



ER3AA~ER3JA

SUPER FAST RECOVERY RECTIFIER

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

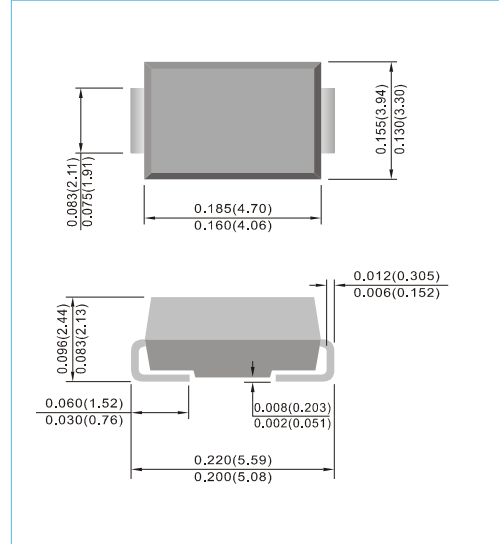
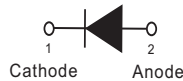
SMB / DO-214AA Unit : inch(mm)

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 | | | | | | | μ A |
| 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 | | | | | | | $^{\circ}$ C / W |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | | $^{\circ}$ C |

NOTES: 1. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area
 2. Mounted on a FR4 PCB, single-sided copper, mini pad.
 3. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=-1A$ $I_{rr}=-0.25A$



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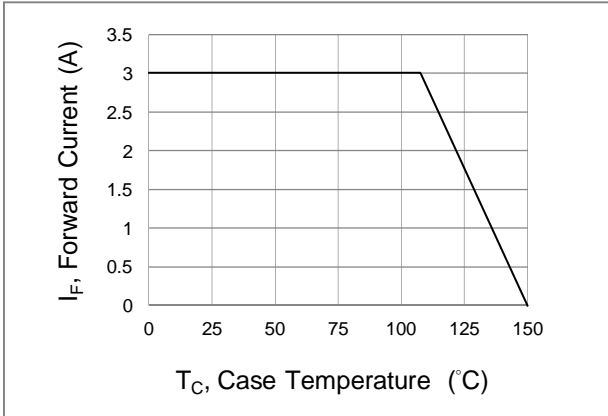


