Elektronische Bauelemente

# SF10TD60F

**Voltage 600 V**

**10.0 Amp Super Fast Recovery Rectifier**

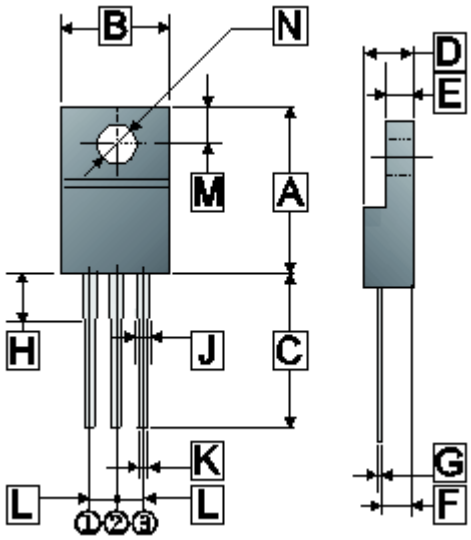
RoHS Compliant Product

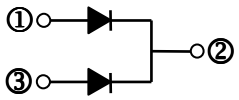
A suffix of "-C" specifies halogen free

## FEATURES

- Fast switching for high efficiency
- 150°C Operating Junction Temperature
- Low Power Loss, High Efficiency
- High-Switching Speed 35 Nanosecond Recovery Time
- Low Forward Voltage, High Current Capability
- Plastic Material Used Carries Underwriters Laboratory Flammability Classification 94V-0

**ITO-220**




| REF. | Millimeter | | REF. | Millimeter | |
|---|---|---|---|---|---|
| | Min. | Max. | | Min. | Max. |
| A | 14.50 | 16.50 | H | 2.70 | 4.35 |
| B | 9.50 | 10.72 | J | 0.90 | 1.70 |
| C | 12.60 | 14.22 | K | 0.30 | 0.95 |
| D | 4.20 | 5.10 | L | 2.34 | 2.75 |
| E | 2.30 | 3.30 | M | 2.40 | 3.60 |
| F | 2.30 | 3.10 | N | ϕ 3.0 | ϕ 3.8 |
| G | 0.30 | 0.75 | | | |

## ORDER INFORMATION

| Part Number | Type |
|---|---|
| SF10TD60F | Lead (Pb)-free |
| SF10TD60F-C | Lead (Pb)-free and Halogen-free |

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.)

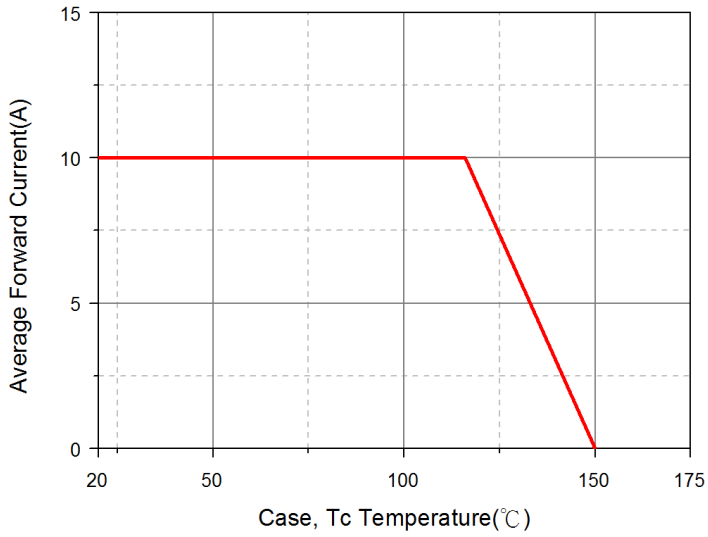
| Parameter | | Symbol | Rating | Unit |
|---|---|---|---|---|
| Peak Repetitive Reverse Voltage | | $V_{RRM}$ | 600 | V |
| Working Peak Reverse Voltage | | $V_{RWM}$ | 600 | V |
| DC Blocking Voltage | | $V_R$ | 600 | V |
| Average Rectifier Forward Current | Per Leg | $I_{F(AV)}$ | 5 | A |
| | Per Device | | 10 | |
| Non-Repetitive Peak Surge Current @ Surge applied at rate load conditions half-wave, single phase, 60Hz | | $I_{FSM}$ | 60 | A |
| Max. Instantaneous Forward Voltage @ $I_F$=5A | $T_A$=25°C | $V_F$ | 1.55 | V |
| | $T_A$=125°C | | 1.45 | |
| Max. Instantaneous Reverse Current [2] | $T_A$=25°C | $I_R$ | 5 | μA |
| | $T_A$=125°C | | 20 | |
| Reverse Recovery Time [3] | | $T_{RR}$ | 35 | nS |
| Typical Junction Capacitance [1] | | $C_J$ | 15 | pF |
| Thermal Resistance | | $R_{\theta JC}$ | 4 | °C / W |
| Operating Junction and Storage Temperature Range | | $T_J$, $T_{STG}$ | 150, -55~150 | °C |

