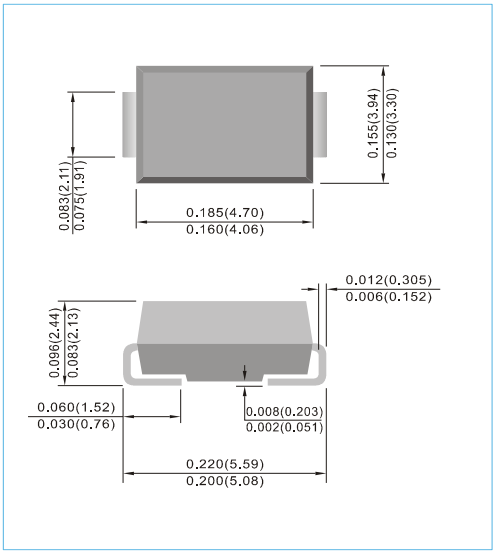
# ER3AA~ER3JA

## SUPER FAST RECOVERY RECTIFIER

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

**SMB / DO-214AA** Unit : inch(mm)

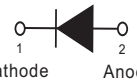



### FEATURES

- 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-214AA 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 : 0.0032 ounces, 0.092 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 | ER3AA | ER3BA | ER3CA | ER3DA | ER3EA | ER3GA | ER3JA | 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 | $I_{F(AV)}$ | 3 | | | | | | | A |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$ | 80 | | | | | | | A |
| Maximum Forward Voltage at 3A | $V_F$ | 0.95 | | | | 1.25 | | 1.7 | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $I_R$ | 1 | | | | | | | µA |
| Maximum Reverse Recovery Time (Notes 3) | $t_{rr}$ | 35 | | | | | | | ns |
| Typical Junction Capacitance Measured at 1MHz and applied $V_R$=4V | $C_J$ | 45 | | | | | | | pF |
| Typical Thermal Resistance (Notes 2) (Notes 1) | $R_{\theta JA}$ $R_{\theta JC}$ | 135 20 | | | | | | | °C / W |
| Operating and Storage Temperature Range | $T_J$,$T_{STG}$ | -55 to +150 | | | | | | | °C |

NOTES: 1. Mounted on a FR4 PCB, single-sided copper, with 100cm$^2$ copper pad area
2. Mounted on a FR4 PCB, single-sided copper, mini pad.
3. Reverse Recovery Test Conditions: $I_F$=0.5A , $I_R$=-1A Irr=-0.25A

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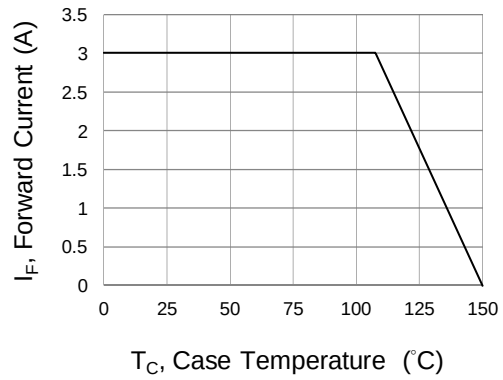


