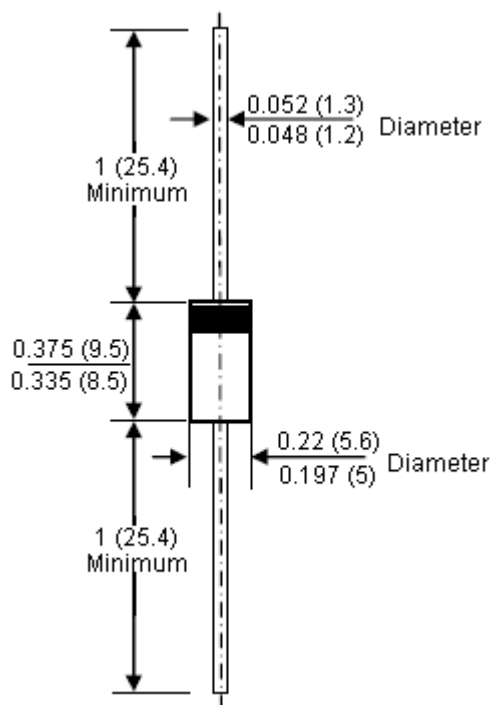


# Ultra Fast Rectifier



Reverse Voltage - 200 V  
Forward Current - 3 Amperes

## DO - 27



Dimensions : Inches (Millimetres)

## Mechanical Data

|                   |                                |
|-------------------|--------------------------------|
| Case              | : JEDEC DO-27 moulded plastic. |
| Polarity          | : Colour band denotes cathode. |
| Weight            | : 0.04 oz, 1.1 g.              |
| Mounting position | : Any.                         |

## Features:

- Diffused junction.
- Ultra fast switching for high efficiency.
- Low reverse leakage current.
- Low forward voltage drop.
- High current capability.

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

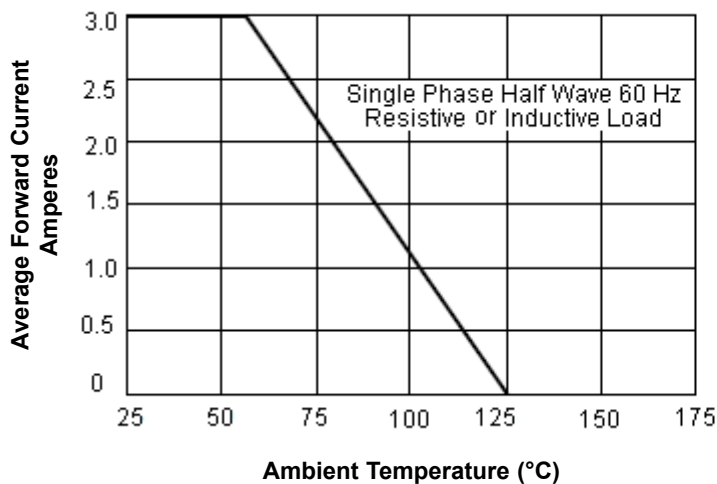
For capacitive load, derate current by 20%.

| Characteristics                                                                                          | Symbol          | UF3003      | Unit               |
|----------------------------------------------------------------------------------------------------------|-----------------|-------------|--------------------|
| Maximum Recurrent Peak Reverse Voltage                                                                   | $V_{RRM}$       | 200         | V                  |
| Maximum RMS Voltage                                                                                      | $V_{RMS}$       | 140         |                    |
| Maximum DC Blocking Voltage                                                                              | $V_{DC}$        | 200         |                    |
| Maximum Average Forward Rectified Current<br>at $T_A = 55^\circ\text{C}$                                 | $I_{(AV)}$      | 3           | A                  |
| Peak Forward Surge Current<br>8.3 ms Single Half Sine-wave<br>Super Imposed on Rated Load (JEDEC Method) | $I_{FSM}$       | 125         |                    |
| Peak Forward Voltage at 3 A dc                                                                           | $V_F$           | 1           | V                  |
| Maximum DC Reverse Current<br>Rated DC Blocking Voltage                                                  | $I_R$           | 5<br>100    | $\mu\text{A}$      |
| Maximum Reverse Recovery Time (Note 1)                                                                   | $T_{RR}$        | 50          | nS                 |
| Typical Junction Capacitance (Note 2)                                                                    | $C_J$           |             | pF                 |
| Typical Thermal Resistance (Note 3)                                                                      | $R_{\theta JA}$ | 20          | $^\circ\text{C/W}$ |
| Operating Temperature Range                                                                              | $T_J$           | -55 to +125 | $^\circ\text{C}$   |
| Storage Temperature Range                                                                                | $T_{STG}$       | -55 to +150 |                    |

