



# UF100~UF1010

## ULTRAFAST RECOVERY RECTIFIER

**VOLTAGE** 50 to 1000 Volts **CURRENT** 1.0 Amperes

DO-41

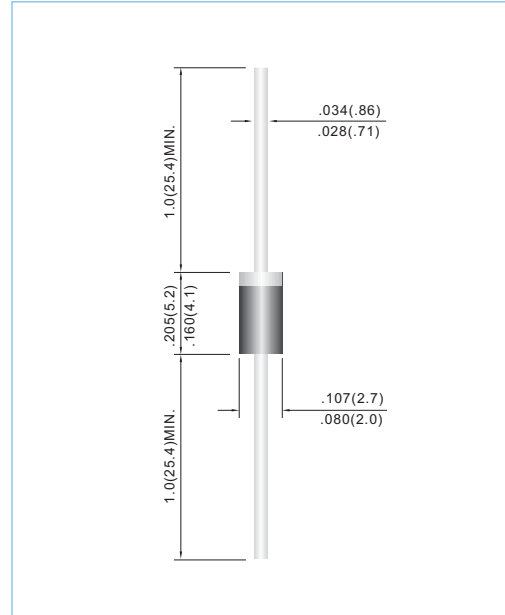
Unit: inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- Exceeds environmental standards of MIL-S-19500/228.
- Ultra Fast switching for high efficiency.
- Lead free in comply with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: Molded plastic, DO-41
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Band denotes cathode
- Mounting Position: Any
- Weight: 0.0118 ounce, 0.336 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.

| PARAMETER                                                                                                 | SYMBOL          | UF100       | UF101 | UF102 | UF104 | UF106 | UF108 | UF1010                      | UNITS            |               |
|-----------------------------------------------------------------------------------------------------------|-----------------|-------------|-------|-------|-------|-------|-------|-----------------------------|------------------|---------------|
| Maximum Recurrent Peak Reverse Voltage                                                                    | $V_{RRM}$       | 50          | 100   | 200   | 400   | 600   | 800   | 1000                        | V                |               |
| Maximum RMS Voltage                                                                                       | $V_{RMS}$       | 35          | 70    | 140   | 280   | 420   | 560   | 700                         | V                |               |
| Maximum DC Blocking Voltage                                                                               | $V_{DC}$        | 50          | 100   | 200   | 400   | 600   | 800   | 1000                        | V                |               |
| Maximum Average Forward Current .375"(9.5mm) lead length at $T_A=55^\circ\text{C}$                        | $I_{F(AV)}$     | 1.0         |       |       |       |       |       |                             | A                |               |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)         | $I_{FSM}$       | 30          |       |       |       |       |       |                             | A                |               |
| Maximum Forward Voltage at 1.0A                                                                           | $V_F$           | 1.0         |       | 1.3   |       | 1.7   |       |                             | V                |               |
| Maximum DC Reverse Current at $T_J=25^\circ\text{C}$<br>Rated DC Blocking Voltage $T_J=100^\circ\text{C}$ | $I_R$           |             |       |       | 10.0  |       | 500   |                             |                  | $\mu\text{A}$ |
| Typical Junction capacitance (Note 1)                                                                     | $C_J$           |             |       |       | 17    |       |       | pF                          |                  |               |
| Typical Thermal Resistance(Note 2)                                                                        | $R_{\theta JA}$ |             |       |       | 60    |       |       | $^\circ\text{C} / \text{W}$ |                  |               |
| Maximum Reverse Recovery Time (Note 3)                                                                    | $t_{rr}$        | 50          |       |       | 75    |       |       | ns                          |                  |               |
| Operating Junction and Storage Temperature Range                                                          | $T_J, T_{STG}$  | -55 to +150 |       |       |       |       |       |                             | $^\circ\text{C}$ |               |

#### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Thermal Resistance from Junction to Ambient and from Junction to lead length 0.375"(9.5mm) P.C.B. mounted.
3. Reverse Recovery Time  $I_F=5A, I_R=1A, I_{rr}=25A$



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## RATING AND CHARACTERISTIC CURVES