**Fig.1 Forward Current Derating Curve**

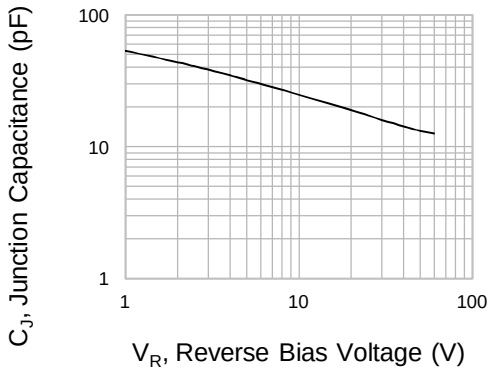


**Fig.2 Typical Junction Capacitance**

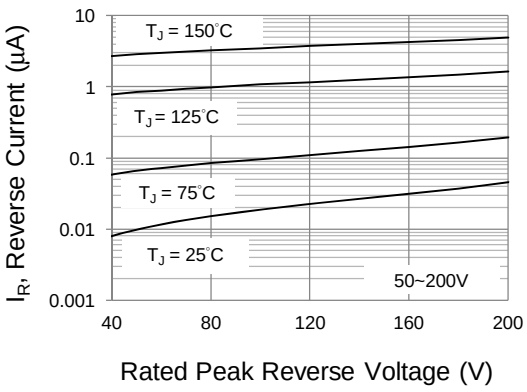


**Fig.3 Typical Reverse Characteristics**

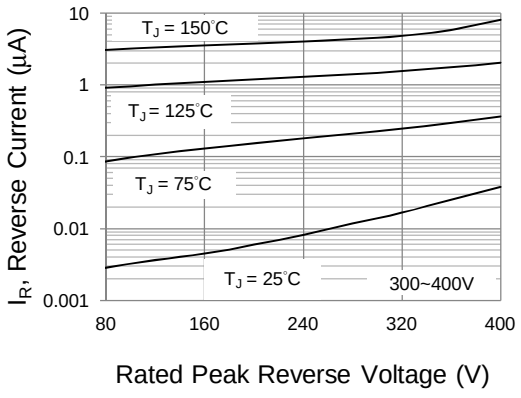


**Fig.4 Typical Reverse Characteristics**

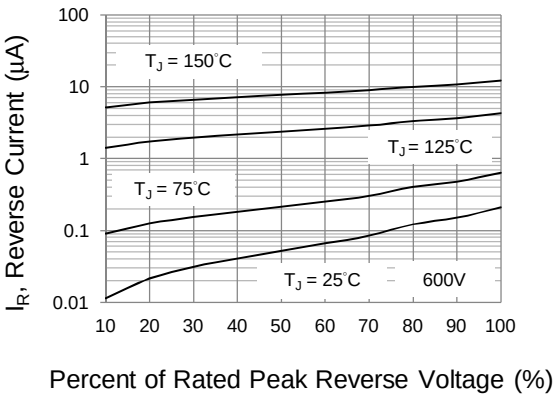


**Fig.5 Typical Reverse Characteristics**

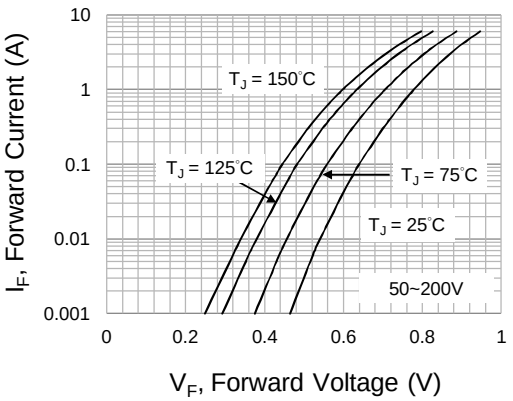


**Fig.6 Typical Forward Characteristics**

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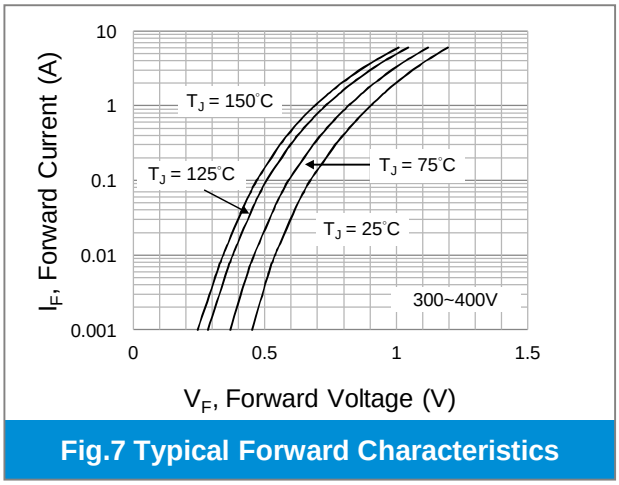


