



# DATA SHEET

## UF100 ~ UF1010

### ULTRAFAST RECOVERY RECTIFIER

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

DO-41

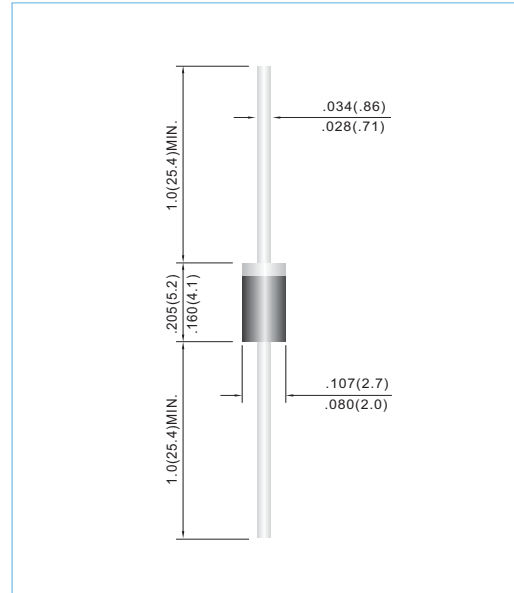
Unit: inch(mm)

#### 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.
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

#### MECHANICAL DATA

Case: Molded plastic, DO-41  
 Terminals: Axial leads, solderable per MIL-STD-202G, Method 208  
 Polarity: Band denotes cathode  
 Mounting Position: Any  
 Weight: 0.012 ounce, 336mg



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

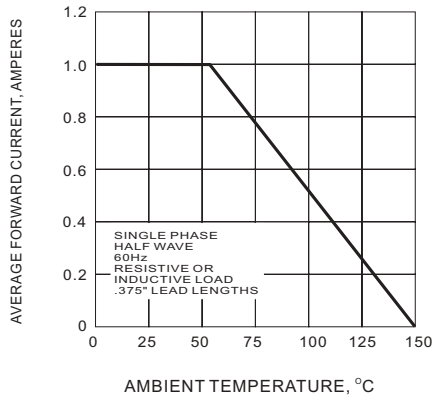
| PARAMETER                                                                                             | SYMBOL                            | UF100       | UF101 | UF102 | UF104       | UF106 | UF108 | UF1010 | UNITS  |
|-------------------------------------------------------------------------------------------------------|-----------------------------------|-------------|-------|-------|-------------|-------|-------|--------|--------|
| Maximum Recurrent Peak Reverse Voltage                                                                | V <sub>RRM</sub>                  | 50          | 100   | 200   | 400         | 600   | 800   | 1000   | V      |
| Maximum RMS Voltage                                                                                   | V <sub>RMS</sub>                  | 35          | 70    | 140   | 280         | 420   | 560   | 700    | V      |
| Maximum DC Blocking Voltage                                                                           | V <sub>DC</sub>                   | 50          | 100   | 200   | 400         | 600   | 800   | 1000   | V      |
| Maximum Average Forward Current .375"(9.5mm) lead length at TA=55°C                                   | I <sub>AV</sub>                   | 1.0         |       |       |             |       |       |        | A      |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)     | I <sub>FSM</sub>                  | 30          |       |       |             |       |       |        | A      |
| Maximum Forward Voltage at 1.0A                                                                       | V <sub>F</sub>                    | 1.0         |       | 1.1   |             | 1.7   |       |        | V      |
| Maximum DC Reverse Current at T <sub>J</sub> =25°C<br>Rated DC Blocking Voltage T <sub>J</sub> =100°C | I <sub>R</sub>                    |             |       |       | 10.0<br>500 |       |       |        | uA     |
| Typical Junction capacitance (Note 1)                                                                 | C <sub>J</sub>                    |             |       |       | 17          |       |       |        | pF     |
| Typical Thermal Resistance(Note 2)                                                                    | R <sub>θJA</sub>                  |             |       |       | 60          |       |       |        | °C / W |
| Maximum Reverse Recovery Time (Note 3)                                                                | T <sub>RR</sub>                   | 50          |       |       | 75          |       |       |        | ns     |
| Operating Junction and Storage Temperature Range                                                      | T <sub>J</sub> , T <sub>STG</sub> | -50 TO +150 |       |       |             |       |       |        | °C     |

