沛倫股份有限公司
Compact Technology Corp.

# S30U100FCT

## Trench MOS Schottky Rectifier

**REVERSE VOLTAGE - 100 Volts**
**FORWARD CURRENT - 30.0 Amperes**

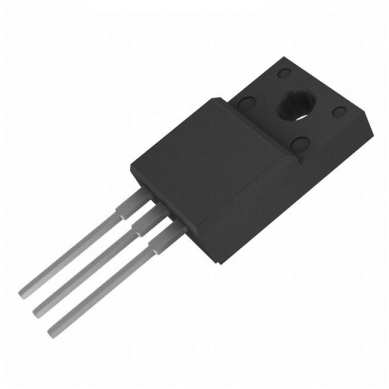
### FEATURES

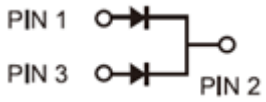
- Low power loss, high efficiency
- Low forward voltage drop
- High forward surge capability
- High frequency operation
- Excellent high temperature stability
- Trench MOS Schottky technology

### MECHANICAL DATA

- Case: TO-220F
- Polarity: As marked
- Weight: Approximated 1.6 grams

TO-220F






### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

| Characteristics | Symbol | Value | | Unit |
|---|---|---|---|---|
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | 100 | | V |
| RMS Reverse Voltage | $V_{RMS}$ | 70 | | V |
| Forward Voltage Drop | | Typ. | Max. | |
| $I_F$=10A ($T_J$=25℃) | $V_F$ | 0.59 | - | V |
| $I_F$=10A ($T_J$=125℃) | | 0.57 | - | |
| $I_F$=15 A ($T_J$=25℃) | | 0.67 | 0.74 | |
| $I_F$=15 A ($T_J$=125℃) | | 0.62 | 0.68 | |
| Maximum Reverse Current at Rated $V_{RRM}$ | | Typ. | Max. | |
| $T_J$=25°C | $I_R$ | 23 | 150 | μA |
| $T_J$=125°C | | 13 | 25 | mA |
| Maximum Average Forward Rectified Current | | | | |
| Total device | $I_O$ | 30 | | A |
| Per diode | | 15 | | |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | $I_{FSM}$ | 200 | | A |
| Peak Repetitive Reverse Current at tp=2 μs, 1 kHz, | $I_{RRM}$ | 1.0 | | A |
| Operating and StorageTemperature Range | $T_J$, $T_{STG}$ | -65 to +150 | | °C |

## Rating and Characteristic Curves

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

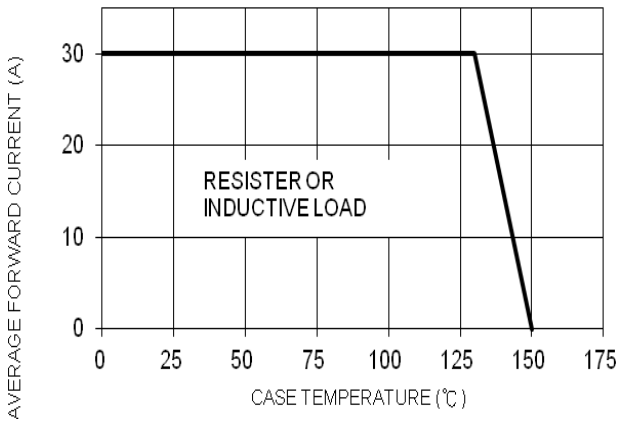



FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

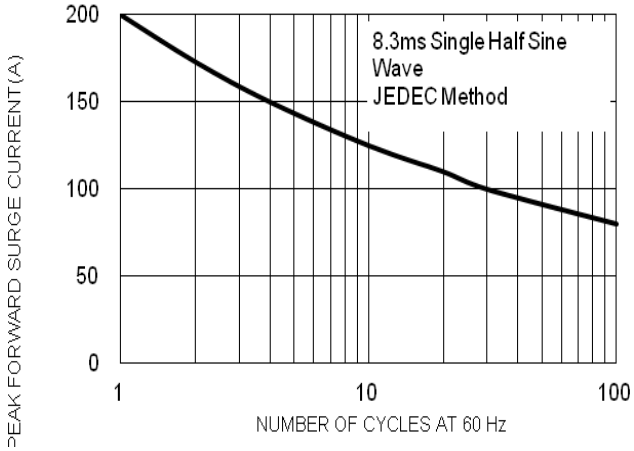
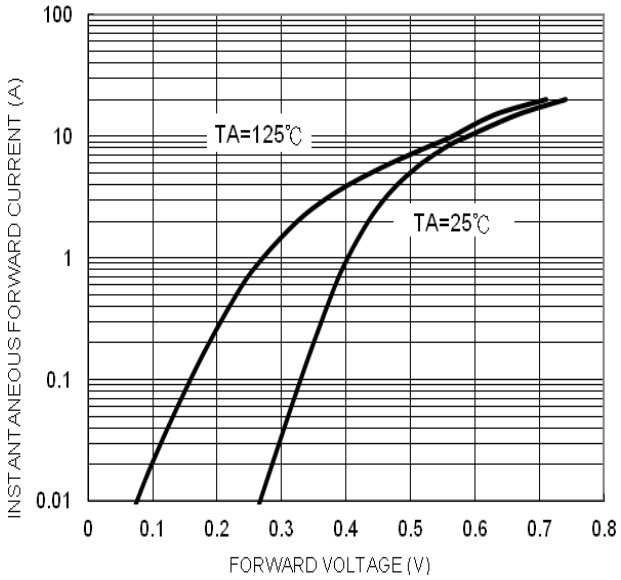



FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG



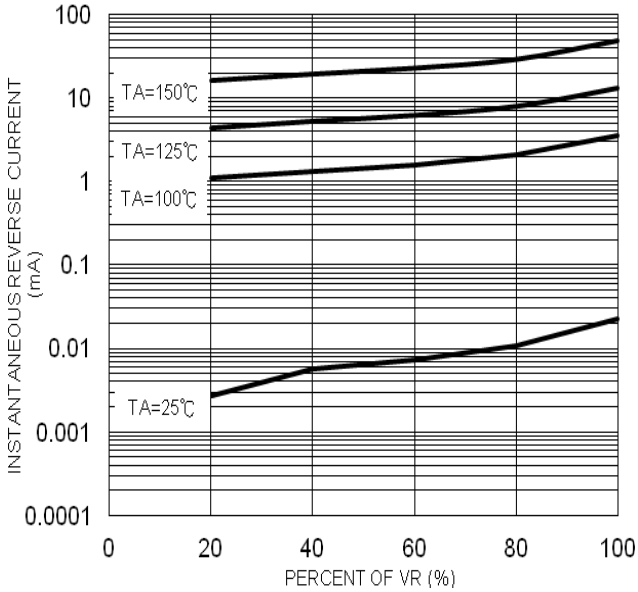


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG