



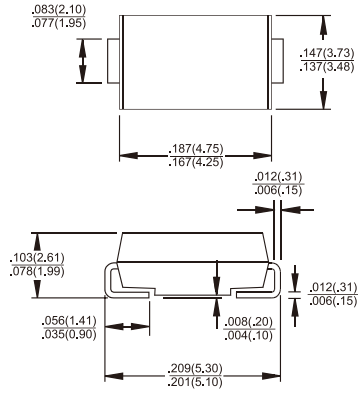
S3AB - S3MB

3.0 AMPS. Surface Mount Rectifiers

SMB/DO-214AA

Features

- ◇ UL Recognized File # E-326243
- ◇ 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



S3XB = 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: 12mm tape per EIA STD RS-481
- ◇ Weight: 0.093 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	S3 AB	S3 BA	S3 DB	S3 GB	S3 JB	S3 KB	S3 MB	Units
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ _{T_L} =75 °C	I _{F(AV)}	3.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	80							A
Maximum Instantaneous Forward Voltage @ 3.0A	V _F	1.15							V
Maximum DC Reverse Current at @ T _A =25 °C	I _R	10							µA
Rated DC Blocking Voltage (Note 1) @ T _A =125 °C		250							µA
Typical Reverse Recovery Time (Note 4)	T _{rr}	1.5							µS
Typical Junction Capacitance (Note 2)	C _j	40							pF
Typical Thermal Resistance (Note 3)	R _{θJL}	10							°C/W
Operating Temperature Range	T _J	-55 to +150							°C
Storage Temperature Range	T _{STG}	-55 to +150							°C

Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle
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.
4. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

RATINGS AND CHARACTERISTIC CURVES (S3AB THRU S3MB)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

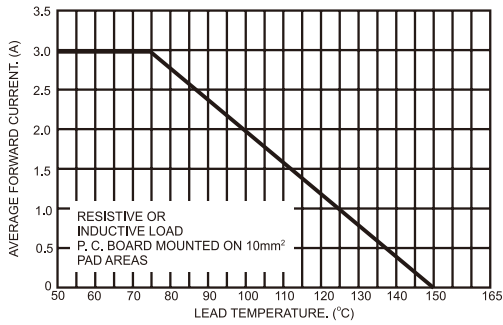


FIG.2- TYPICAL REVERSE CHARACTERISTICS

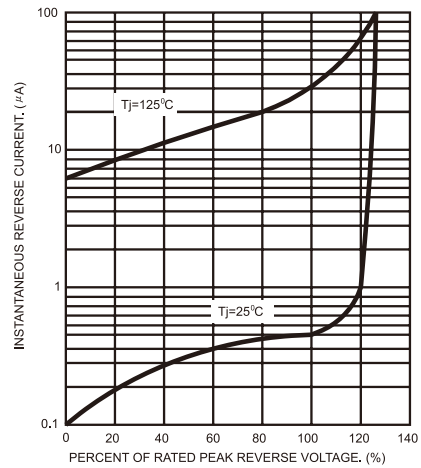


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

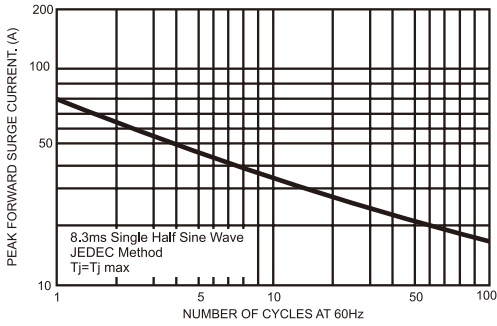


FIG.5- TYPICAL FORWARD CHARACTERISTICS

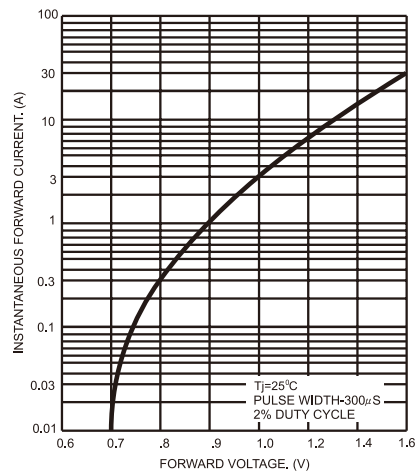


FIG.4- TYPICAL JUNCTION CAPACITANCE

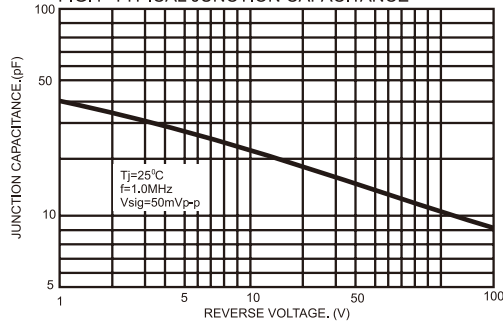


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

