

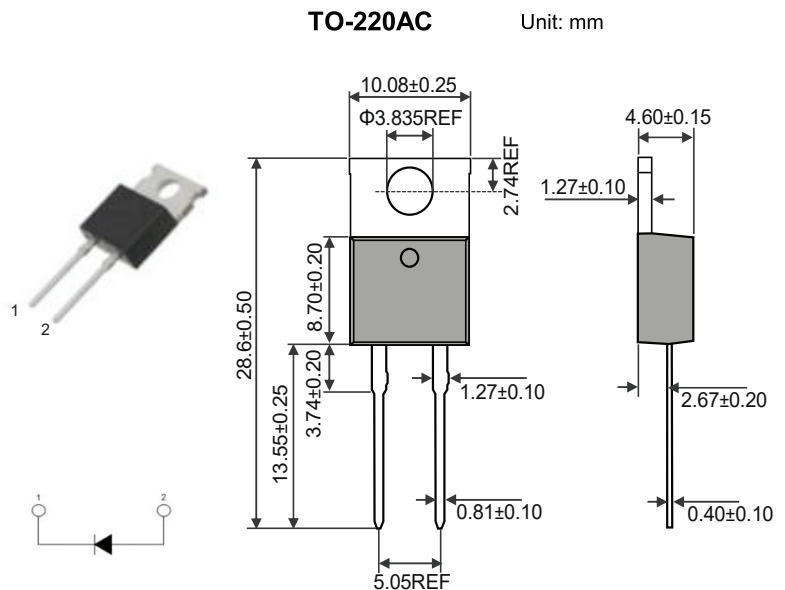
# **SUPER FAST RECTIFIER DATA SHEET**

## **FEATURES**

- Super fast switching for high efficiency.
- Low reverse leakage.
- High forward surge current capability.
- RoHs Product.

## **MECHANICAL DATA**

Mainly used in switching power supply, PWM pulse width modulator, inverter as a freewheeling and other electronic circuits, high-frequency rectifier diode, diode or damping diode use



## **Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified**

### **Absolute Maximum Ratings**

| Parameter                       | Symbol             | Test Conditions                                | Values      | Unit |
|---------------------------------|--------------------|--|-------------|------|
| Repetitive peak reverse voltage | V <sub>RRM</sub>   |  | 600         | V    |
| Continuous forward current      | I <sub>F(AV)</sub> | (Rated VR-20Khz Square Wave)-50% duty cycle    | 8           | A    |
| Single pulse forward current    | I <sub>FSM</sub>   | 8.3 Half Mssine Wave-According to JEDEC Method | 80          | A    |
| Operating junction              | T <sub>J</sub>     |  | -40 to +175 | °C   |
| Storage temperatures            | T <sub>stg</sub>   |  | -40 to +175 | °C   |

### **Electrical characteristics (T<sub>J</sub>=25°C unless otherwise specified)**

| Parameter                          | Symbol          | Test Conditions  | Min. | Typ. | Max. | Unit |
|------------------------------------|-----------------|--|------|------|------|------|
| Breakdown voltage Blocking voltage | V <sub>R</sub>  | I <sub>R</sub> =100μA  | 600  |      |      | V    |
| Forward voltage                    | V <sub>F</sub>  | I <sub>F</sub> =8 A  |      | 1.9  | 2.3  | V    |
|                                    |                 | I <sub>F</sub> =8 A, T <sub>J</sub> =125°C                       |      |      | 2    | V    |
| Reverse leakage current            | I <sub>R</sub>  | V <sub>R</sub> = V <sub>RRM</sub>                                |      |      | 10   | μA   |
|                                    |                 | T <sub>J</sub> =125°C, V <sub>R</sub> =600V                      |      |      | 100  | μA   |
| Reverse recovery time              | T <sub>rr</sub> | I <sub>F</sub> =0.5A, I <sub>R</sub> =1A, I <sub>RR</sub> =0.25A |      | 16   | 20   | ns   |

### **Thermal characteristics**

| Parameter        | Symbol            | Typ | MAX | Unit |
|------------------|-------------------|-----|-----|------|
| Junction-to-Case | R <sub>thJC</sub> | -   | 2   | °C/W |

