



# RS1AW SERIES

## SURFACE MOUNT FAST RECOVERY RECTIFIER

**VOLTAGE** 50 to 1000 Volt **CURRENT** 1 Ampere

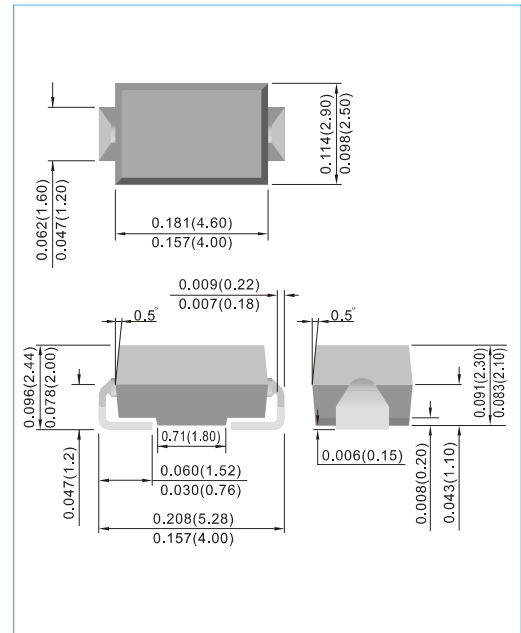
### FEATURES

- 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
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. ( Halogen Free)

### MECHANICAL DATA

- Case: SMA(W) molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.002 ounces, 0.068 grams

**SMA(W)** Unit : inch(mm)



## 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%.

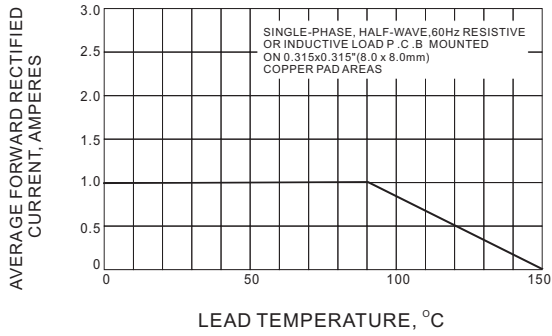
PARAMETER	SYMBOL	RS1AW	RS1BW	RS1DW	RS1GW	RS1JW	RS1KW	RS1MW	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	800	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Rectified Current $T_L=90^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30							A
Maximum Forward Voltage at 1.0A	$V_F$	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	$I_R$	5.0 150							$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	150				250	500	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:  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$   
2. Measured at 1 MHz and applied  $V_r = 4$  volts.  
3. 8 mm<sup>2</sup> ( 0.013mm thick ) land areas.

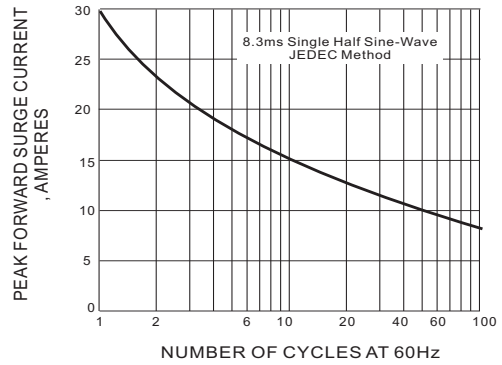


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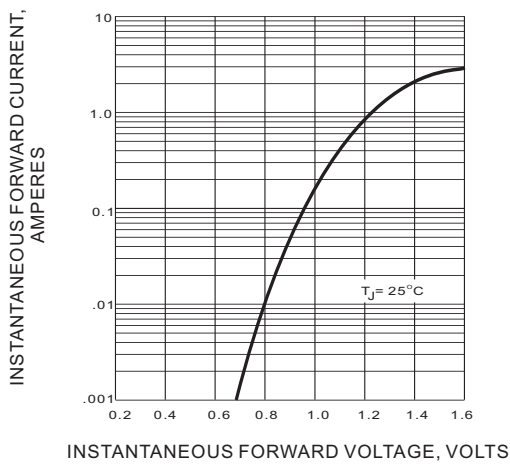
## RATING AND CHARACTERISTIC CURVES



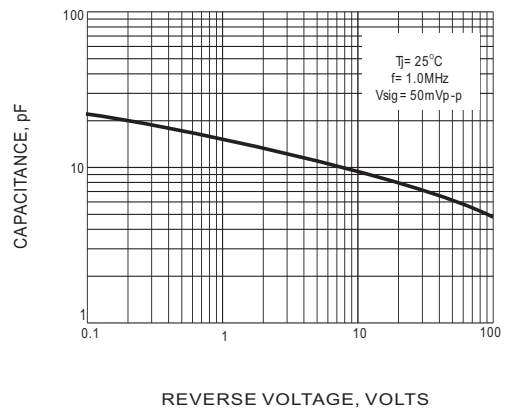
**Fig.1 FORWARD CURRENT DERATING CURVE**



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



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



**Fig.4 TYPICAL JUNCTION CAPACITANCE**

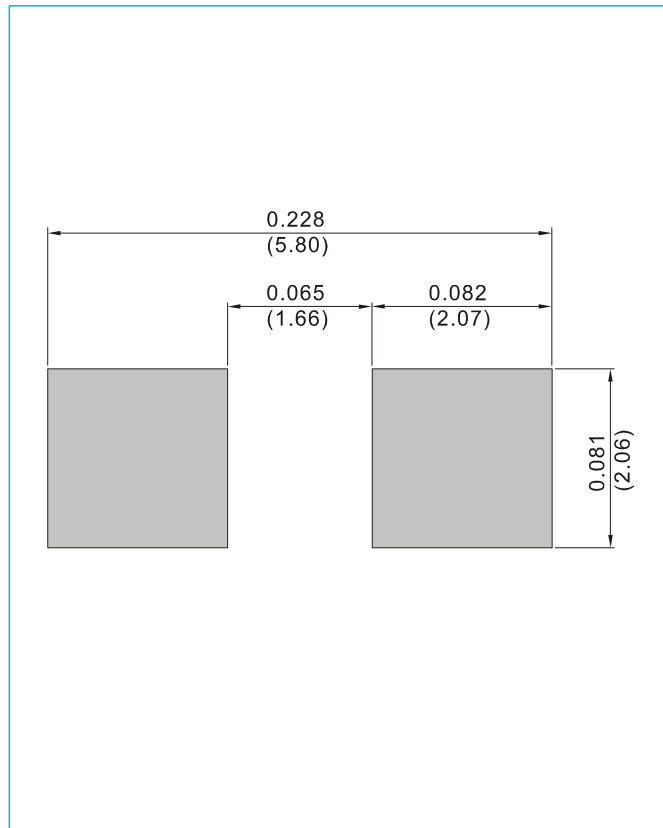


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### MOUNTING PAD LAYOUT

SMA(W)

Unit : inch(mm)



### ORDER INFORMATION

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



## RS1AW SERIES

### Part No\_packing code\_Version

RS1AW\_R1\_00001

RS1AW\_R2\_00001

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)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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