

# Super Fast Recovery Rectifier **multicomp**PRO



## Features:

- Fred chip planar construction
- Super fast switching, high efficiency
- Low forward voltage drop
- Low forward voltage current
- High surge current capacity
- Plastic package has UL flammability classification 94V-0

## Mechanical Data:

|                   |                                                                      |
|-------------------|----------------------------------------------------------------------|
| Case              | : TO-220AB Type, Molded Plastic                                      |
| Terminals         | : Pure Tin plated, Lead free Solderable Per MIL-STD-750, method 2026 |
| Polarity          | : As marked                                                          |
| Weight            | : 1.2 grams                                                          |
| Mounting Position | : Any                                                                |
| Reverse Voltage   | : 200Volts                                                           |
| Forward Current   | : 8 Amperes                                                          |

## Typical Application:

For use in High Frequency Rectifier of Switching Mode Power Supplies, Freewheeling Diode, DC/DC Converters or polarity Protection Application

## 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          | Values                                      | Unit          |
|----------------------------------------------------------------------------------------------------------|-----------------|---------------------------------------------|---------------|
| Max. Recurrent Peak Reverse Voltage                                                                      | $V_{RRM}$       | 200                                         | V             |
| Max. RMS Voltage                                                                                         | $V_{RMS}$       | 140                                         |               |
| Max. DC Blocking Voltage                                                                                 | $V_{DC}$        | 200                                         |               |
| Maximum Average Forward Rectified Current                                                                | $I_{(AV)}$      | 8                                           | A             |
| Peak Forward Surge Current,<br>8.3ms Single Half Sine-wave<br>Super Imposed on Rated Load (JEDEC method) | $I_{FSM}$       | 100                                         |               |
| Peak Forward Voltage at 4A per leg                                                                       | $V_F$           | 0.95                                        |               |
| Max. DC Reverse Current at<br>Rated DC Blocking Voltage                                                  | $I_R$           | 10<br>250                                   | $\mu A$       |
|                                                                                                          |                 | $T_J = 25^{\circ}C$<br>$T_J = 100^{\circ}C$ |               |
| Max. Reverse Recovery Time (Note 1)                                                                      | $T_{RR}$        | 35                                          | nS            |
| Typical Thermal Resistance, Junction to Case                                                             | $R_{\theta JC}$ | 2                                           | $^{\circ}C/W$ |
| Operating Temperature Range                                                                              | $T_J$           | -55 to +150                                 | $^{\circ}C$   |
| Storage Temperature Range                                                                                | $T_{STG}$       |                                             |               |

## Notes:

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

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## Ratings and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

