

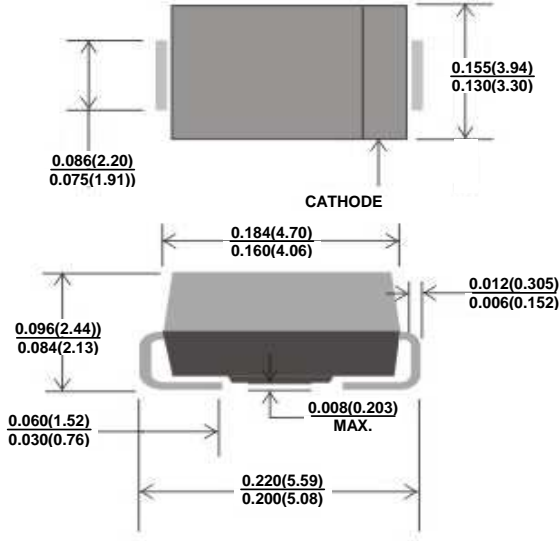


# S3AB THRU S3MB

## SURFACE MOUNT GENERAL RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Ampere

### DO-214AA



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering : 260°C /10 seconds at terminals

### MECHANICAL DATA

**Case:** JEDEC DO-214AA molded plastic body

**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.004 ounce, 0.105 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

PARAMETER	SYMBOLS	S3AB	S3BB	S3DB	S3GB	S3JB	S3KB	S3MB	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Minimum DC Breakdown Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Average Rectified current at $T_L = 75^\circ\text{C}$	$I_{F(AV)}$	3.0							Amp
Non-repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100							Amps
Maximum Forward Voltage at $I_F = 3.0\text{A}$	$V_F$	1.15							Volts
Reverse Leakage Current at $V_{RRM}$ $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	$I_R$	10 100							$\mu\text{A}$
Typical Junction Capacitance (NOTE 1)	$C_J$	60							pF
Typical Thermal Resistance (NOTE 2)	$R_{\theta JA}$	47							$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	-65 to +150							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150							$^\circ\text{C}$

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas, PCBoard FR4.

3.  $T_J = 25^\circ\text{C}$  unless otherwise specified.



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## RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

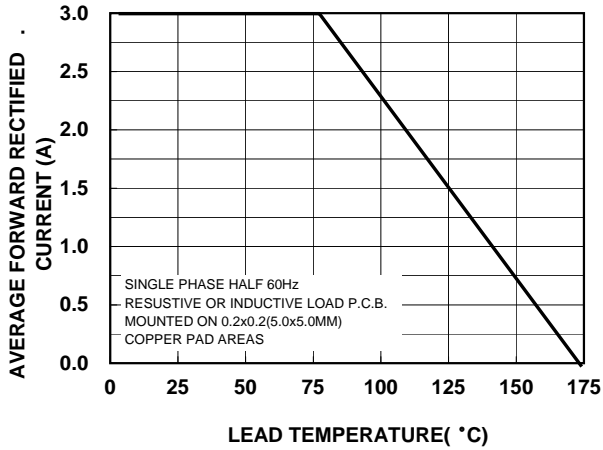


FIG. 2-TYPICAL JUNCTION RATINGS

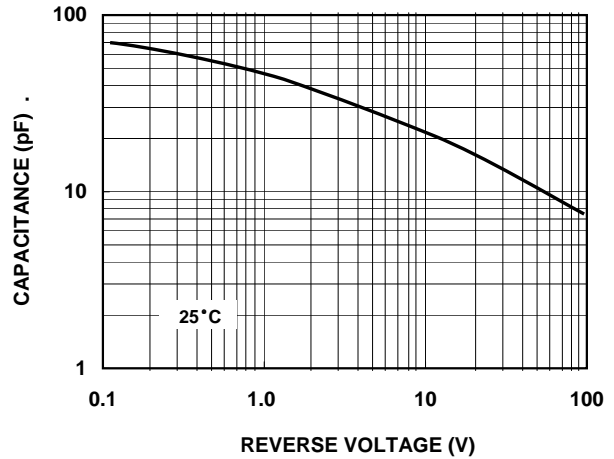


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

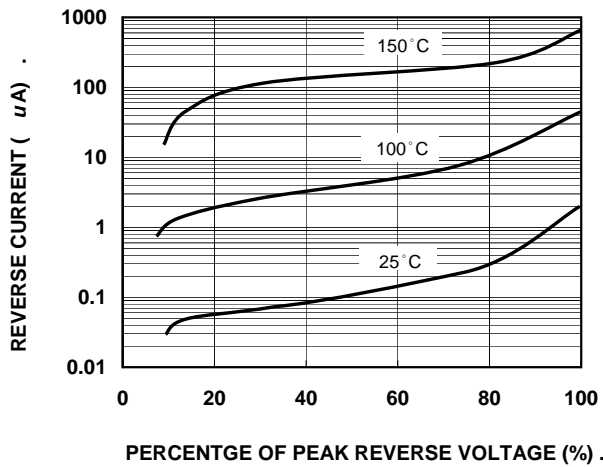


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

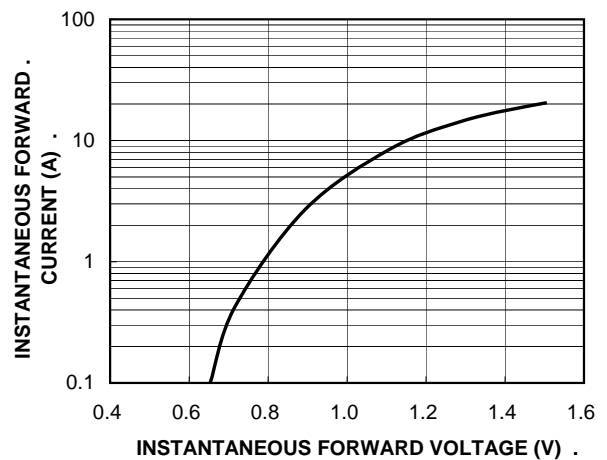


FIG.5.µMAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

