



## Features:

- Super fast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

## Mechanical Data:

|                   |                               |
|-------------------|-------------------------------|
| Case              | : JEDEC DO-27 molded plastic  |
| Polarity          | : Colour band denotes cathode |
| Weight            | : 0.04 ounces , 1.1 grams     |
| Mounting Position | : Any                         |
| Reverse Voltage   | : 100 to 600 Volts            |
| Forward Current   | : 3.0 Amperes                 |

## Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

| Characteristics                                                                                               | Symbol           | SF32+       | SF36+ | SF38+ | Unit |
|---------------------------------------------------------------------------------------------------------------|------------------|-------------|-------|-------|------|
| Max. Recurrent Peak Reverse Voltage                                                                           | V <sub>RRM</sub> | 100         | 400   | 600   | V    |
| Max. RMS Voltage                                                                                              | V <sub>RMS</sub> | 70          | 280   | 420   |      |
| Max. DC Blocking Voltage                                                                                      | V <sub>DC</sub>  | 100         | 400   | 600   |      |
| Max. Average Forward Rectified Current<br>T <sub>A</sub> = 55°C                                               | I(AV)            | 3           |       |       | A    |
| Peak Forward Surge Current,<br>8.3ms Single Half Sine-wave<br>Super Imposed on Rated Load (JEDEC method )     | I <sub>FSM</sub> | 125         |       |       |      |
| Peak Forward Voltage at 3.0A DC                                                                               | V <sub>F</sub>   | 0.95        | 1.3   | 1.7   | V    |
| Max. DC Reverse Current at<br>Rated DC Blocking Voltage at<br>T <sub>A</sub> = 25°C<br>T <sub>A</sub> = 100°C | I <sub>R</sub>   | 5<br>100    |       |       | µA   |
| Max. Reverse Recovery Time (Note 1)                                                                           | T <sub>RR</sub>  | 35          |       |       | nS   |
| Typical Junction Capacitance (Note 2)                                                                         | C <sub>J</sub>   | 70          | 45    |       | pF   |
| Typical Thermal Resistance (Note 3)                                                                           | R <sub>θJA</sub> | 20          |       |       | °C/W |
| Operating Temperature Range                                                                                   | T <sub>J</sub>   | -55 to +150 |       |       | °C   |
| Storage Temperature Range                                                                                     | T <sub>STG</sub> |             |       |       |      |

## Notes:

1. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{RR} = 0.25\text{A}$ .
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to ambient.
4. The typical data above is for reference only