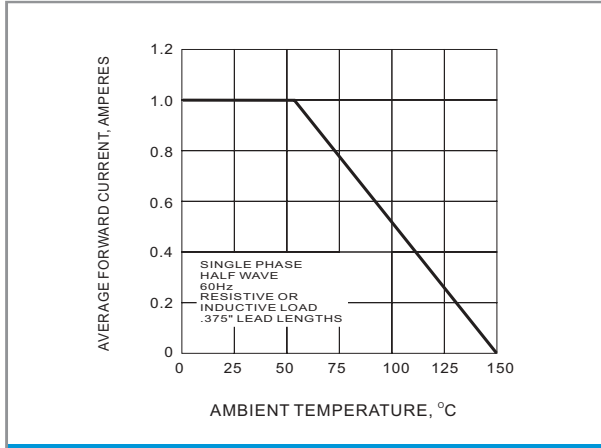


Fig.1 FORWARD CURRENT DERATING CURVE

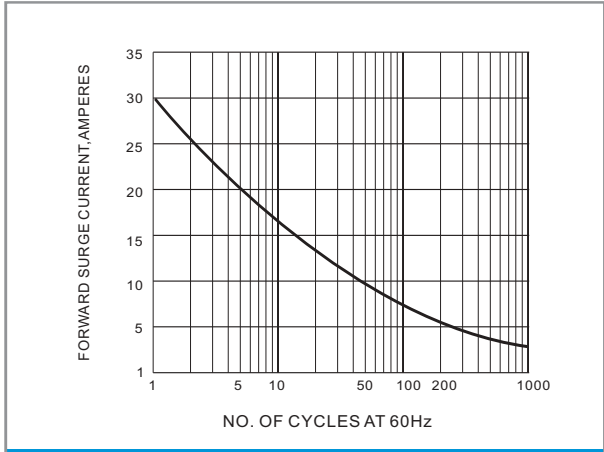


Fig.2 PEAK FORWARD SURGE CURRENT

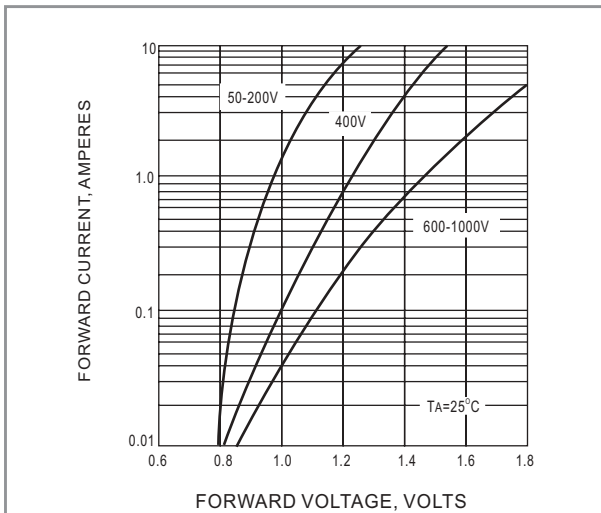


Fig.3 FORWARD CHARACTERISTICS

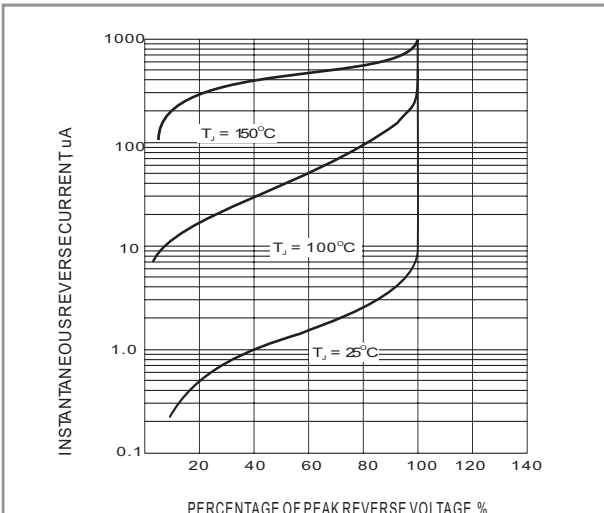


Fig.4-TYPICAL REVERSE CHARACTERISTIC

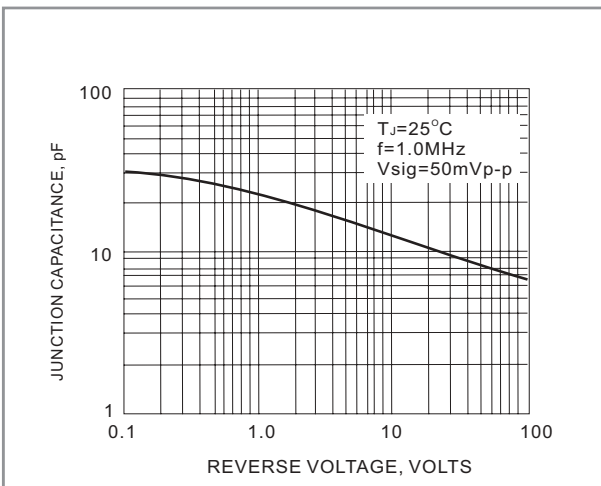


Fig.5 TYPICAL JUNCTION CAPACITANCE

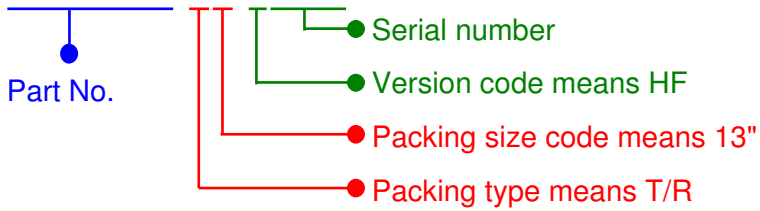


## UF100~UF1010

### Part No\_packing code\_Version

For example :

**RB500V-40 R2 00000**



| 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 |
| T/B                    | <b>A</b>             | N/A               | <b>0</b>             | HF                        | <b>0</b>             | <b>serial number</b>                  |
| T/R                    | <b>R</b>             | 7"                | <b>1</b>             | RoHS                      | <b>1</b>             | <b>serial number</b>                  |
| B/P                    | <b>B</b>             | 13"               | <b>2</b>             |                           |                      |                                       |
| T/P                    | <b>T</b>             | 26mm              | <b>X</b>             |                           |                      |                                       |
| TRR                    | <b>S</b>             | 52mm              | <b>Y</b>             |                           |                      |                                       |
| TRL                    | <b>L</b>             | PBCU              | <b>U</b>             |                           |                      |                                       |
| FORMING                | <b>F</b>             | PBCD              | <b>D</b>             |                           |                      |                                       |