



# RS1A~RS1J

## SURFACE MOUNT FAST RECOVERY RECTIFIER

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

SMA / DO-214AC

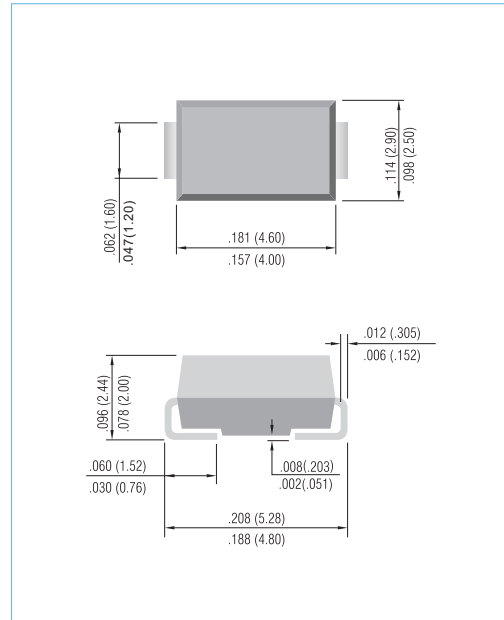
Unit: inch ( mm )

### 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
- Lead free in comply 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



## 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%.

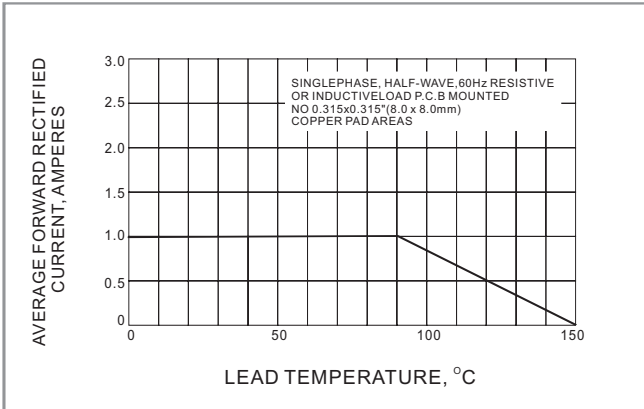
PARAMETER	SYMBOL	RS1A	RS1B	RS1D	RS1G	RS1J	UNITS	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	V	
Maximum Average Rectified Current at $T_L=90\text{ }^\circ\text{C}$	$I_{F(AV)}$	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.

