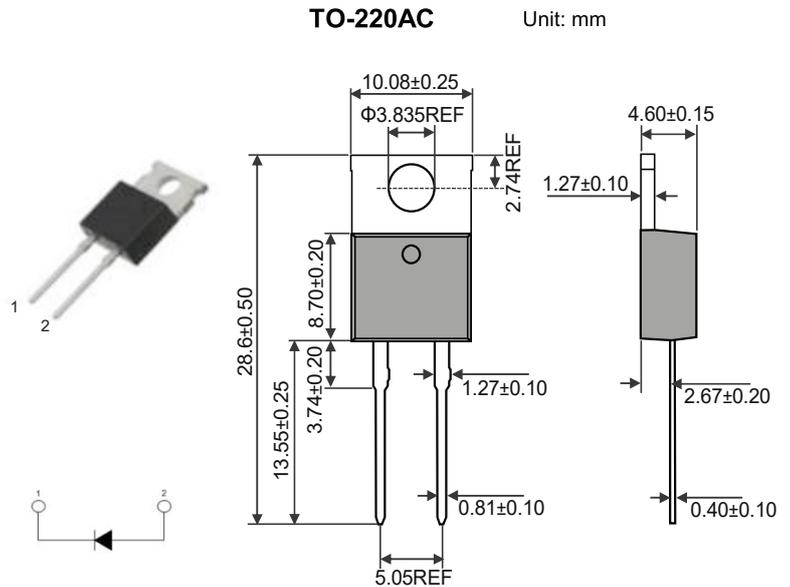


SUPER FAST RECTIFIER DATA SHEET
FEATURES

- 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 @ $T_A=25^\circ\text{C}$ unless otherwise specified
Absolute Maximum Ratings

| Parameter | Symbol | Test Conditions | Values | Unit |
|---------------------------------|-------------|--|-------------|------------------|
| Repetitive peak reverse voltage | V_{RRM} | | 600 | V |
| Continuous forward current | $I_{F(AV)}$ | (Rated VR-20Khz Square Wave)-50% duty cycle | 30 | A |
| Single pulse forward current | I_{FSM} | 8.3 Half Mssine Wave-According to JEDEC Method | 320 | A |
| Operating junction | T_J | | -40 to +175 | $^\circ\text{C}$ |
| Storage temperatures | T_{stg} | | -40 to +175 | $^\circ\text{C}$ |

Electrical characteristics ($T_J=25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min. | Typ. | Max. | Unit |
|------------------------------------|----------|---|------|------|------|---------------|
| Breakdown voltage Blocking voltage | V_R | $I_R=100\mu\text{A}$ | 600 | | | V |
| Forward voltage | V_F | $I_F=30\text{ A}$ | | 2.2 | 2.6 | V |
| | | $I_F=30\text{ A}, T_J=125^\circ\text{C}$ | | | 1.8 | V |
| Reverse leakage current | I_R | $V_R=V_{RRM}$ | | | 10 | μA |
| | | $T_J=125^\circ\text{C}, V_R=600\text{V}$ | | | 500 | μA |
| Reverse recovery time | T_{rr} | $I_F=0.5\text{A}, I_R=1\text{A}, I_{RR}=0.25\text{A}$ | | | 40 | ns |

Thermal characteristics

| Parameter | Symbol | Typ | MAX | Unit |
|------------------|------------|-----|-----|---------------------------|
| Junction-to-Case | R_{thJC} | - | 1.0 | $^\circ\text{C}/\text{W}$ |