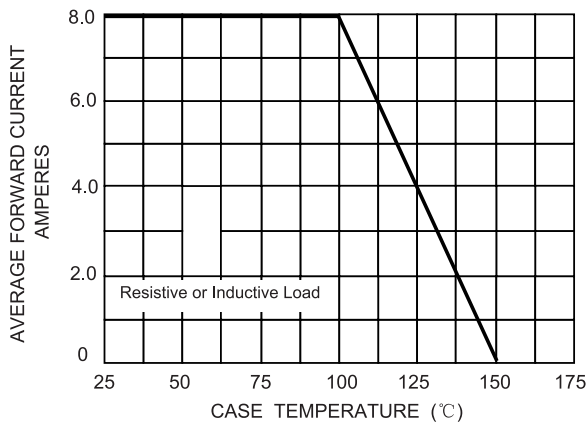


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

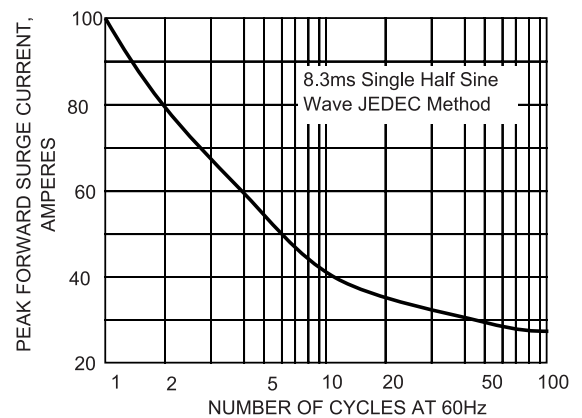


FIG.3-TYPICAL REVER CHARACTERISTICS

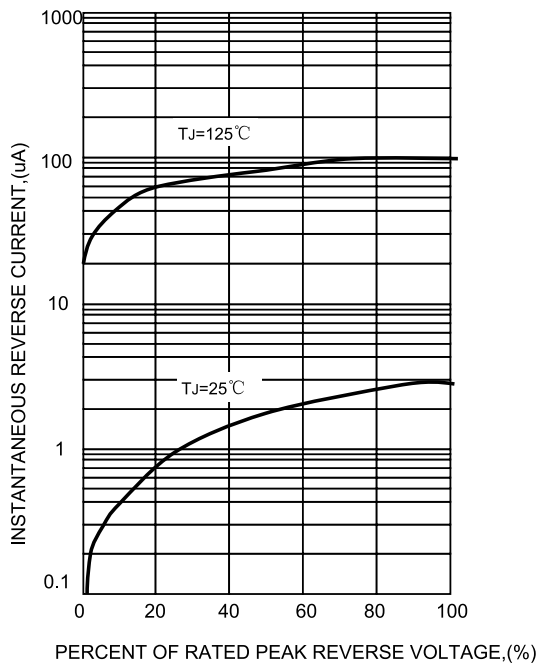
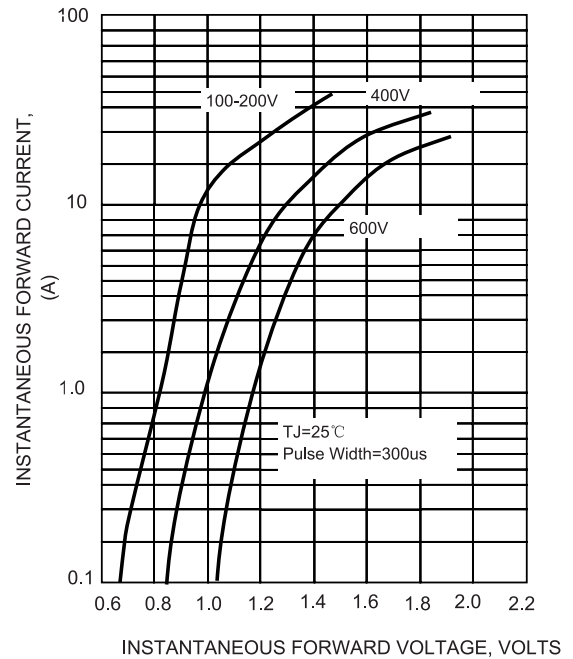


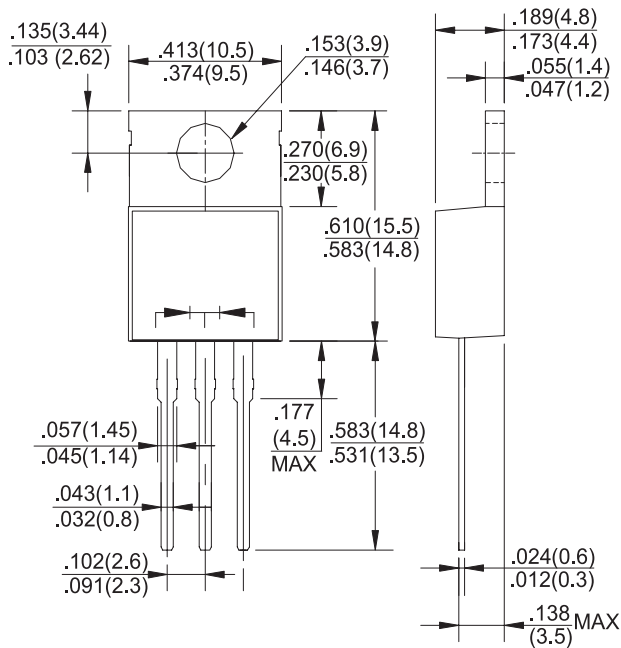
FIG.4-TYPICAL FORWARD CHARACTERISTICS



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## Dimensions:

### **TO-220AB**



Dimensions : Inches (Millimetres)

## Part Number Table

| Description                   | Part Number |
|-------------------------------|-------------|
| Super Fast Recovery Rectifier | SF804CT     |

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