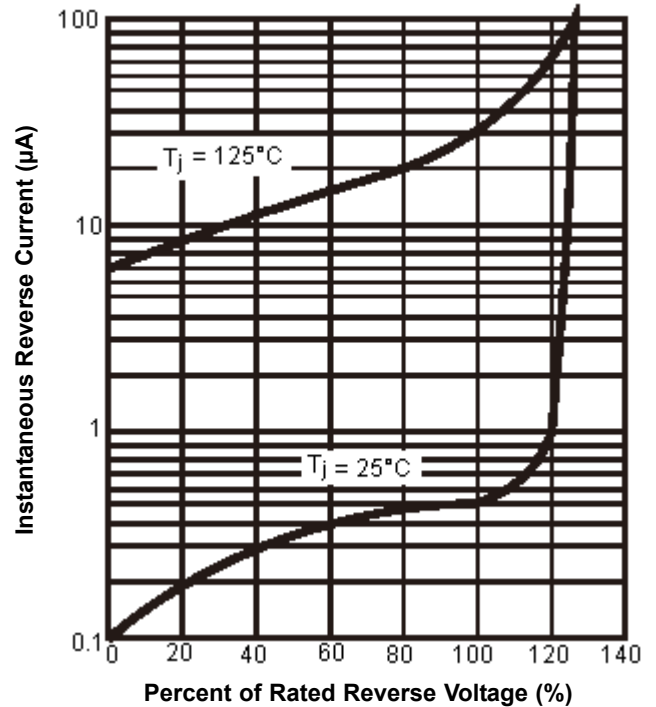
- Notes:**
1. Pulse test with $PW = 300 \mu\text{s}$, 1% duty cycle.
 2. Measured at 1 MHz and applied $V_R = 4$ Volts.
 3. Measured on P C board with $0.6 \times 0.6"$ (16×16 mm) copper pad areas.
 4. Reverse recovery test conditions : $I_F = 0.5$ A, $I_R = 1$ A, $I_{RR} = 0.25$ A.

Ratings and Characteristic Curves (S4G thru S4M)