RATINGS AND CHARACTERISTIC CURVES

Fig. 1- Current derating curve, per element

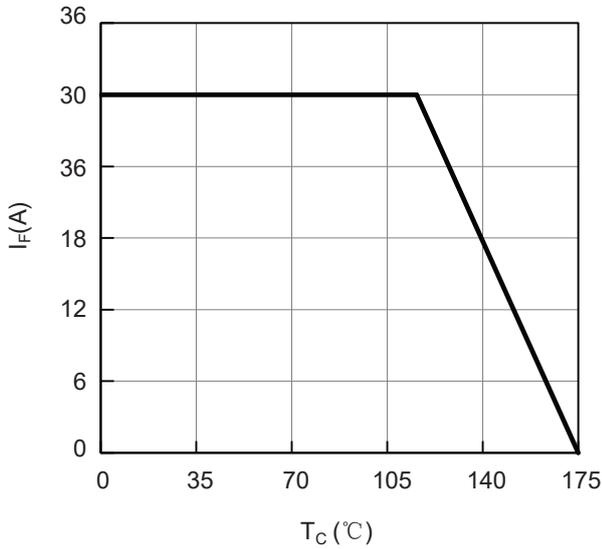


Fig. 2 - The forward voltage and forward current curve

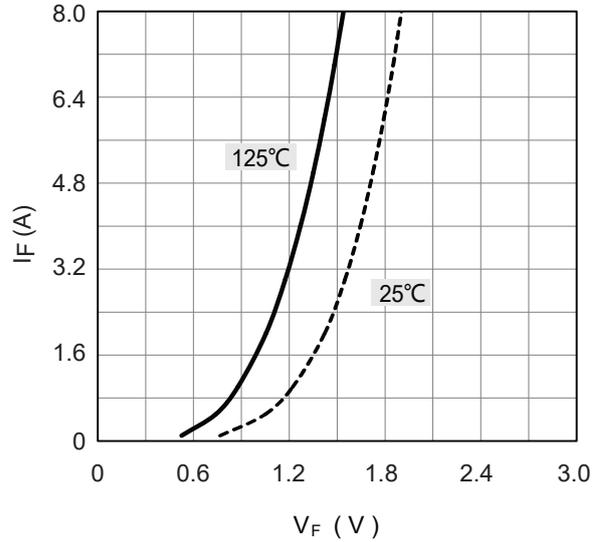


Fig. 3 - The reverse leakage current and the reverse voltage (single-device) curve.

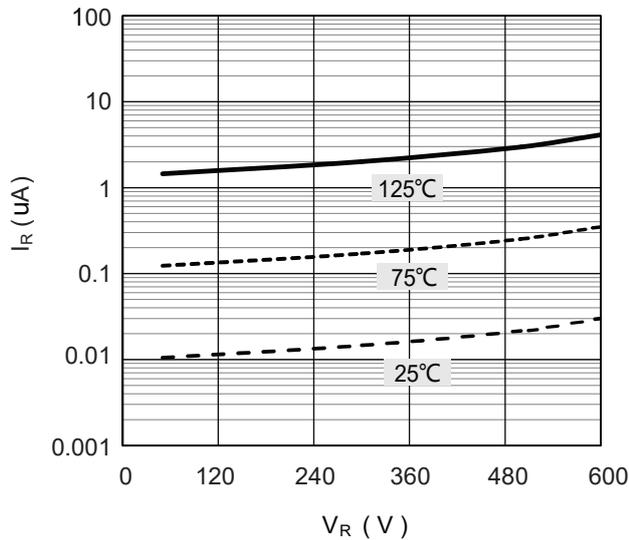
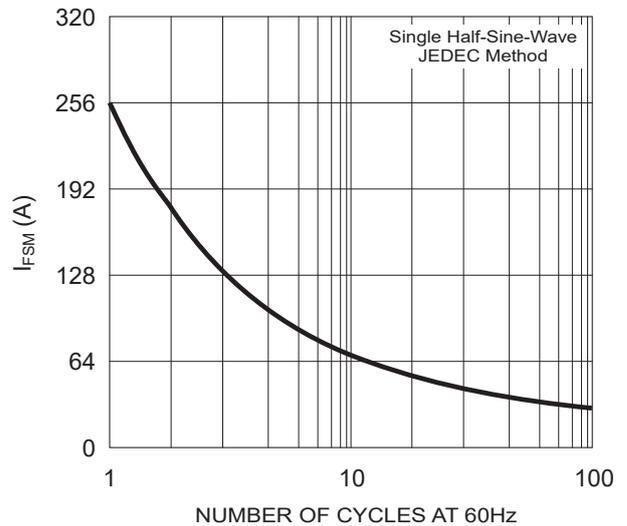


Fig. 4 - Forward surge current derating curve



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