#### NOTES:

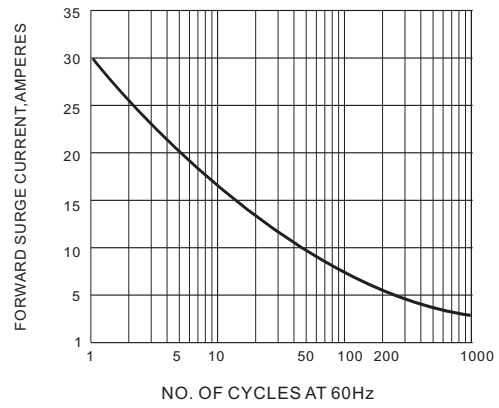
1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Thermal Resistance from Junction to Ambient and from Junction to lead length 0.375"(9.5mm) P.C.B. mounted.
3. Reverse Recovery Time I<sub>F</sub>=.5A , I<sub>R</sub>=1A , I<sub>rr</sub>=.25A



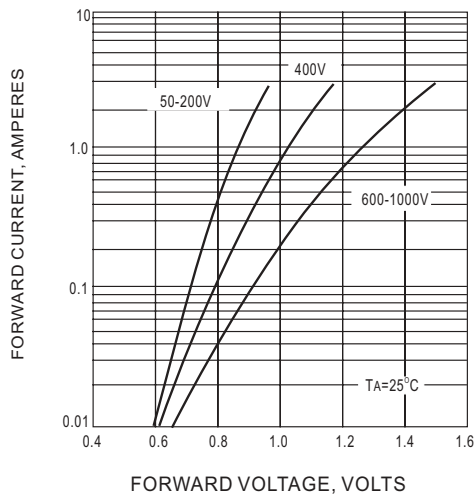
**RATING AND CHARACTERISTIC CURVES**



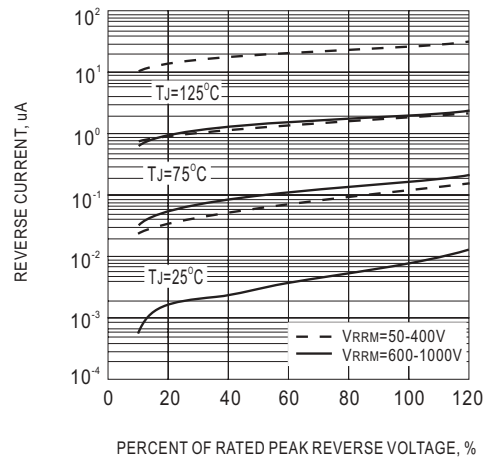
**Fig.1 FORWARD CURRENT DERATING CURVE**



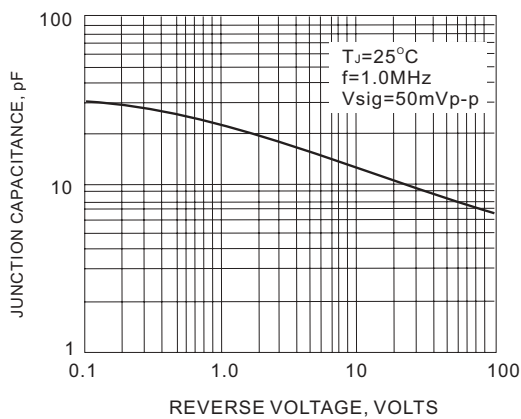
**Fig.2 PEAK FORWARD SURGE CURRENT**



**Fig.3 FORWARD CHARACTERISTICS**



**Fig.4 TYPICAL REVERSE CHARACTERISTICS**



**Fig.5 TYPICAL JUNCTION CAPACITANCE**