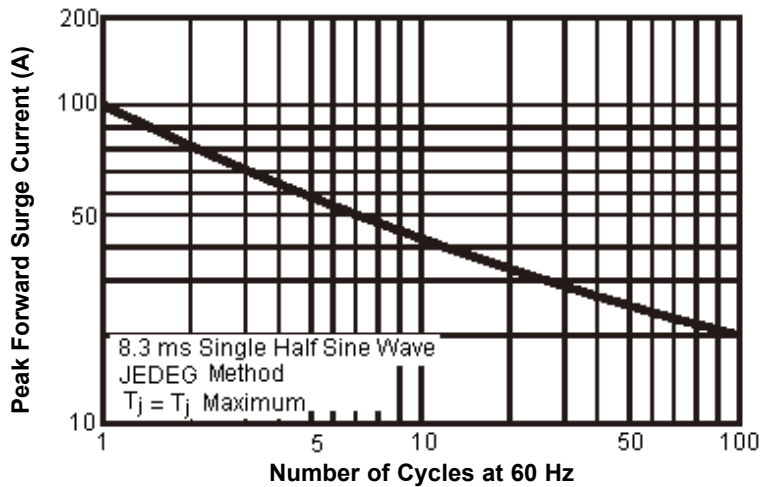
Maximum Forward Current Derating Curve



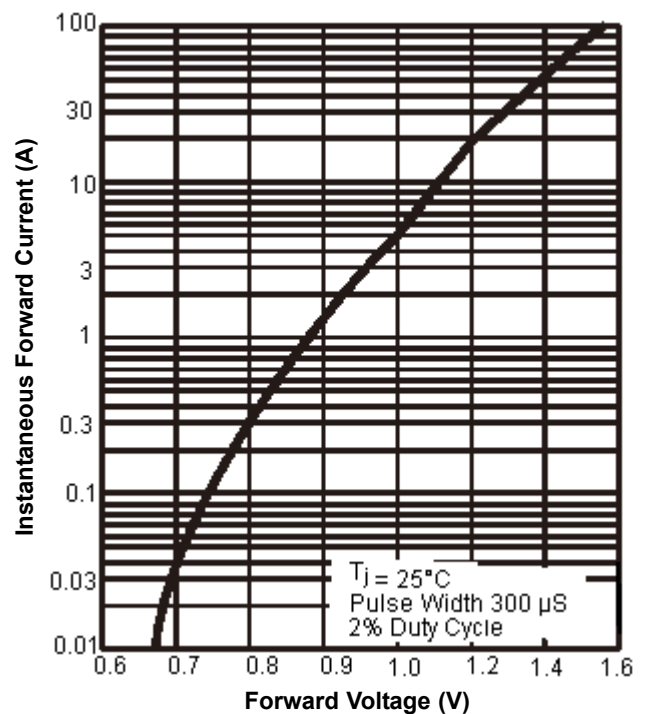
Typical Reverse Characteristics



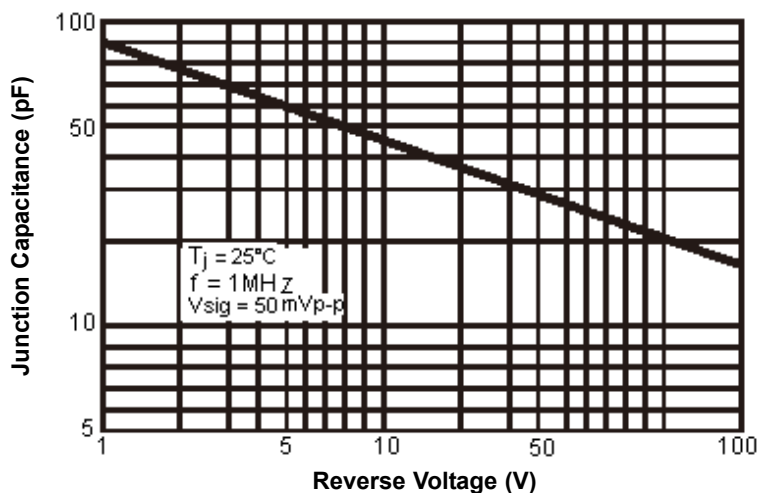
Maximum Non-Repetitive Forward Surge Current



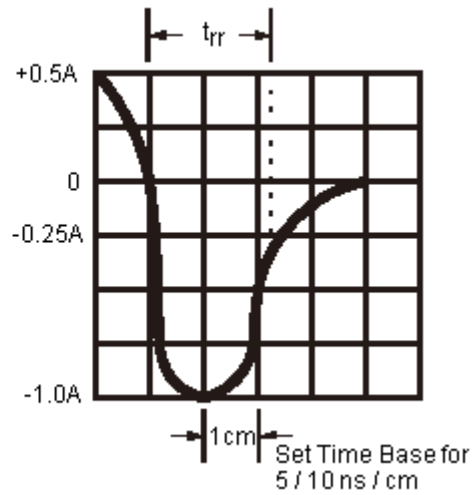
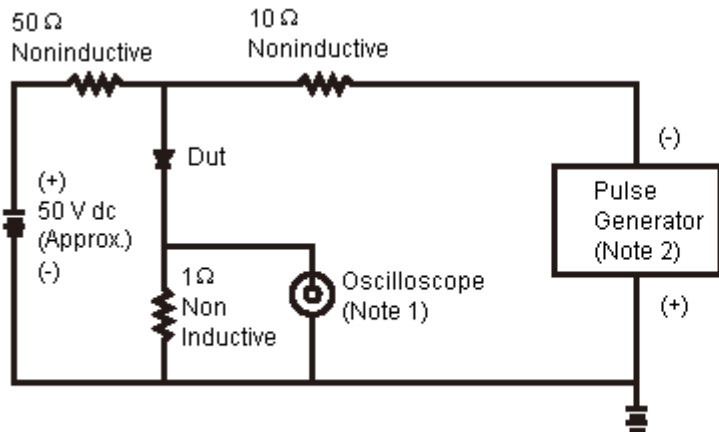
Typical Forward Characteristics



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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