



# S3A~S3M

## SURFACE MOUNT RECTIFIER

**VOLTAGE** 50 to 1000 Volt **CURRENT** 3 Ampere

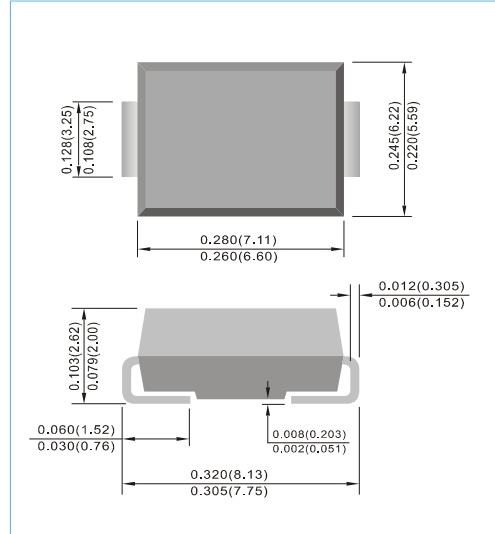
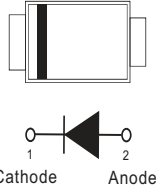
**SMC / DO-214AB** Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications in order to optimize board space
- Easy pick and place
- Glass passivated junction
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: JEDEC DO-214AB molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard packaging: 16mm tape (EIA-481)
- Approx. Weight: 0.2325 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 , derate current by 20%.

PARAMETER	SYMBOL	S3A	S3B	S3D	S3G	S3J	S3K	S3M	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	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_L = 75^\circ\text{C}$	$I_{F(AV)}$	3							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	200							A
Maximum Forward Voltage at 3A	$V_F$	1.2							V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	$I_R$	1 250							$\mu\text{A}$
Maximum Junction Capacitance (Note 1)	$C_J$	53							pF
Typical Junction Resistance (Note 2)	$R_{\theta J L}$ $R_{\theta J A}$	10 40							$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

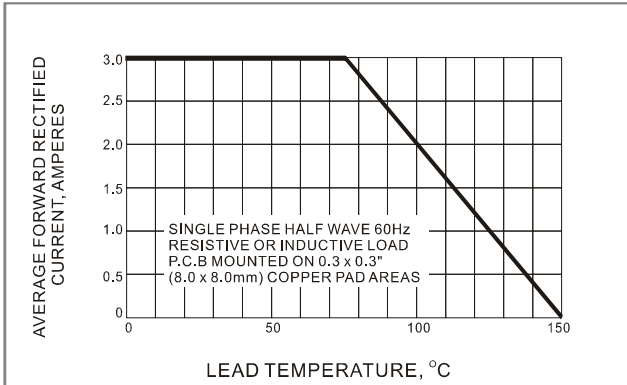
**NOTES :**

1. Measured at 1 MHz and applied  $V_R = 4$  volts.
2. Mounted on a FR-4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area

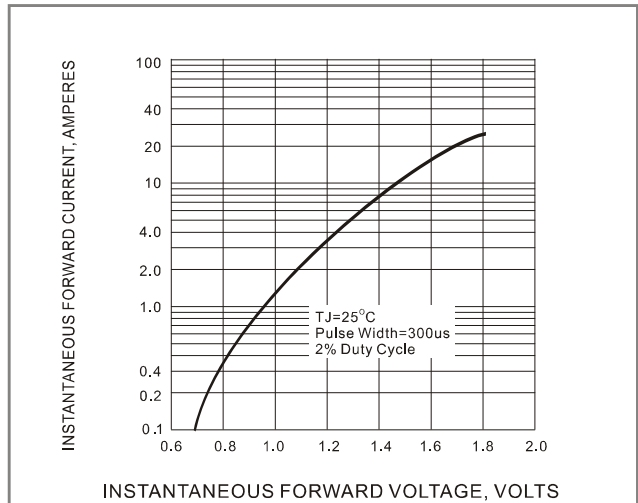


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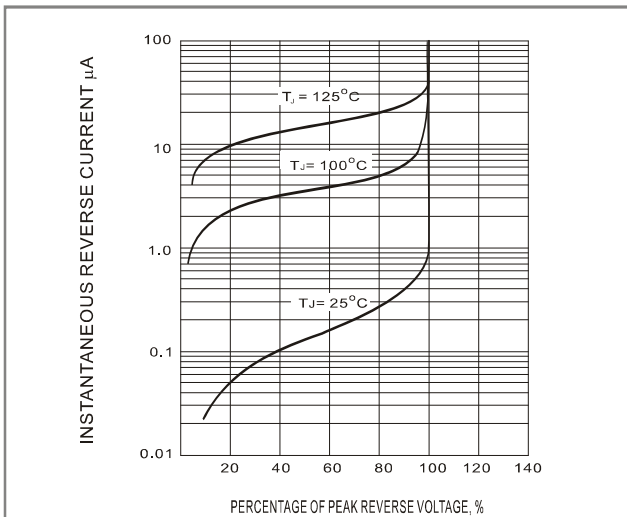
## RATING AND CHARACTERISTIC CURVES



