



ER1A~ER1J

SURFACE MOUNT SUPERFAST RECTIFIER

VOLTAGE 50 to 600 Volt **CURRENT** 1 Ampere

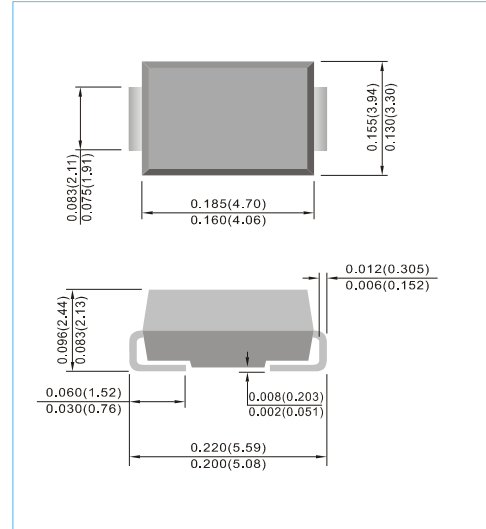
SMB / DO-214AA Unit : inch(mm)

FEATURES

- For surface mounted applications in order to optimize board space
- Easy pick and place
- Superfast recovery times for high efficiency.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- 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-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 | ER1A | ER1B | ER1C | ER1D | ER1E | ER1G | ER1J | 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 $T_L=100^\circ\text{C}$ | $I_{F(AV)}$ | 1 | | | | | | | A |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 30 | | | | | | | A |
| Maximum Forward Voltage at 1A | 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 | | | | 150 | | | μA |
| Maximum Reverse Recovery Time (Note 1) | t_{rr} | 35 | | | | | | | ns |
| Typical Junction Capacitance (Note 2) | C_J | 10 | | | | | | | pF |
| Maximum Thermal Resistance (Note 3) | $R_{\theta JL}$ | 34 | | | | | | | $^\circ\text{C} / \text{W}$ |
| Operating Junction and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

NOTES :

- 1.Reverse Recovery Tset Conditions : $I_F=0.5A, I_R=-1A, I_{rr}=-0.25A$
- 2.Measured at 1MHz and applied reverse voltage of 4 volts.
- 3.8mm²(0.013mm thick) land areas.



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RATING AND CHARACTERISTIC CURVES