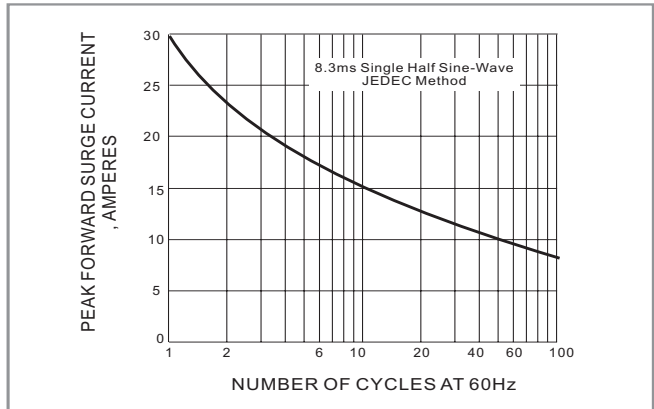


# RS1A~RS1J

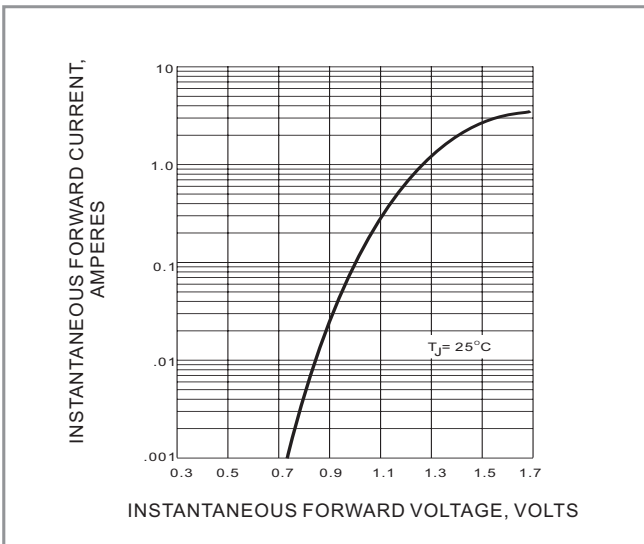
## RATING AND CHARACTERISTIC CURVES



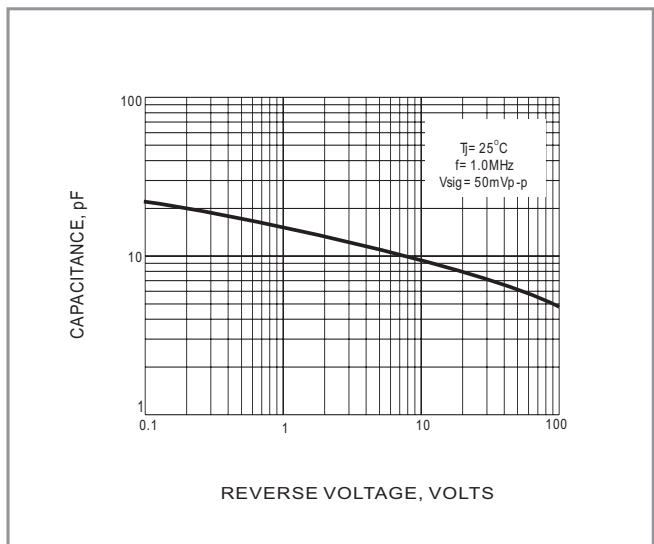
**Fig.1 FORWARD CURRENT DERATING CURVE**



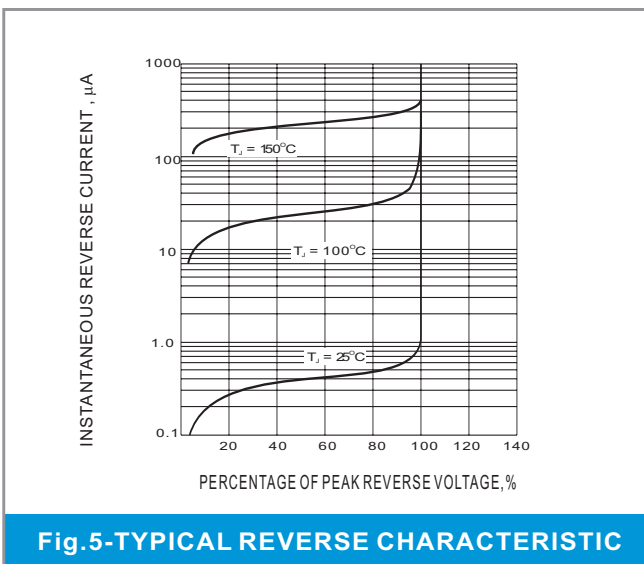
**Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**Fig.4 TYPICAL JUNCTION CAPACITANCE**

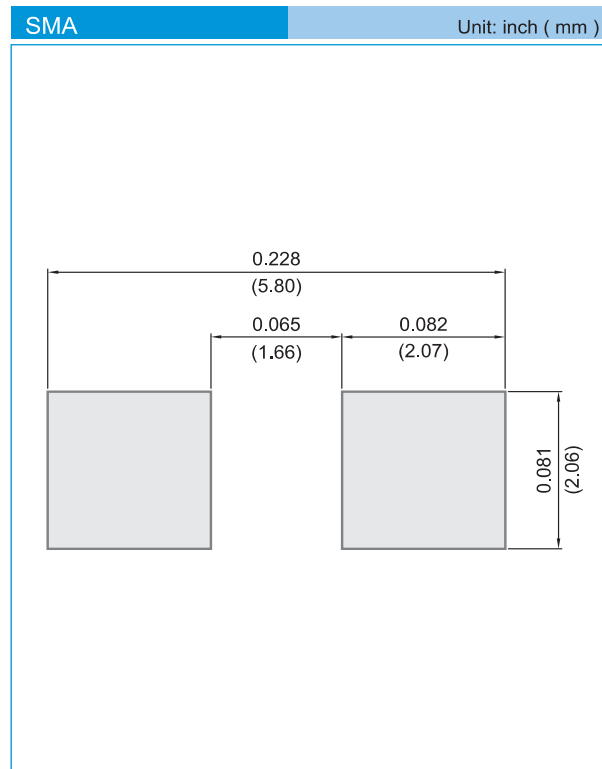


**Fig.5-TYPICAL REVERSE CHARACTERISTIC**



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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



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## Part No\_packing code\_Version

RS1A\_R1\_00001  
RS1A\_R1\_10001  
RS1A\_R2\_00001  
RS1A\_R2\_10001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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