**Fig.7 Typical Forward Characteristics**

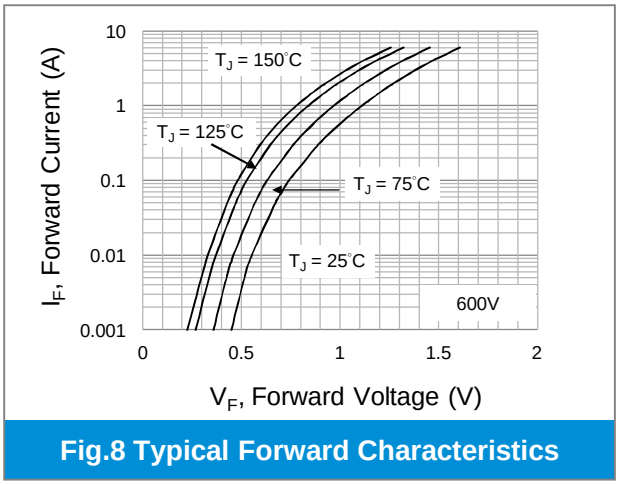


**Fig.8 Typical Forward Characteristics**

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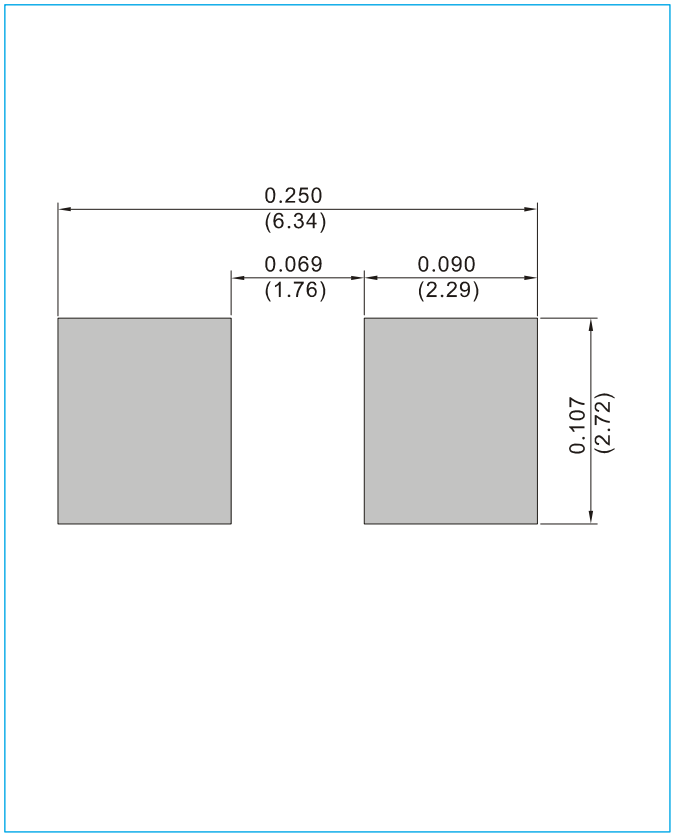
## MOUNTING PAD LAYOUT

SMB / DO-214AA Unit：inch(mm)




## ORDER INFORMATION

- Packing information

  T/R - 3K per 13" plastic Reel

  T/R - 0.8K per 7" plastic Reel

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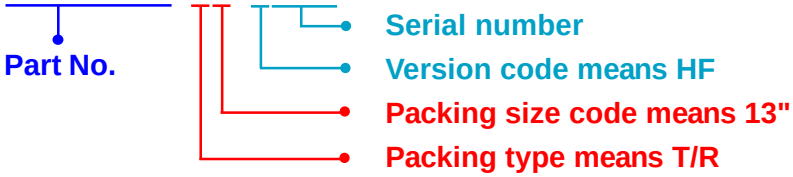
**Part No_packing code_Version**

ER3AA_R1_00001

ER3AA_R2_00001

**For example :**

**RB500V-40_R2_00001**




| Packing Code XX | | | | Version Code XXXXX | | |
|---|---|---|---|---|---|---|
| Packing type | 1st Code | Packing size code | 2nd Code | HF or RoHS | 1st Code | 2nd~5th 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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