



# ER3A~ER3J

## SURFACE MOUNT RECTIFIER

**VOLTAGE** 50 to 600 Volt **CURRENT** 3 Ampere

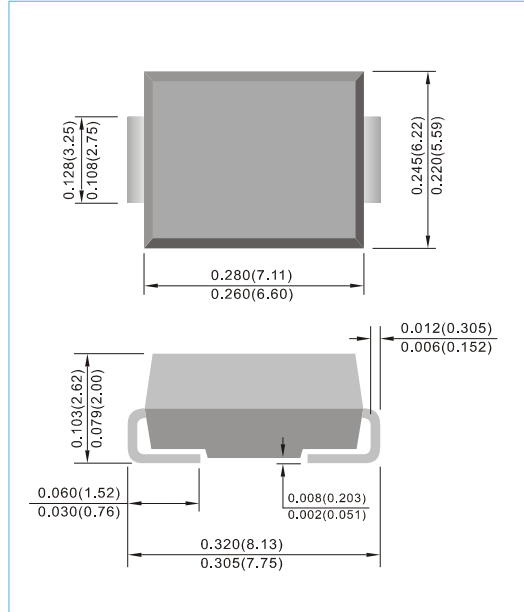
**SMC / DO-214AB** Unit : inch(mm)

### FEATURES

- For surface mounted applications
- High temperature metallurgically bonded-no compression contacts as found in other diode-constructed rectifiers
- Glass passivated junction
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- 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)
- Weight: 0.0082 ounces, 0.2325 grams



### 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	ER3A	ER3B	ER3C	ER3D	ER3E	ER3G	ER3J	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	V
Maximum Average Forward 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	$I_{FSM}$	100							A
Maximum Forward Voltage at 3A	$V_F$	0.95				1.25		1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	$I_R$	1				200			$\mu\text{A}$
Maximum Reverse Recovery Time (Notes 1)	$t_{rr}$	35							ns
Typical Junction Capacitance (Notes 2)	$C_J$	45							pF
Typical Thermal Resistance (Notes 3)	$R_{\theta JL}$	16							$^\circ\text{C} / \text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-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.  $8\text{mm}^2$  ( 0.013mm thick ) land areas.



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## RATING AND CHARACTERISTIC CURVES