Fig.1 Forward Current Derating Curve

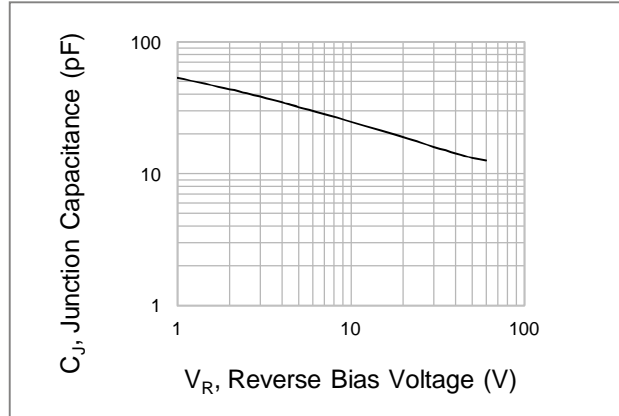


Fig.2 Typical Junction Capacitance

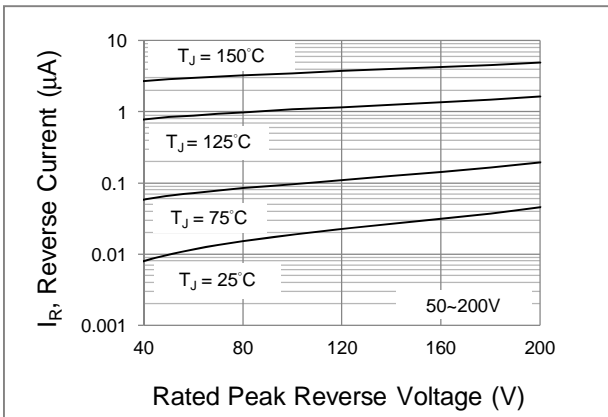


Fig.3 Typical Reverse Characteristics

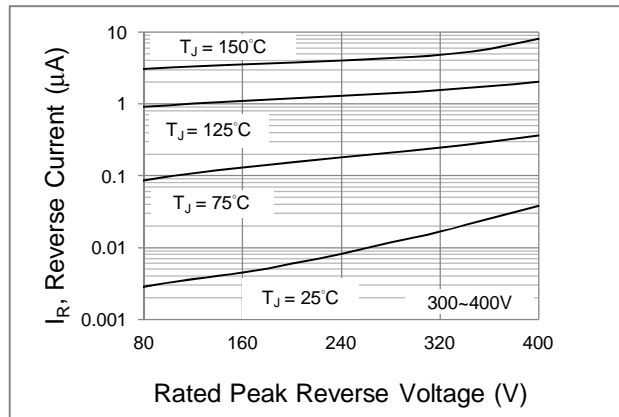


Fig.4 Typical Reverse Characteristics

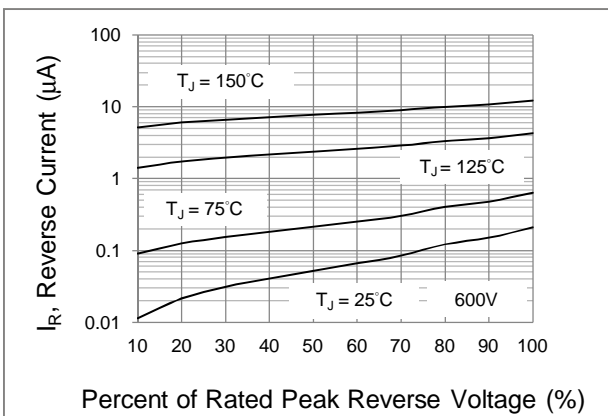


Fig.5 Typical Reverse Characteristics

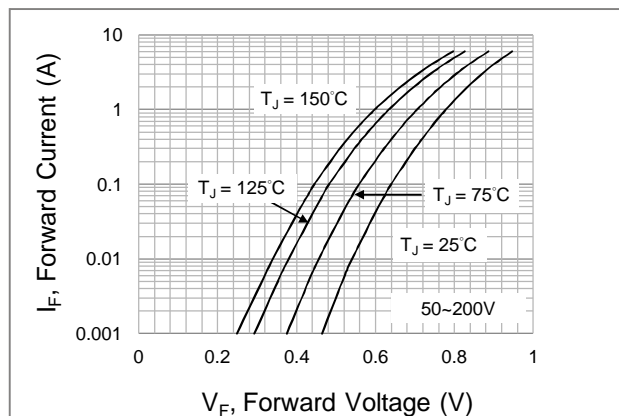


Fig.6 Typical Forward Characteristics



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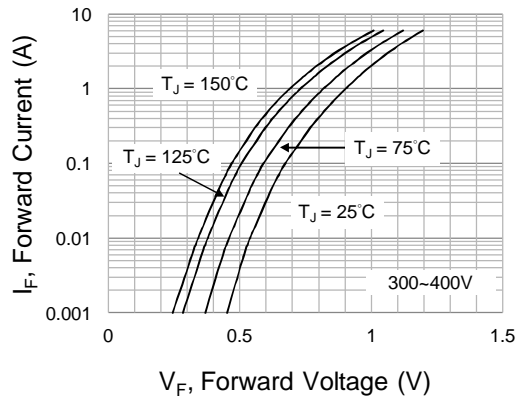


Fig.7 Typical Forward Characteristics

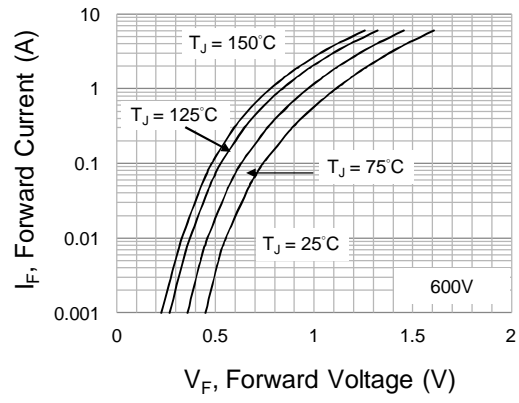
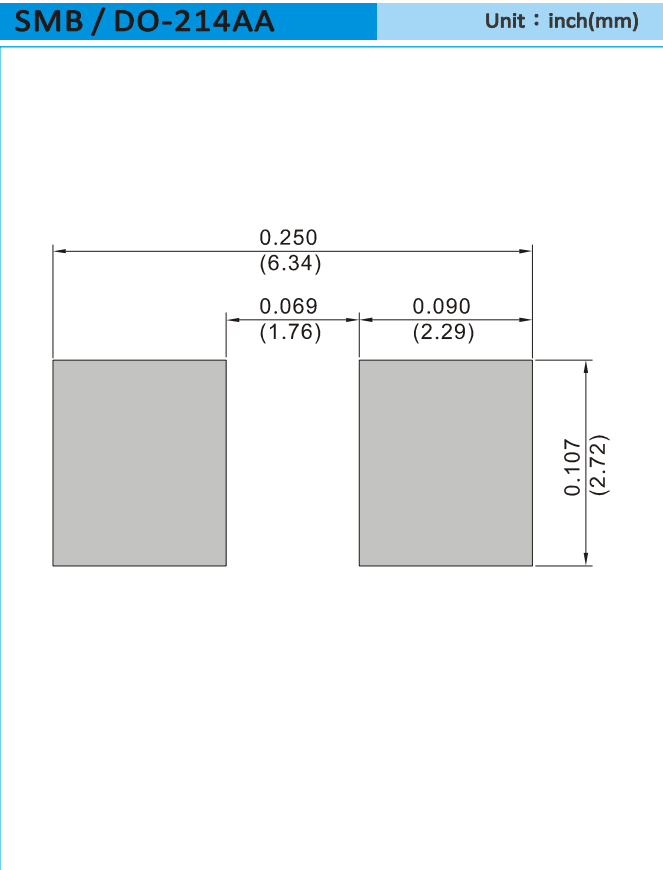


Fig.8 Typical Forward Characteristics



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MOUNTING PAD LAYOUT



ORDER INFORMATION

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



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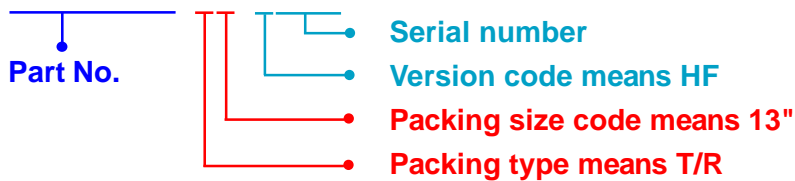
Part No_packing code_Version

ER3AA_R1_00001

ER3AA_R2_00001

For example :

RB500V-40 **R2** **00001**



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