



# S3A~S3M

## SURFACE MOUNT RECTIFIER

**VOLTAGE** 50 to 1000 Volts    **CURRENT** 3.0 Amperes

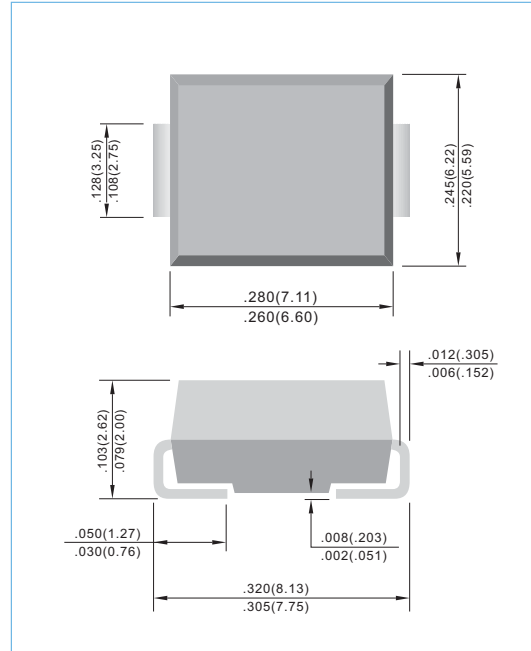
**SMC/DO-214AB**    Unit: inch (mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- glass passivated junction
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: JEDEC DO-214AB molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard packaging: 16mm tape (EIA-481)
- Weight: 0.007 ounce, 0.21 gram



### 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 $T_L = 75^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	100							A
Maximum Forward Voltage at 3.0A	$V_F$	1.2							V
Maximum DC Reverse Current at $T_J = 25^\circ\text{C}$ Rated DC Blocking Voltage $T_J = 125^\circ\text{C}$	$I_R$	5.0 250							uA
Maximum Junction capacitance (Note 1)	$C_J$	53							pF
Typical Junction Resistance(Note 2)	$R_{\theta JL}$ $R_{\theta JA}$	13 47							$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 TO +150							$^\circ\text{C}$

