

RoHS Compliant Product
A suffix of "-C" specifies halogen free

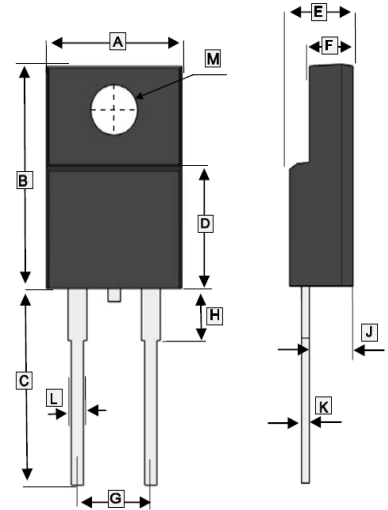
FEATURES

- Fast Switching for High Efficiency
- 150°C Operating Junction Temperature
- Low Power Loss, High Efficiency
- High-Switching Speed 25 Nanosecond Recovery Time
- Low Forward Voltage, High Current Capability
- Plastic Material Used Carries Underwriters Laboratory Flammability Classification 94V-0

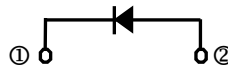
ORDER INFORMATION

| Part Number | Type |
|-------------|---------------------------------|
| SF10E20F | Lead (Pb)-free |
| SF10E20F-C | Lead (Pb)-free and Halogen-free |

ITO-220A



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|-------|------|------------|--------|
| | Min. | Max. | | Min. | Max. |
| A | 9.50 | 10.70 | G | 3.60 | 5.90 |
| B | 14.40 | 15.90 | H | 3.45 | 4.50 |
| C | 12.70 | 14.20 | J | 2.10 | 3.20 |
| D | 8.40 TYP. | | K | 0.40 | 0.80 |
| E | 4.20 | 5.10 | L | 0.30 | 0.90 |
| F | 2.50 | 3.56 | M | φ 2.60 | φ 3.80 |



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%.)

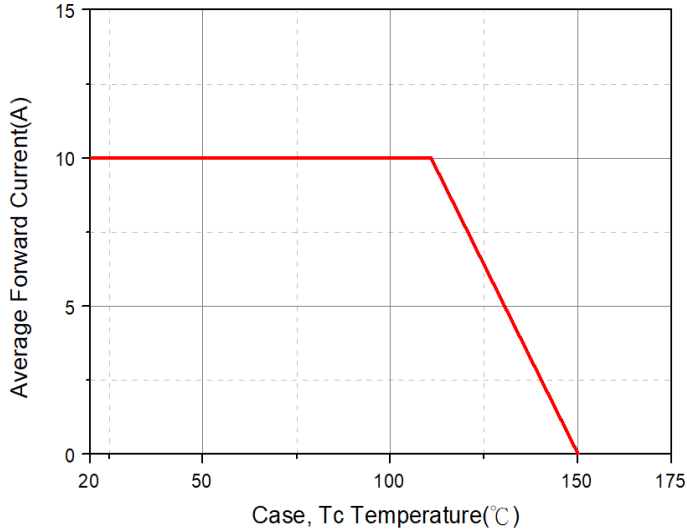
| Parameter | Symbol | Rating | Unit |
|---|-------------------|--------------|--------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 200 | V |
| Working Peak Reverse Voltage | V_{RWM} | 200 | V |
| DC Blocking Voltage | V_R | 200 | V |
| Average Rectifier Forward Current | $I_{F(AV)}$ | 10 | A |
| Non-Repetitive Peak Surge Current @Surge applied at rate load conditions half-wave, single phase, 60Hz | I_{FSM} | 100 | A |
| Max. Instantaneous Forward Voltage @ $I_F=10A$ | V_F | 0.98 | V |
| Max. Instantaneous Reverse Current ² | $T_J=25^\circ C$ | 5 | μA |
| | $T_J=125^\circ C$ | 50 | |
| Reverse Recovery Time ³ | T_{RR} | 25 | nS |
| Typical Junction Capacitance ¹ | C_J | 65 | pF |
| Thermal Resistance | $R_{\theta JC}$ | 4 | $^\circ C/W$ |
| Operating Junction and Storage Temperature Range | T_J, T_{STG} | 150, -55~150 | $^\circ C$ |

Notes:

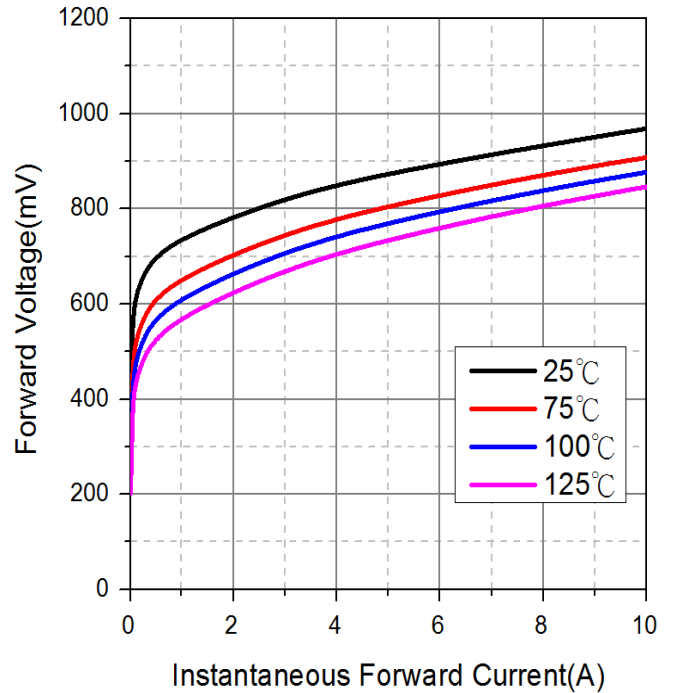
1. Measured at 1MHz and applied reverse voltage of 5V D.C.
2. Pulse Test: Pulse Width=300 μs , Duty Cycle $\leq 2\%$.
3. $I_F=0.5A, I_R=1A, I_{RR}=0.25A$.

RATINGS AND CHARACTERISTIC CURVES

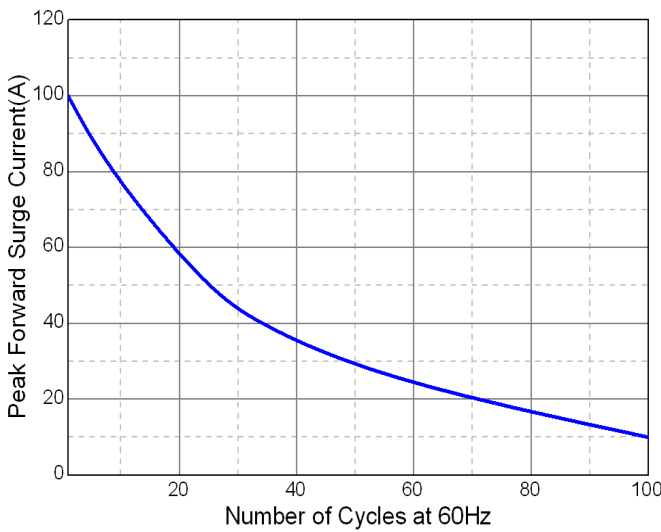
Typical Forward Current Derating Curve



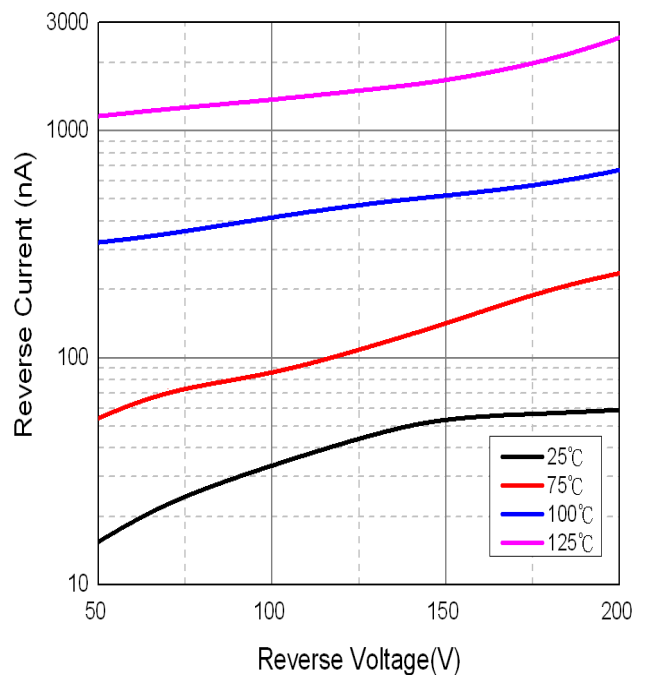
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

