



US1R

SURFACE MOUNT ULTRAFAST RECTIFIER

VOLTAGE 1300 Volt **CURRENT** 1 Ampere

SMA / DO-214AC

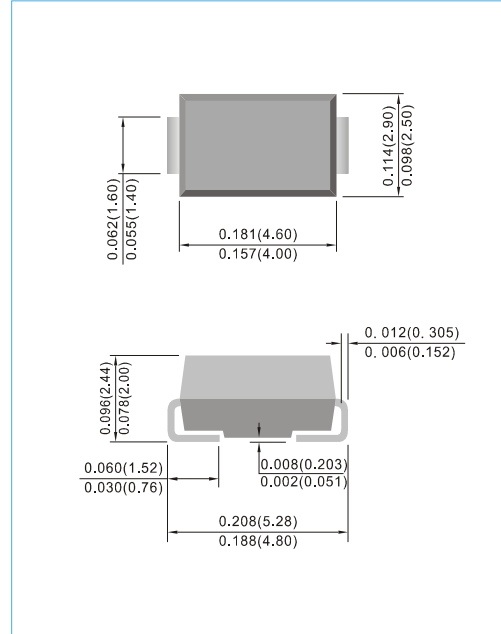
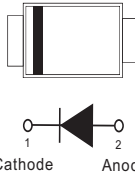
Unit : inch(mm)

FEATURES

- For surface mounted applications in order to optimize board space
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- 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-214AC 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: 0.0023 ounces, 0.0679 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 | VALUE | UNITS |
|---|--------------------------------------|-------------|-----------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 1300 | V |
| Maximum RMS Voltage | V_{RMS} | 910 | V |
| Maximum DC Blocking Voltage | V_{DC} | 1300 | V |
| Maximum Average Forward Current | $I_{F(AV)}$ | 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 | 1.9 | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 1 | μA |
| Typical Junction Capacitance ($V_R=4V$, $f=1MHz$) | C_J | 6 | pF |
| Typical Thermal Resistance (Note 1) (Note 2) | $R_{\theta J L}$ $R_{\theta J A}$ | 32 150 | $^{\circ}C / W$ |
| Maximum Reverse Recovery Time (Note 3) | T_{RR} | 75 | ns |
| Operating Junction and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | $^{\circ}C$ |

NOTES : 1. Mounted on an FR4 PCB, single-sided copper, with 100cm² copper pad area.
2. Mounted on an FR4 PCB, single-sided copper, mini pad.
3. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, Recover to 0.25A



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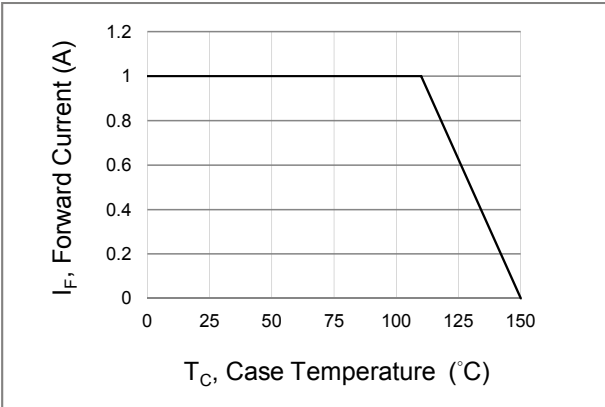