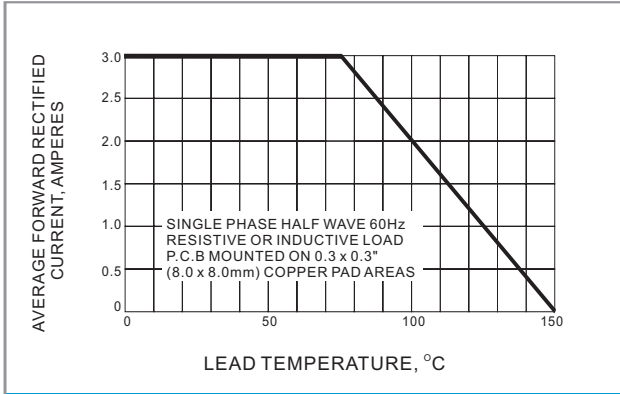
**NOTES:**

1. Measured at 1.0 MHZ and applied Vr=4.0 volts.
2. 8.0mm<sup>2</sup>(.013mm thick)land areas.

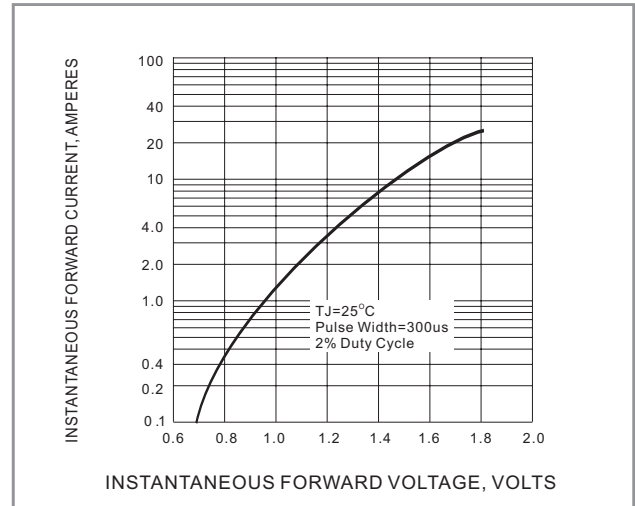


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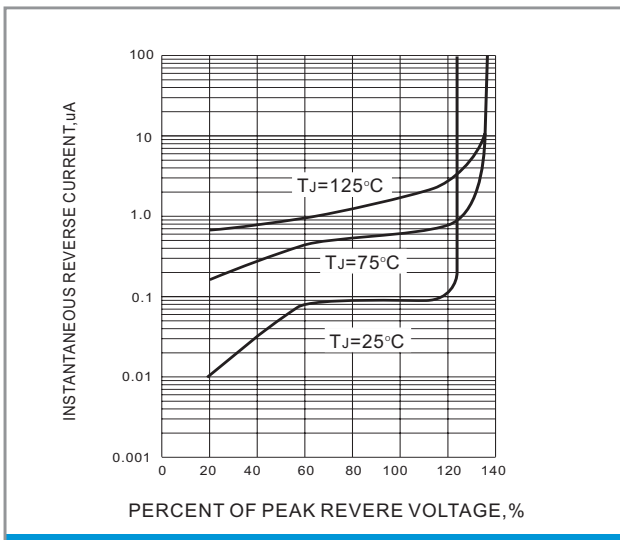
## RATING AND CHARACTERISTIC CURVES



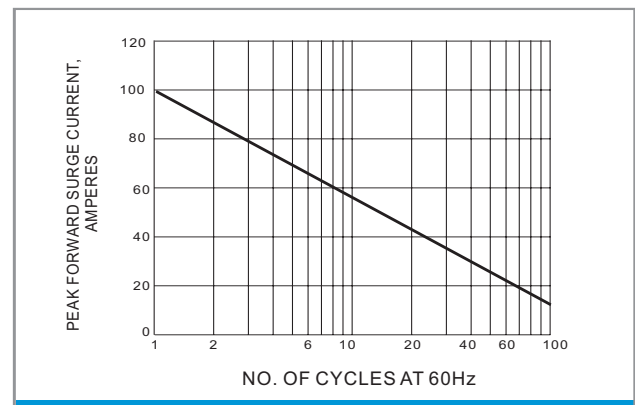
**Fig.1 FORWARD CURRENT DERATING CURVE**



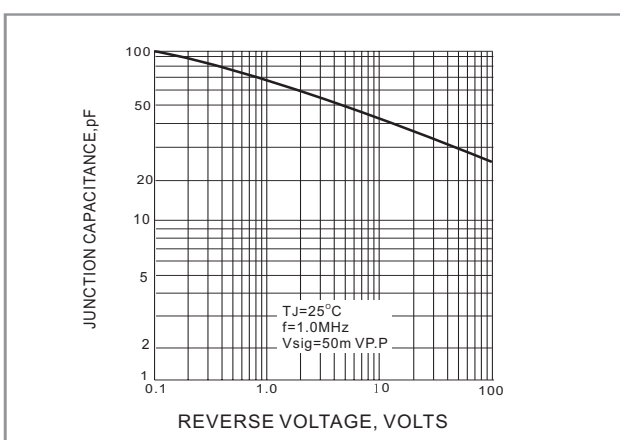
**Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**Fig.3 TYPICAL REVERSE CHARACTERISTICS**



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



**Fig.5 TYPICAL JUNCTION CAPACITANCE**

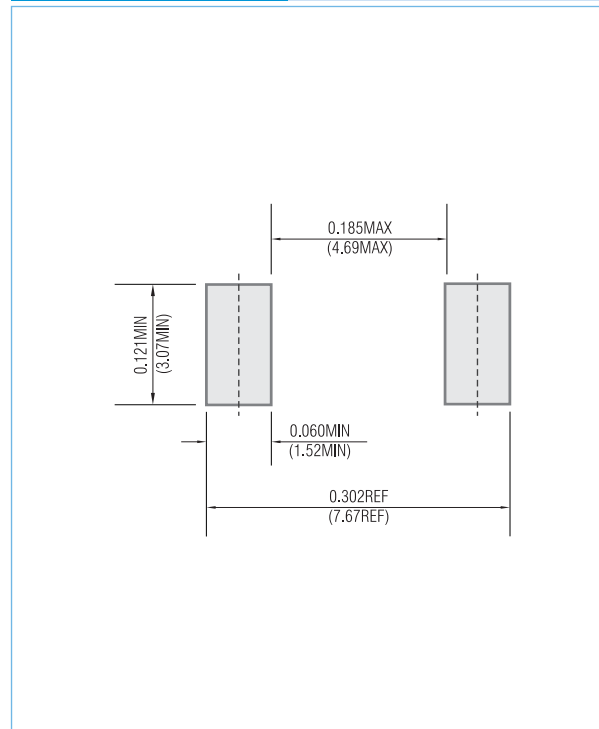


## S3A~S3M

### MOUNTING PAD LAYOUT

SMC/DO-214AB

Unit: inch ( mm )



### ORDER INFORMATION

- Packing information
  - T/R - 3K per 13" plastic Reel
  - T/R - 0.5Kper 7" plastic Reel

### LEGAL STATEMENT

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