## RATINGS AND CHARACTERISTIC CURVES

Fig. 1- Current derating curve, per element

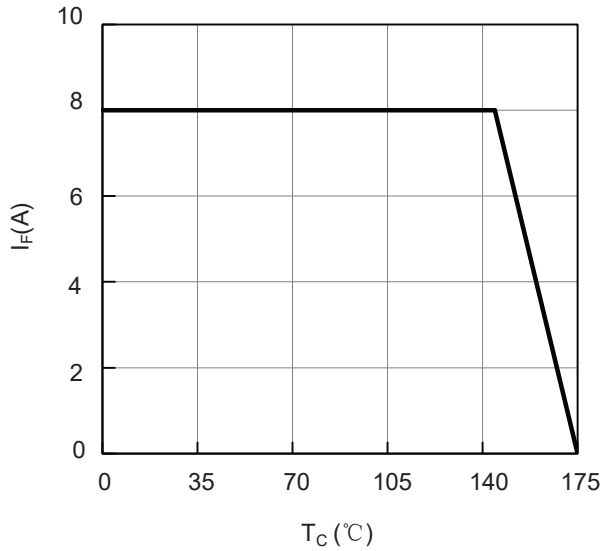


Fig. 2 - The forward voltage and forward current curve

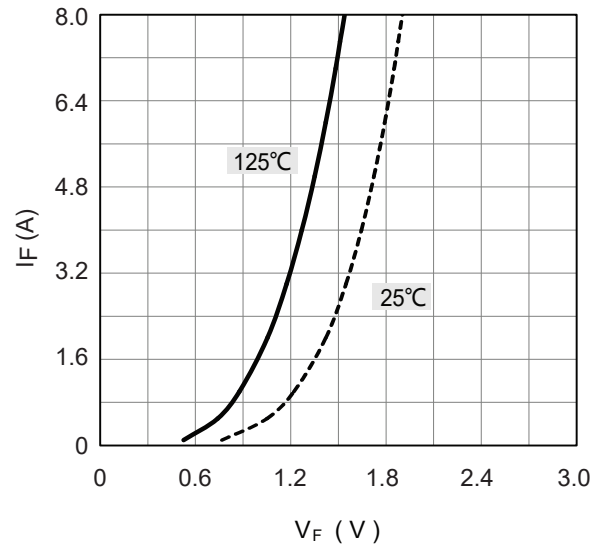


Fig. 3 - The reverse leakage current and the reverse voltage (single-device) curve.

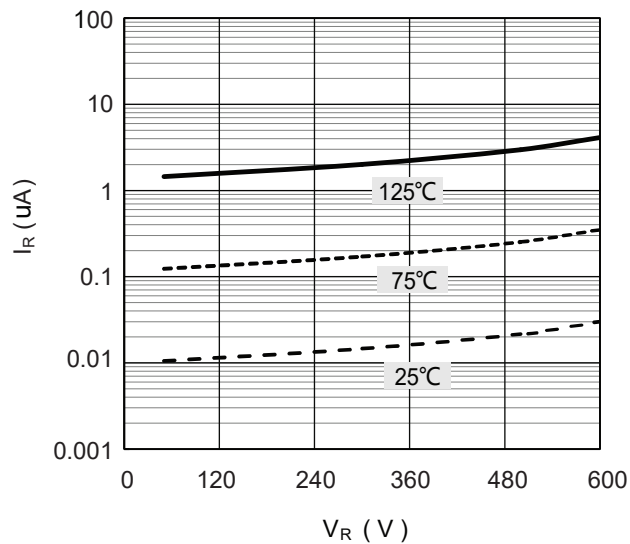
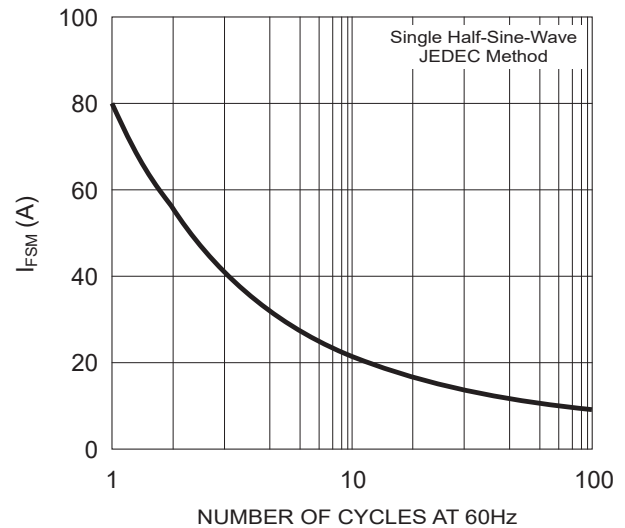


Fig. 4 - Forward surge current derating curve



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