

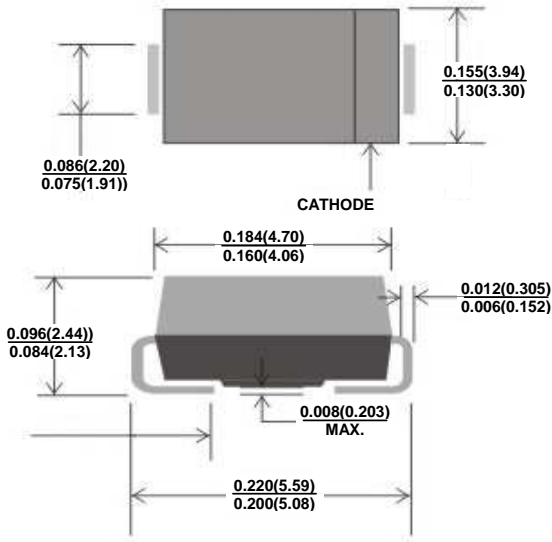


# RS1AB THRU RS1MB

## SURFACE MOUNT FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

### DO-214AA



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Surface mount package ideally suited for automatic insertion
- ◆ Fast switching for high efficiency, Low reverse leakage
- ◆ Pb free product : 99% Sn above can meet RoHS environment substance directive request
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** JEDEC DO-214AA , Molded plastic body

**Terminals:** Solderable per MIL-STD-750 , Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

### 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	RS1AB	RS1BB	RS1DB	RS1GB	RS1JB	RS1KB	RS1MB	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 $T_L = 90^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Non-repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0							Amps
Maximum Forward Voltage at $I_F=1.0A$	$V_F$	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	5.0 50							$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	150			250		500		nS
Typical Junction Capacitance (NOTE 2)	$C_J$	15.0							pF
Typical Thermal Resistance (NOTE 3)	$R_{\theta JA}$	50.0							$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	150							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 ~ +150							$^\circ\text{C}$

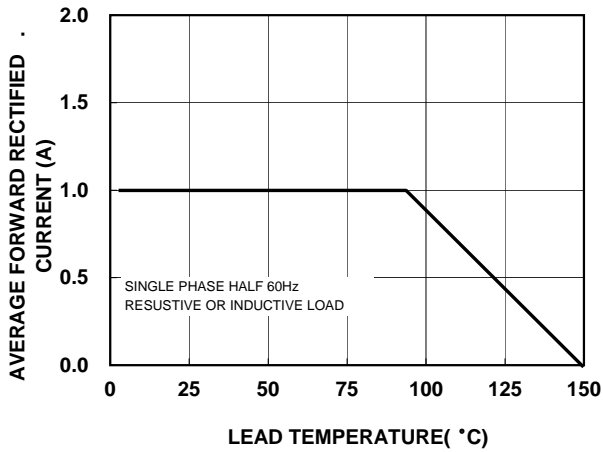
- Note:**
1. Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
  2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
  3. Mounted with minimum recommended padsize , PCBoard FR4.



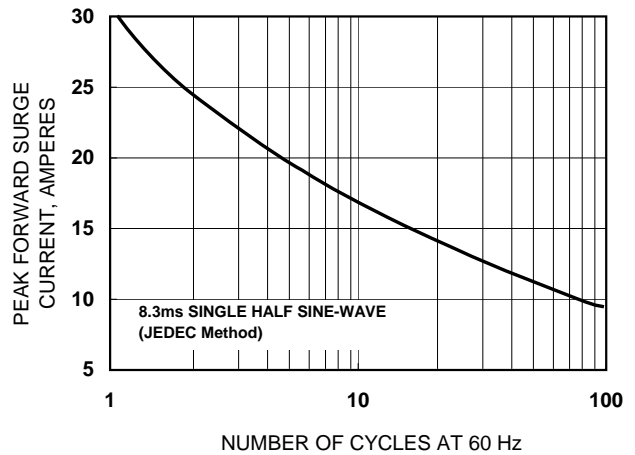
# RS1AB THRU RS1MB

## RATINGS AND CHARACTERISTIC CURVES

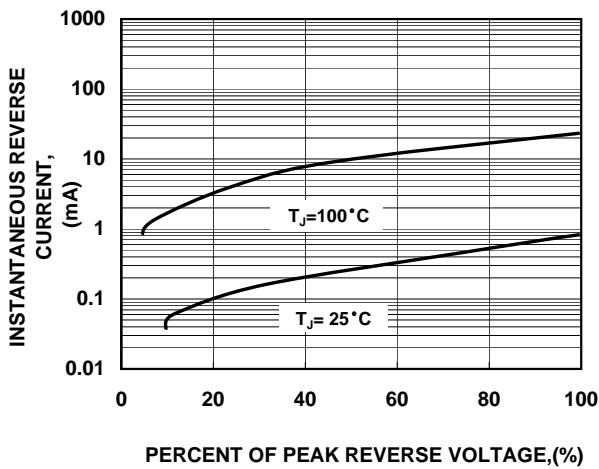
**FIG. 1- FORWARD CURRENT DERATING CURVE**



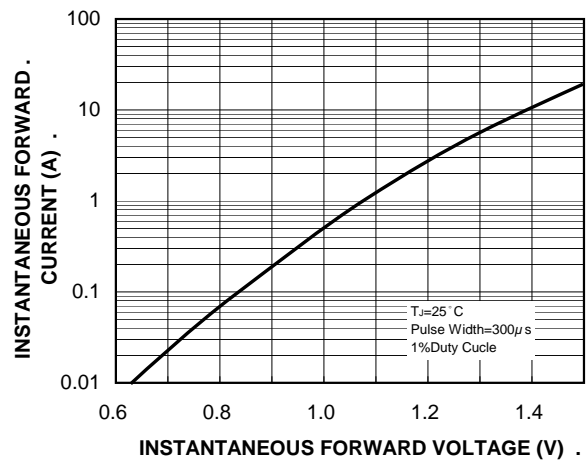
**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



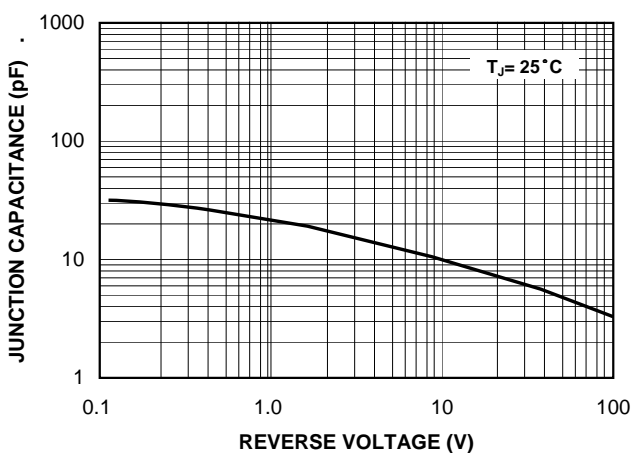
**FIG. 3-TYPICAL REVERSE CHARACTERISTICS**



**FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 5-TYPICAL JUNCTION CAPACITANCE**



**FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE**

