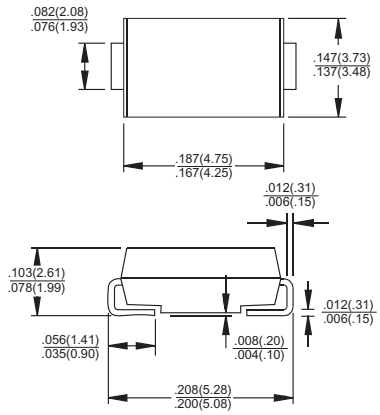
S3AB THRU S3MB

3.0 AMPS. Surface Mount Rectifiers



Voltage Range
50 to 1000 Volts
Current
3.0 Amperes

SMB/DO-214AA



Dimensions in inches and (millimeters)

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-O
- ✧ High temperature soldering:
- ✧ 260°C / 10 seconds at terminals

Mechanical Data

- ✧ Case: Molded plastic
- ✧ Terminals: Solder plated
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 16mm tape per EIA STD RS-481
- ✧ Weight: 0.093 gram

Maximum Ratings and Electrical Characteristics

Rating at 25℃ 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	S3AB	S3BB	S3DB	S3GB	S3JB	S3KB	S3MB	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℃	$I_{(AV)}$	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℃ at Rated DC Blocking Voltage @ T_A=125℃	I_R	10.0 250							uA uA
Typical Thermal Resistance (Note 3)	$R\theta_{JL}$	10							℃/W
Maximum Reverse Recovery Time (Note 1)	Trr	2.5							uS
Typical Junction Capacitance (Note 2)	Cj	40							pF
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃

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 0.4 x 0.4" (10 x 10mm) Copper Pad Areas.

RATINGS AND CHARACTERISTIC CURVES (S3AB THRU S3MB)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

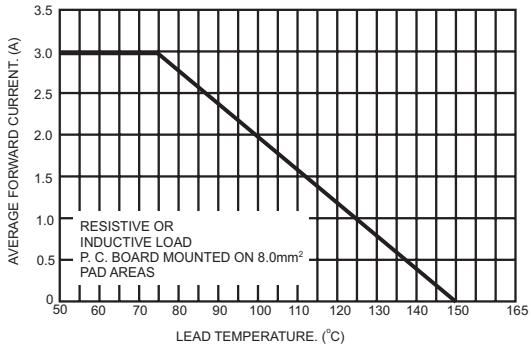


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

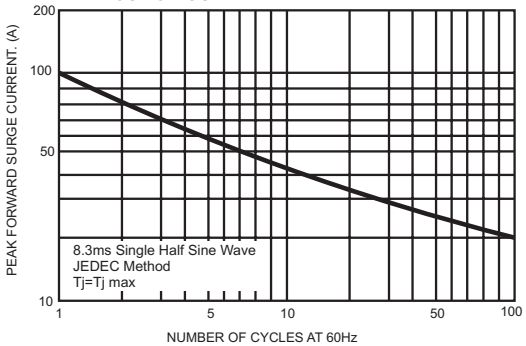


FIG.3- TYPICAL FORWARD CHARACTERISTICS

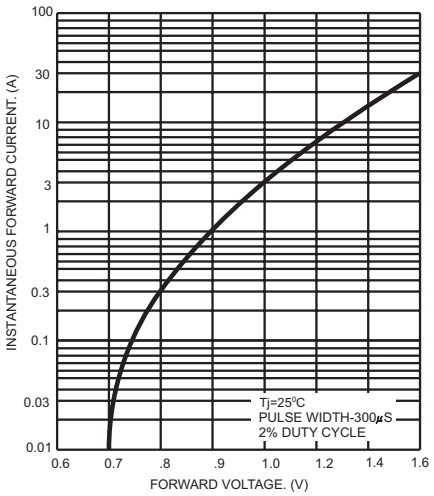


FIG.4- TYPICAL REVERSE CHARACTERISTICS

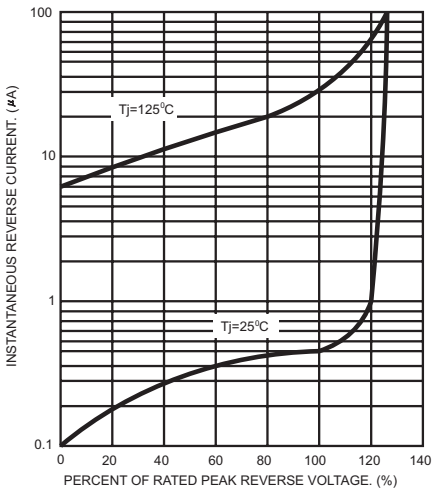


FIG.5- TYPICAL JUNCTION CAPACITANCE

