



# RS1A~RS1J

## SURFACE MOUNT FAST RECOVERY RECTIFIER

**VOLTAGE** 50 to 600 Volts **CURRENT** 1.0 Ampere

SMA / DO-214AC

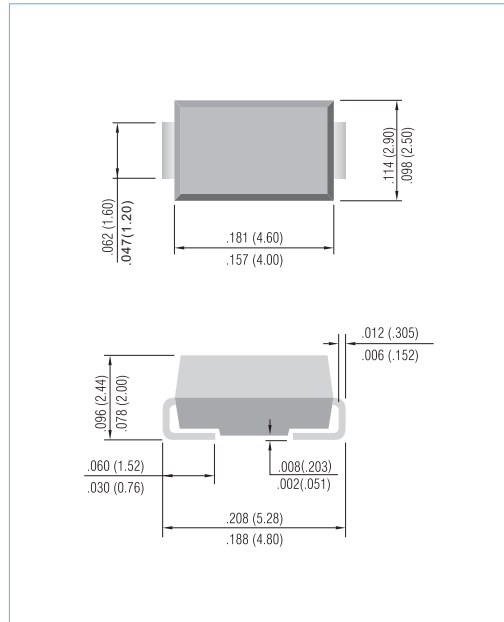
Unit: inch ( mm )

### FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Fast Recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.0023 ounce, 0.0679 gram



# Datasheet World

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.

PARAMETER	SYMBOL	RS1A	RS1B	RS1D	RS1G	RS1J	UNITS	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	V	
Maximum Average Rectified Current at $T_L=90^\circ\text{C}$	$I_{F(AV)}$	1.0						A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	30						A
Maximum Forward Voltage at 1.0A	$V_F$	1.3						V
Maximum DC Reverse Current $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=125^\circ\text{C}$	$I_R$	1.0 150						$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	150				250		ns
Maximum Junction capacitance (Note 2)	$C_J$	12						pF
Typical Junction Resistance(Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	100 32						$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Rating	$T_J, T_{STG}$	-55 to +150						$^\circ\text{C}$

NOTES:1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$   
 2. Measured at 1 MHz and applied  $V_r = 4.0$  volts.  
 3.  $8.0 \text{ mm}^2$  ( .013mm thick ) land areas.



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## RATING AND CHARACTERISTIC CURVES