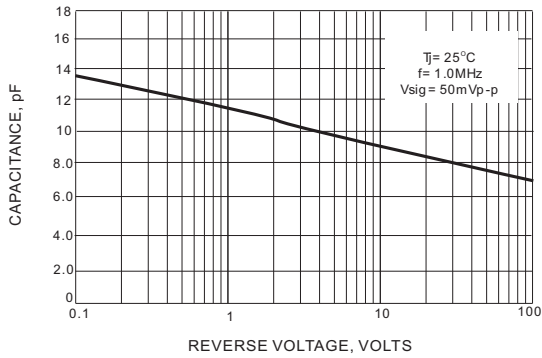


FIG.1 TYPICAL JUNCTION CAPACITANCE

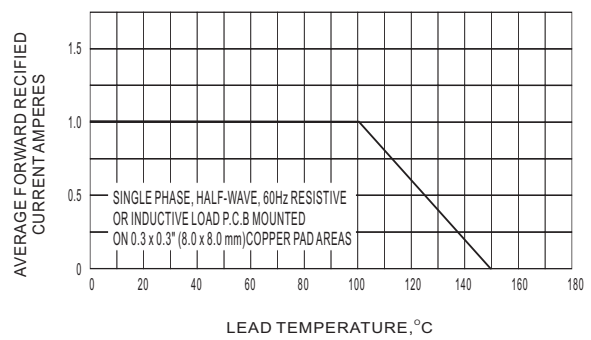


FIG.2 MAXIMUM AVERAGE FORWARD CURRENT DERATING

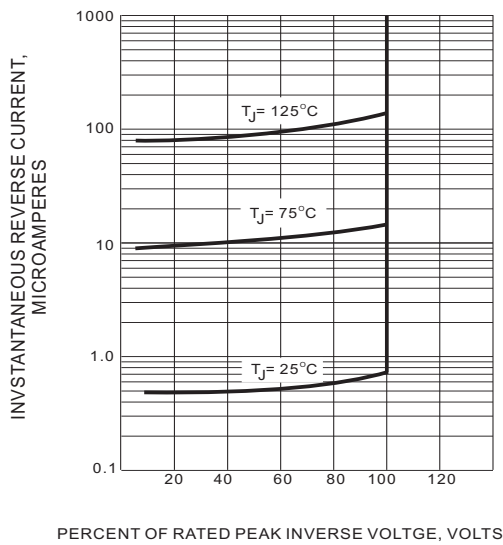


FIG.3 TYPICAL REVERSE CHARACTERISTICS

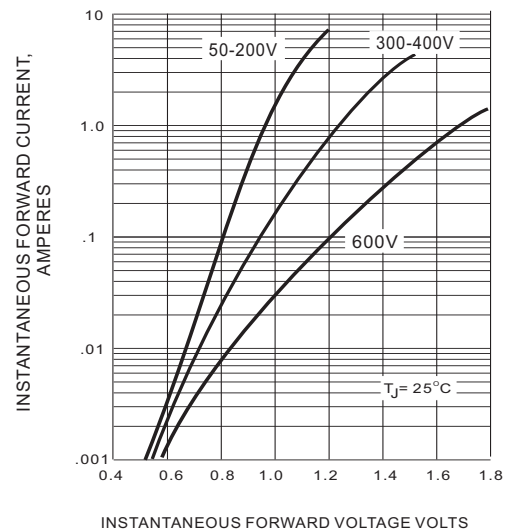


FIG.4 TYPICAL FORWARD CHARACTERISTICS

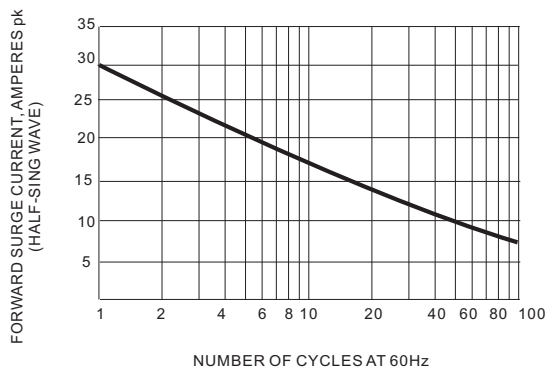


FIG.5 MAXIMUM NON-REPEITIVE SURGE CURRENT

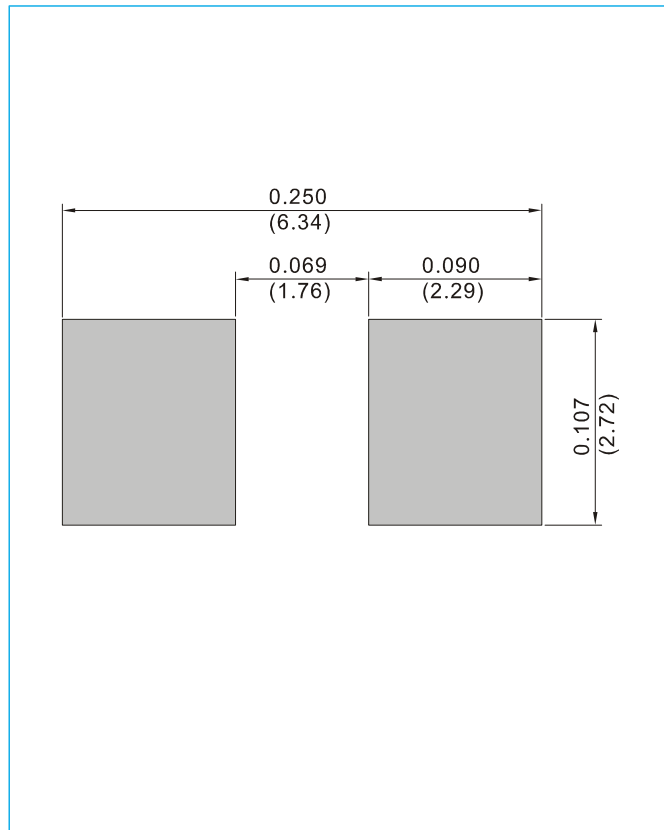


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MOUNTING PAD LAYOUT

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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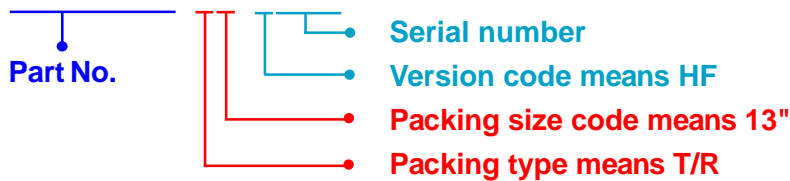
Part No_packing code_Version

ER1A_R1_00001

ER1A_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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