



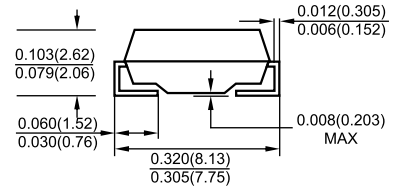
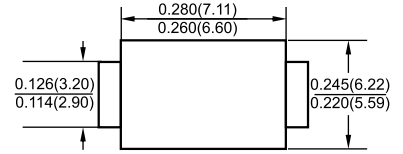
### Features

- ✧ 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

### Mechanical Data

- ✧ Case: Molded plastic
- ✧ Terminals: Pure tin plated, lead free.
- ✧ Polarity: Indicated by cathode band
- ✧ Weight: 0.21 gram

### SMC/DO-214AB



Dimensions in inches and (millimeters)

### 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	S3TC	S3WC	S3XC	S3YC	Units
<b>Marking code</b>		<b>S3T</b>	<b>S3W</b>	<b>S3X</b>	<b>S3Y</b>	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	1300	1600	1800	2000	V
Maximum RMS Voltage	$V_{RMS}$	760	820	880	940	V
Maximum DC Blocking Voltage	$V_{DC}$	1300	1600	1800	2000	V
Maximum Average Forward Rectified Current @ $T_L = 105^\circ\text{C}$	$I_{(AV)}$	3.0				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 @ 3.0A	$V_F$	1.15				V
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	$I_R$	10.0 250				$\mu\text{A}$ $\mu\text{A}$
Typical Reverse Recovery Time ( Note 1 )	$T_{rr}$	1.5				$\mu\text{S}$
Typical Junction Capacitance ( Note 2 )	$C_j$	60				pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$ $R_{\theta JA}$	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. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$
  2. Measured at 1 MHz and Applied  $V_R=4.0$  Volts
  3. Measured on P.C. Board with 0.4" x 0.4" (10mm x 10mm) Copper Pad Areas.



### RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

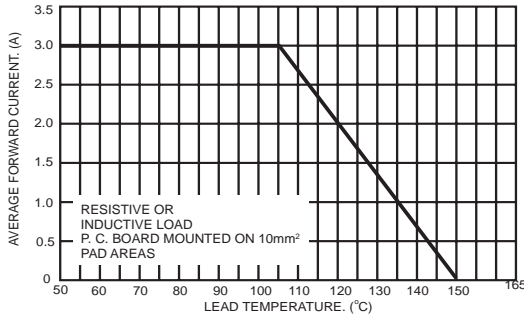


FIG.2- TYPICAL REVERSE CHARACTERISTICS

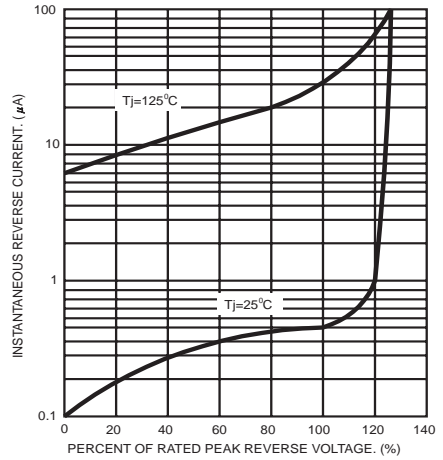


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

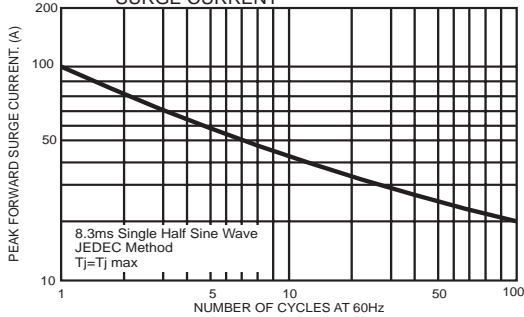


FIG.5- TYPICAL FORWARD CHARACTERISTICS

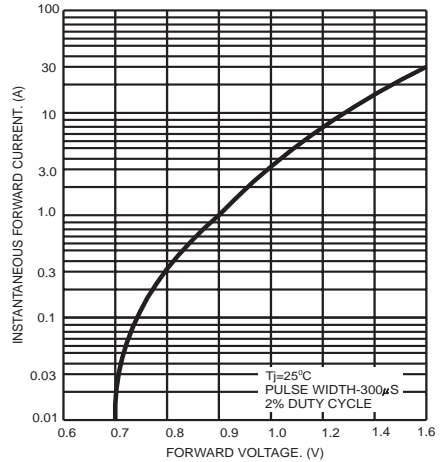


FIG.4- TYPICAL JUNCTION CAPACITANCE

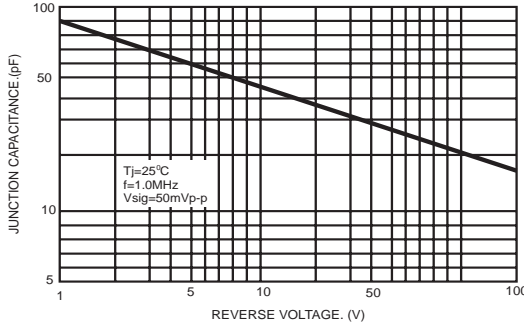
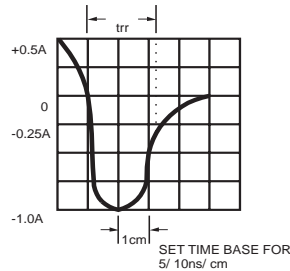
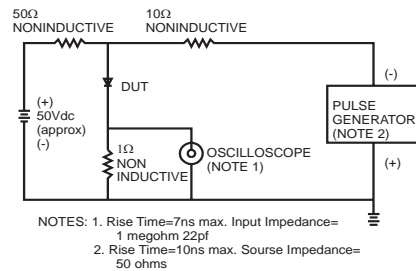


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMC	3000/REEL	42000	36X36X36.5	18.50	15.50