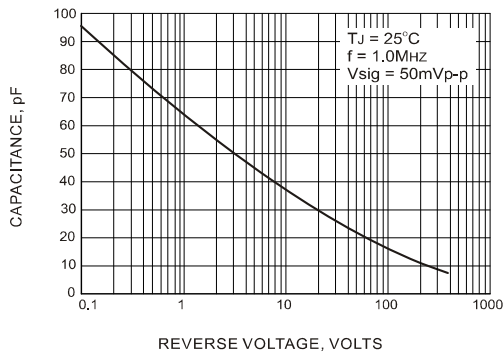


FIG. 1 TYPICAL JUNCTION CAPACITANCE

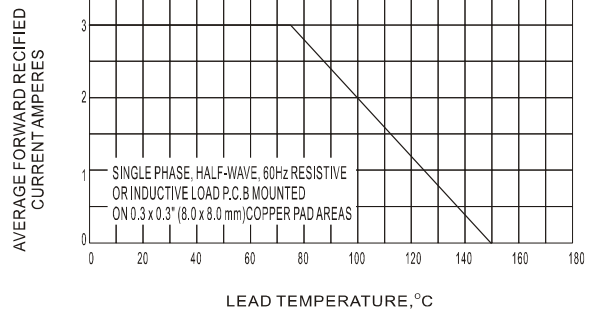


FIG. 2 MAXIMUM AVERAGE FORWARD CURRENT RATING

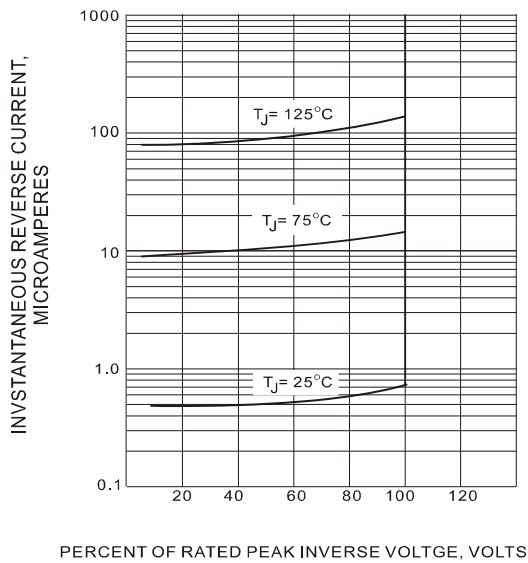


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

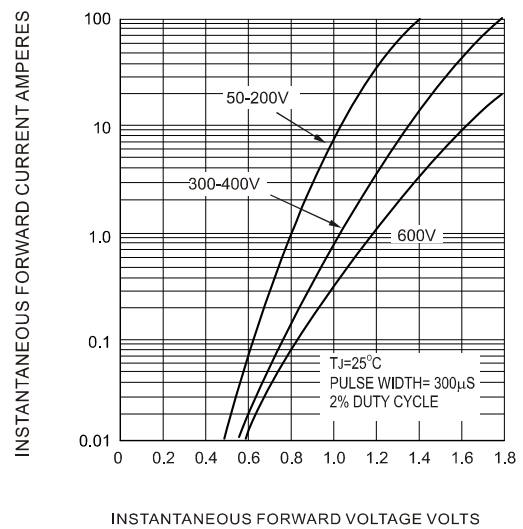


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

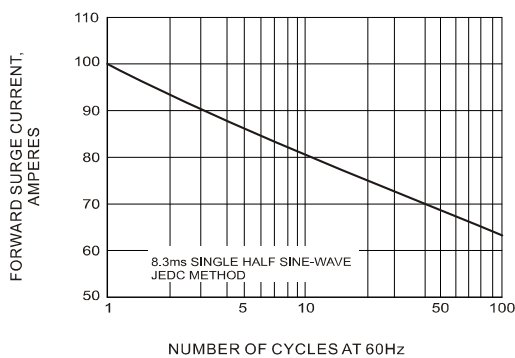
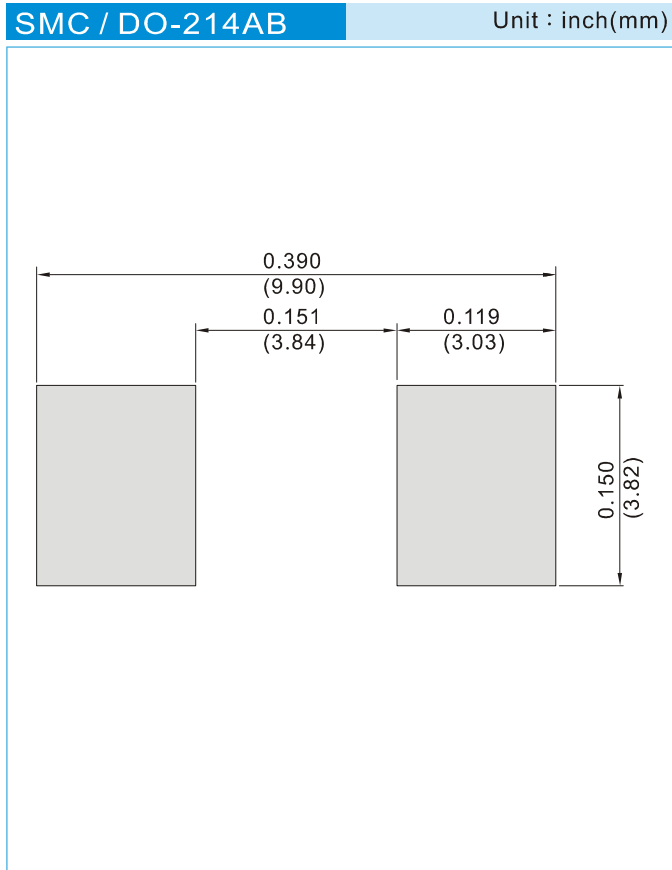


FIG. 5 MAXIMUM NON-REPEITIVE SURGE CURRENT



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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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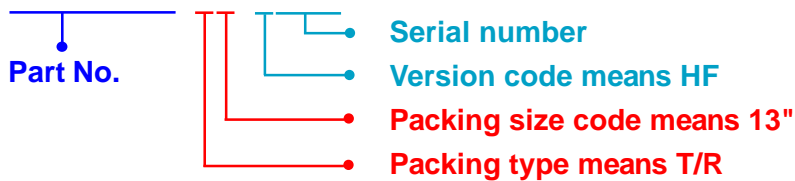
## Part No\_packing code\_Version

ER3A\_R1\_00001

ER3A\_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)	<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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