Notes:

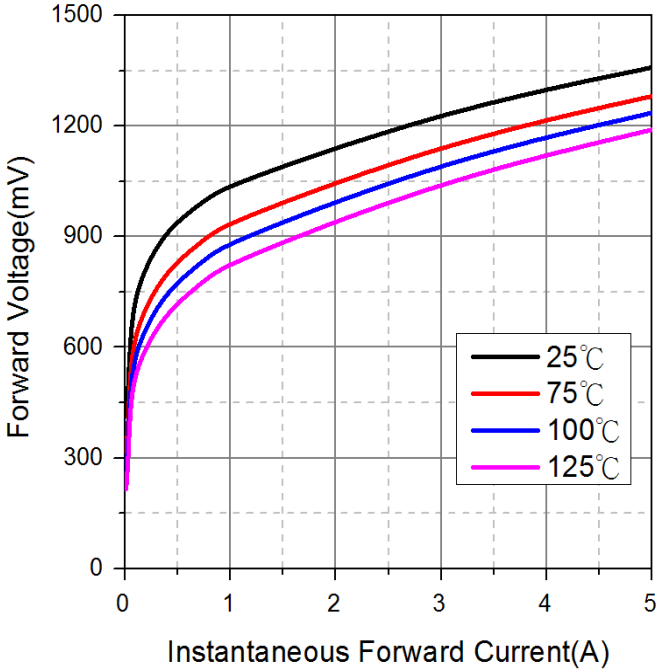
1. Measured at 1MHz and applied reverse voltage of 5V D.C.
2. Pulse Test: Pulse Width=300μs, Duty Cycle≦2%.
3. $I_F$=0.5A, $I_R$ =1A, $I_{RR}$=0.25A.

## RATINGS AND CHARACTERISTIC CURVES

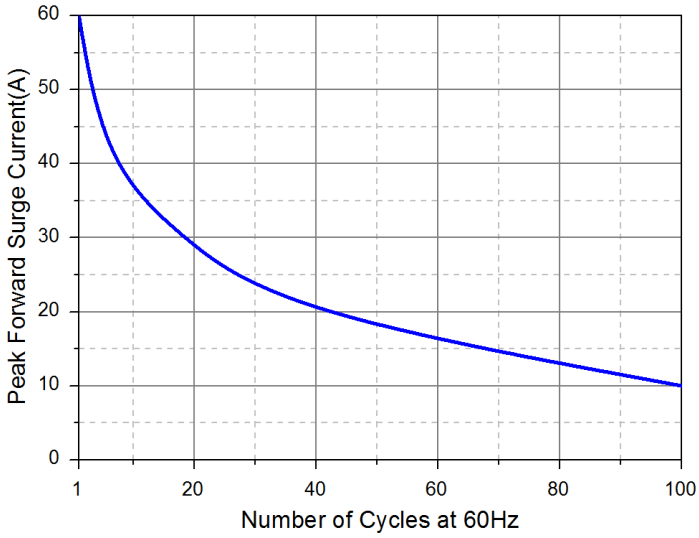
Typical Forward Current Derating Curve



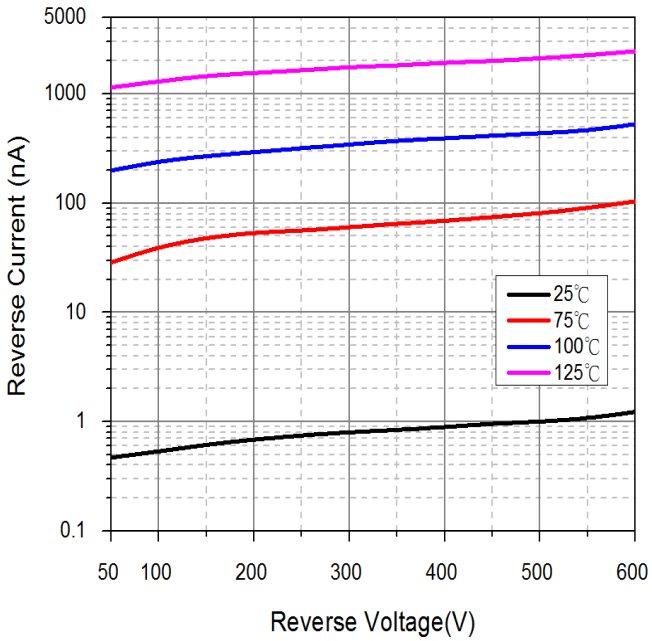

Typical Forward Characteristic




Maximum Non-Repetitive Forward Surge Current




Typical Reverse Characteristic




Typical Junction Capacitance