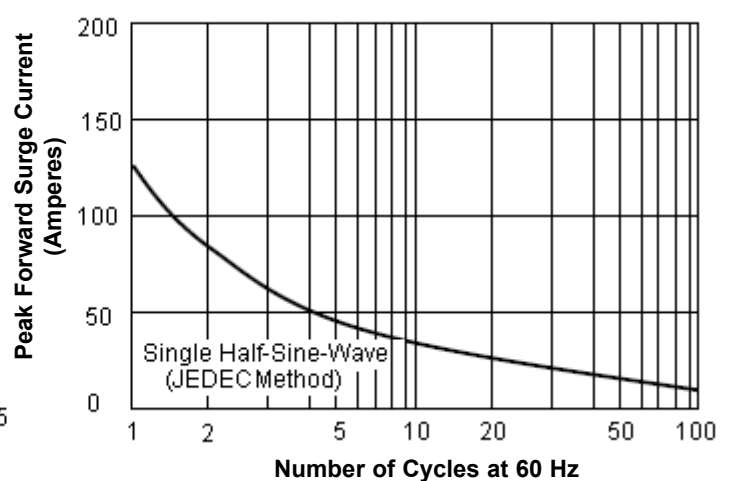
- Notes :**
1. Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{RR} = 0.25\text{ A}$ .
  2. Measured at 1 MHz and applied reverse voltage of 4 V dc.
  3. Thermal resistance junction to ambient.

## Rating and Characteristics Curves

Forward Current Derating Curve



Maximum Non-Repetitive Surge Current

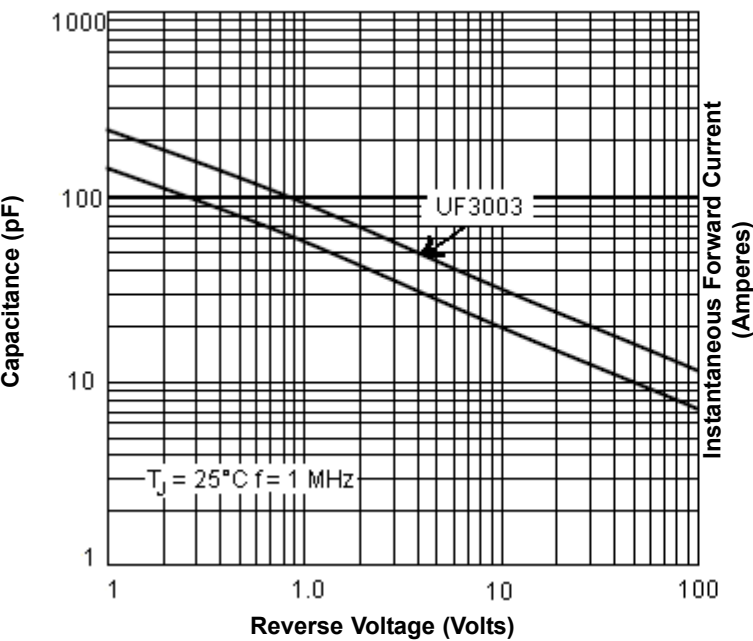


# Ultra Fast Rectifier

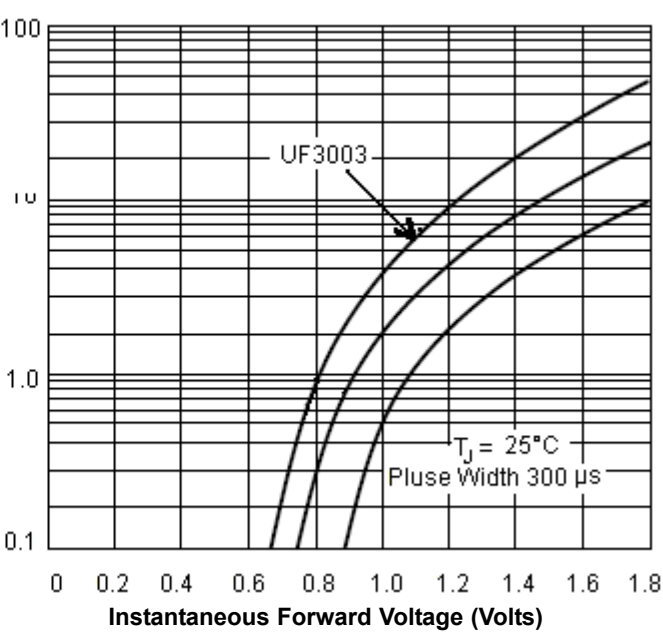


## Rating and Characteristics Curves

Typical Junction Capacitance



Typical Forward Characteristics



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