Fig.1 Forward Current Derating Curve

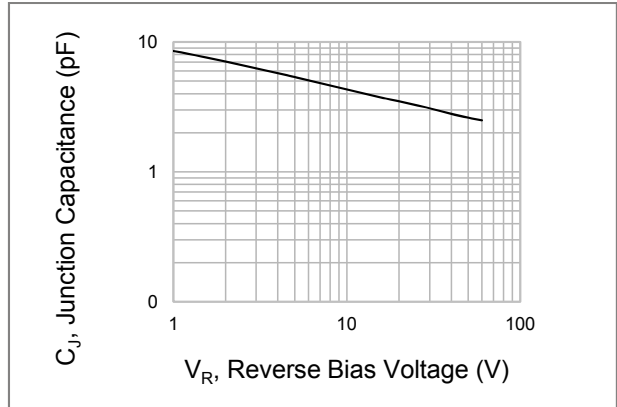


Fig.2 Typical Junction Capacitance

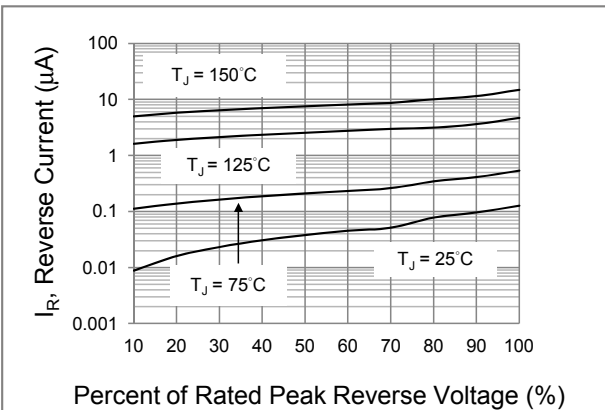


Fig.3 Typical Reverse Characteristics

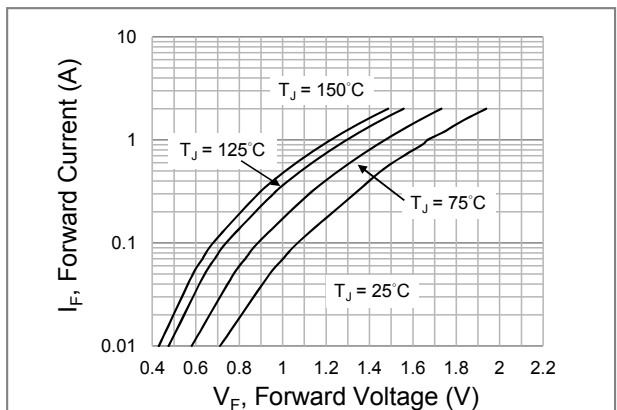
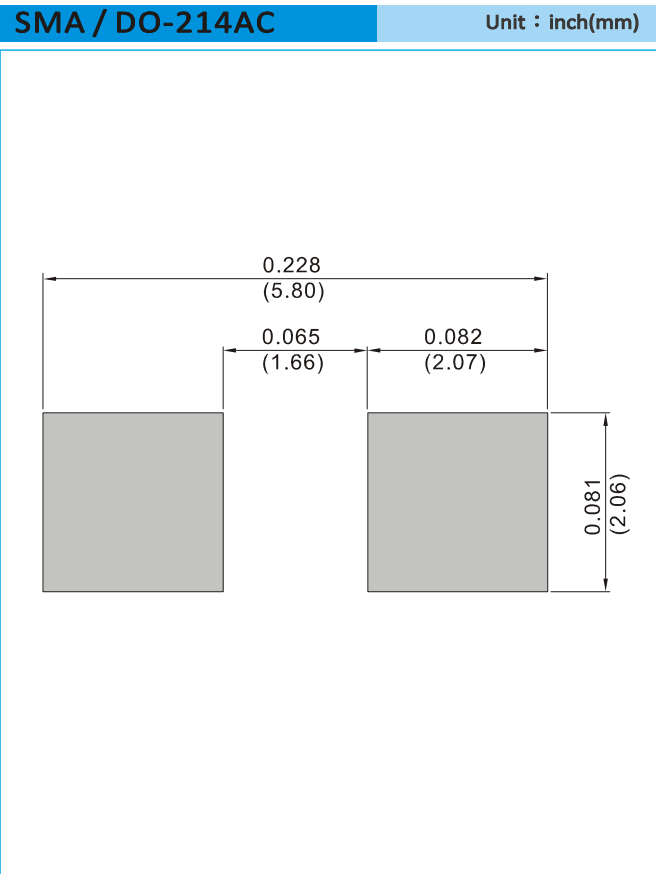


Fig.4 Typical Forward Characteristics



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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R - 7.5K per 13" plastic Reel
T/R - 1.8K per 7" plastic Reel



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Part No_packing code_Version

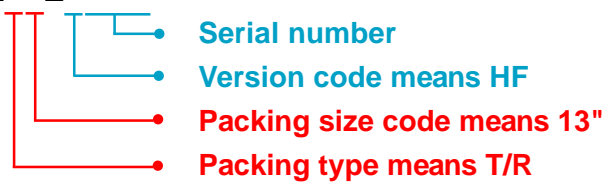
US1R_R1_00001

US1R_R2_00001

For example :

RB500V-40_R2_00001

Part No.



| Packing Code XX | | | | Version Code XXXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|----------------------------|----------------------|---------------------------------------|
| 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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