## Ratings and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

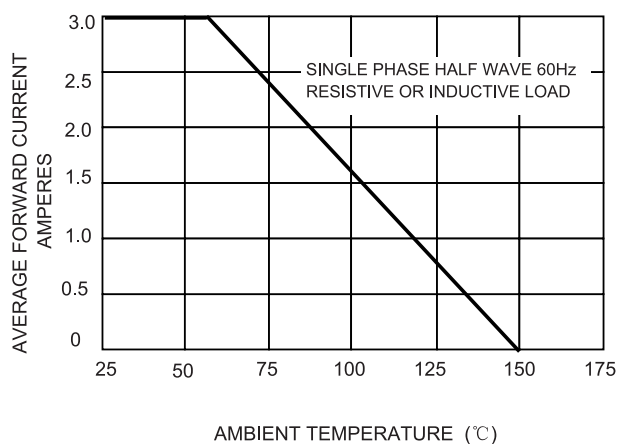


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

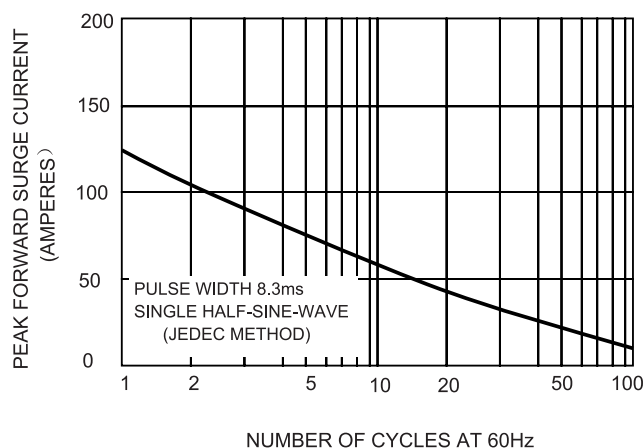


FIG. 3 – TYPICAL JUNCTION CAPACITANCE

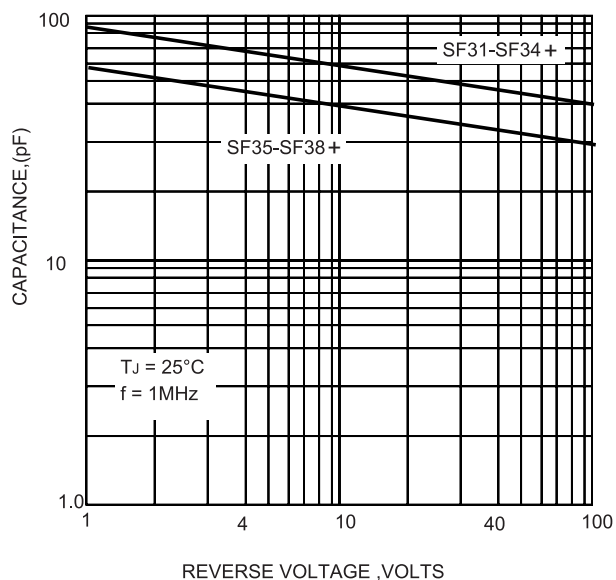
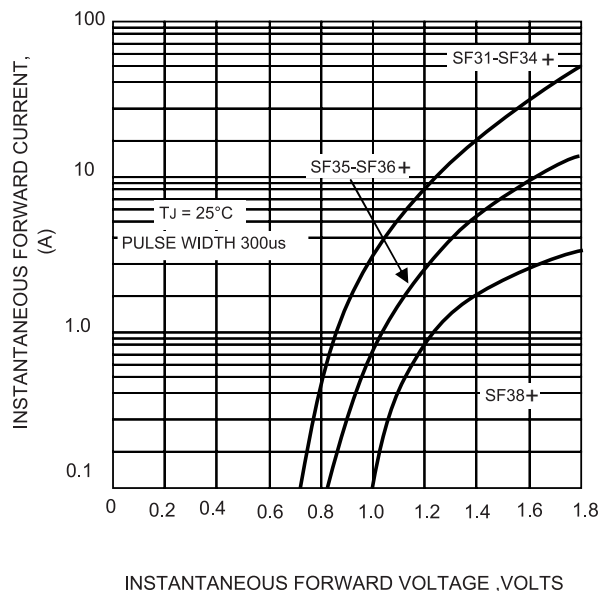
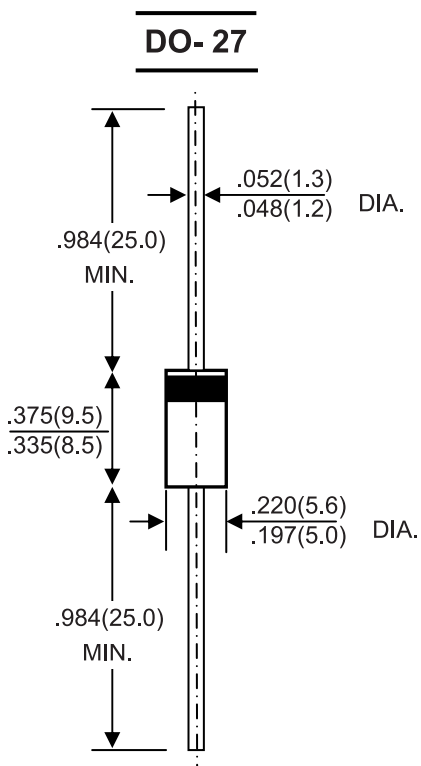


FIG. 4 – TYPICAL FORWARD CHARACTERISTICS



## Dimensions:



Dimensions : Inches (Millimetres)

## Part Number Table

| Description          | Part Number |
|----------------------|-------------|
| Super Fast Rectifier | SF32+       |
|                      | SF36+       |
|                      | SF38+       |

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