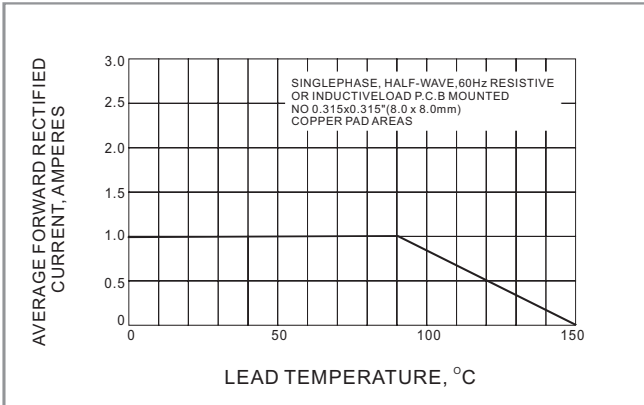


Fig.1 FORWARD CURRENT DERATING CURVE

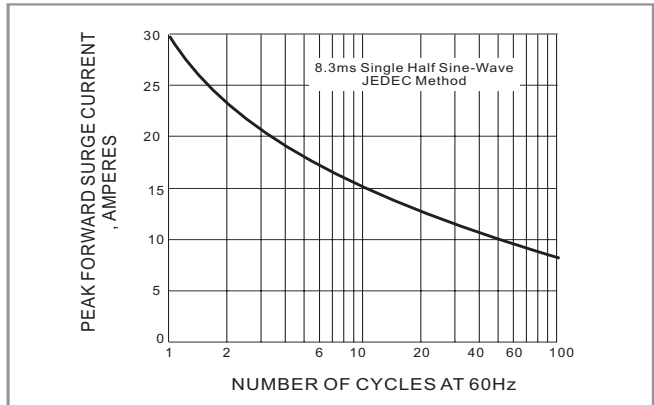


Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

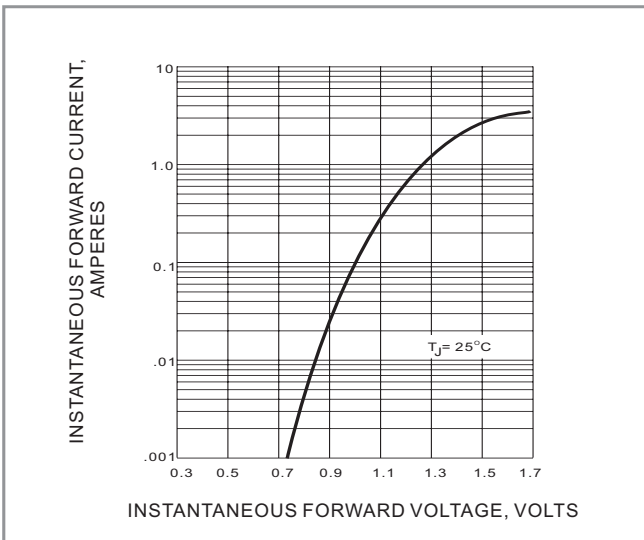


Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

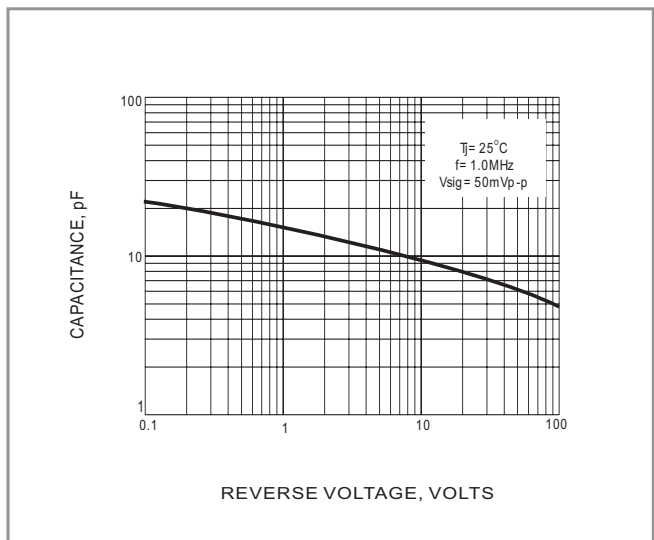


Fig.4 TYPICAL JUNCTION CAPACITANCE

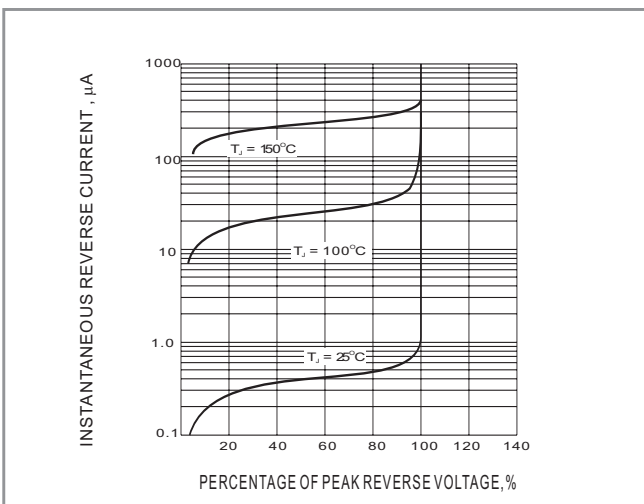
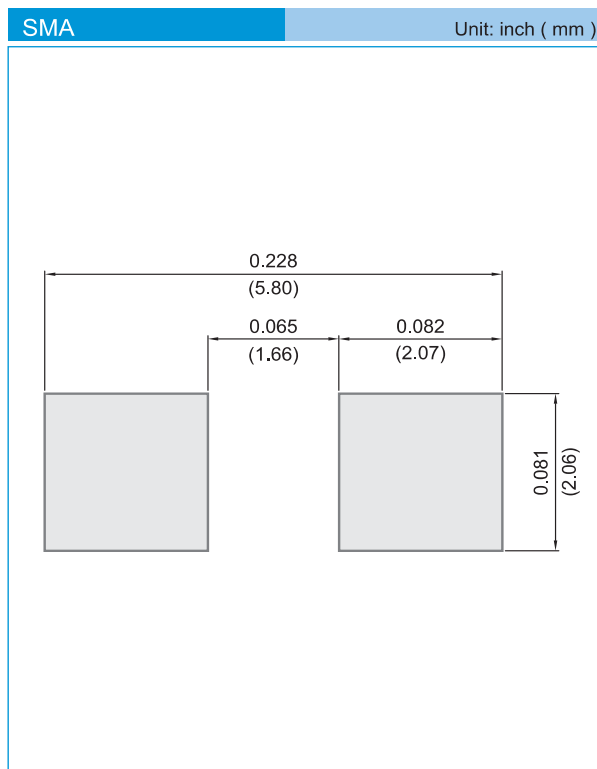


Fig.5-TYPICAL REVERSE CHARACTERISTIC



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information
  - T/R - 7.5K per 13" plastic Reel
  - T/R - 1.8Kper 7" plastic Reel

## LEGAL STATEMENT

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