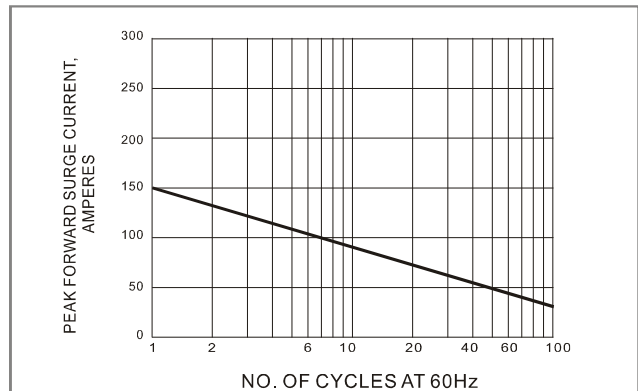
**Fig.1 FORWARD CURRENT DERATING CURVE**



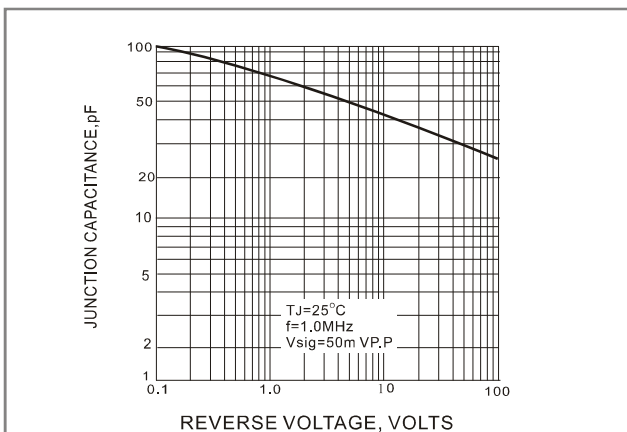
**Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**Fig.3-TYPICAL REVERSE CHARACTERISTIC**



**Fig.4 MAXIMUM NON REPETITIVE PEAK SURGE CURRENT**

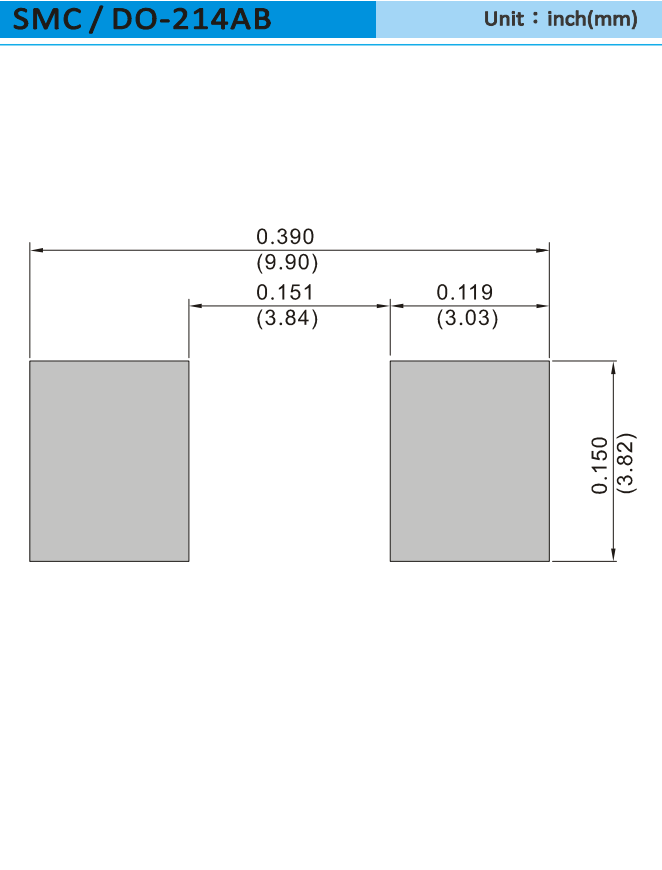


**Fig.5 TYPICAL JUNCTION CAPACITANCE**



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R - 3K per 13" plastic Reel  
T/R - 0.8K per 7" plastic Reel



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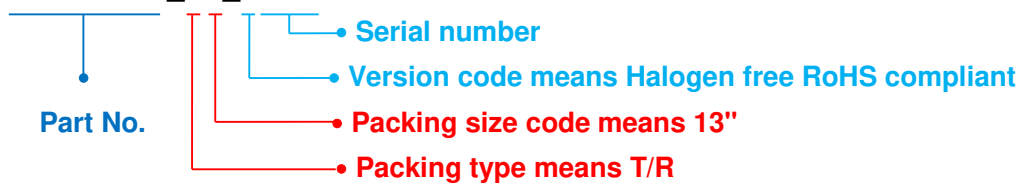
Part No.\_packing code\_Version

S3A\_R1\_00001

S3A\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>X</b>		Serial number <b>XXXX</b>
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HSF Level	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>	Halogen free RoHS compliant	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	RoHS compliant	<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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