



S4A - S4M

4.0 AMPS. Surface Mount Rectifiers

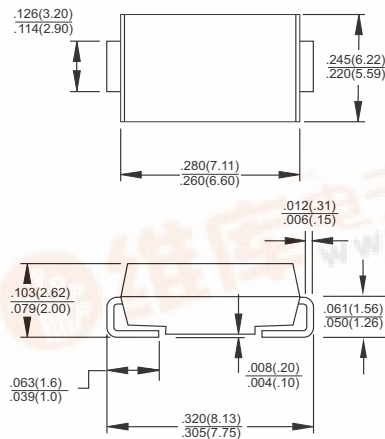
SMC/DO-214AB

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

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 gram



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	S4A	S4B	S4D	S4G	S4J	S4K	S4M	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 @ $T_L = 75^\circ C$	I_{AV}	4.0							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 @ 4.0A	V_F	1.15							V
Maximum DC Reverse Current @ $T_A = 25^\circ C$ at Rated DC Blocking Voltage @ $T_A = 125^\circ C$	I_R	10 250							μA μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	2.5							μS
Typical Junction Capacitance (Note 2)	C_j	60							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$ $R_{\theta JA}$	13 47							$^\circ C / W$
Operating Temperature Range	T_J	-55 to +150							$^\circ C$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ C$

Notes:

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

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

3. Measured on P.C. Board with 0.6" x 0.6" (16mm x 16mm) Copper Pad Areas.

RATINGS AND CHARACTERISTIC CURVES (S4A THRU S4M)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

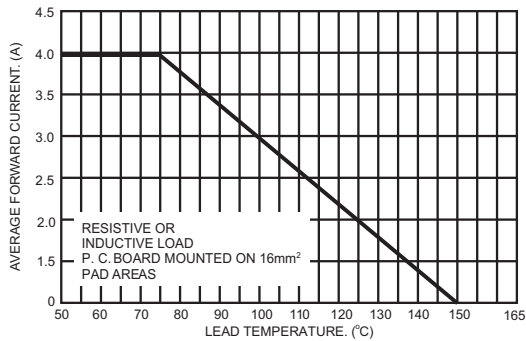


FIG.2- TYPICAL REVERSE CHARACTERISTICS

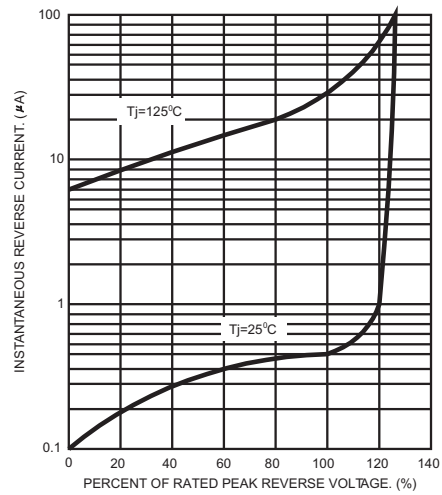


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

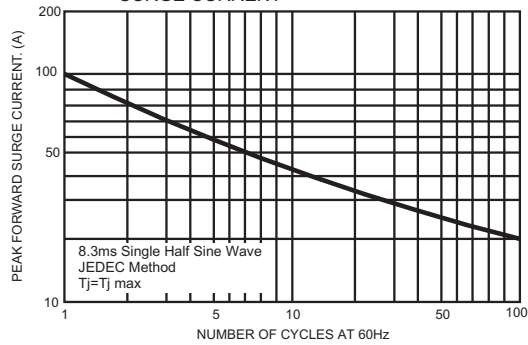


FIG.5- TYPICAL FORWARD CHARACTERISTICS

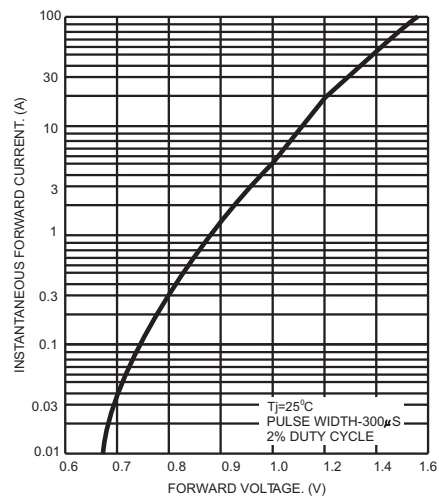


FIG.4- TYPICAL JUNCTION CAPACITANCE

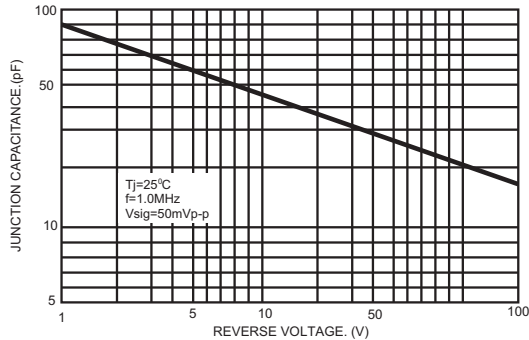


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

