# SFF1601 THRU SFF1608

## Super Fast Recovery Rectifiers

**Reverse Voltage - 50 to 600 Volts**
**Forward Current - 16.0 Amperes**

### Features

- Fast switching for high efficiency
- Low cost
- Low reverse leakage current
- High current capability
- Low forward voltage drop
- Meet UL flammability classification 94V-0

### Mechanical Data

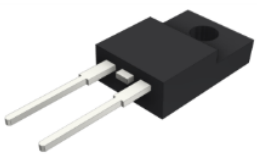
- Case: ITO-220AC Molded plastic
- Polarity: Polarity: As marked on the body
- Mounting position: Any

Note: Products with logo HY® or hy® are made by HY Electronic (Cayman) Limited.

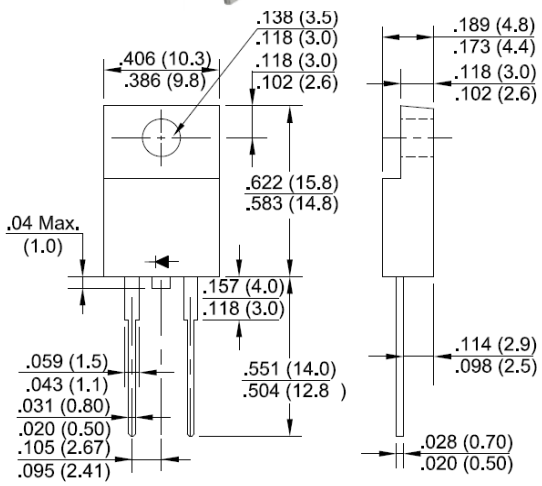
### Applications

- For use in SMPS, high frequency inverters, PWM and polarity protection applications

**ITO-220AC**



RoHS COMPLIANT




Package Outline Dimensions in Inches (Millimeters)

## Maximum Ratings and Electrical Characteristics

Rating 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 | SFF 1601 | SFF 1602 | SFF 1603 | SFF 1604 | SFF 1605 | SFF 1606 | SFF 1608 | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum Average Forward Rectified Current @ $T_A$=75℃ | $I_{(AV)}$ | 16.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method) | $I_{FSM}$ | 200 | | | | | | | A |
| Peak Forward Voltage at 16.0A DC (Note1) | $V_F$ | 1.0 | | | | 1.3 | | 1.7 | V |
| Maximum DC Reverse Current @$T_J$=25℃ | $I_R$ | 10 | | | | | | | μA |
| at Rated DC Blocking Voltage @$T_J$=100℃ | | 150 | | | | | | | |
| Maximum Reverse Recovery Time (Note 2) | $T_{RR}$ | 35 | | | | | | | nS |
| Typical Junction Capacitance (Note3) | $C_J$ | 80 | | | | | | | pF |
| Typical Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 2.5 | | | | | | | ℃/W |
| Operating Junction Temperature Range | $T_J$,$T_{STG}$ | -55 to + 150 | | | | | | | ℃ |

Notes: 1. 300uS pulse width, 2%duty cycle.

2. Measured with IF=0.5A,IR=1A,IRR=0.25A .
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
4. The typical data above is for reference only

## Rating and Characteristic Curves

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Fig. 1 - Forward Current Derating Curve

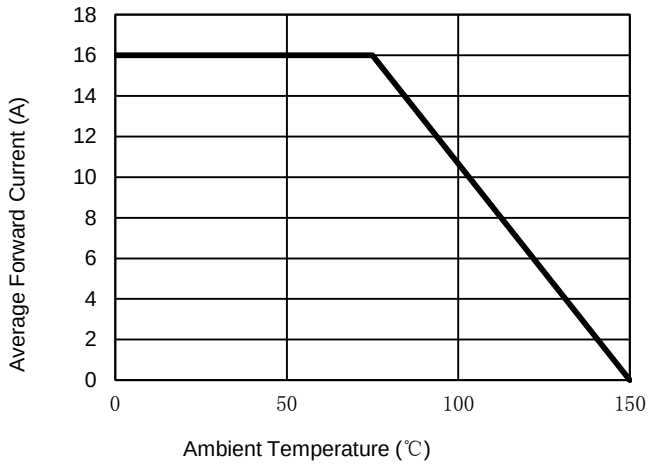



Fig. 2 - Maximum Non-Repetitive Surge Current

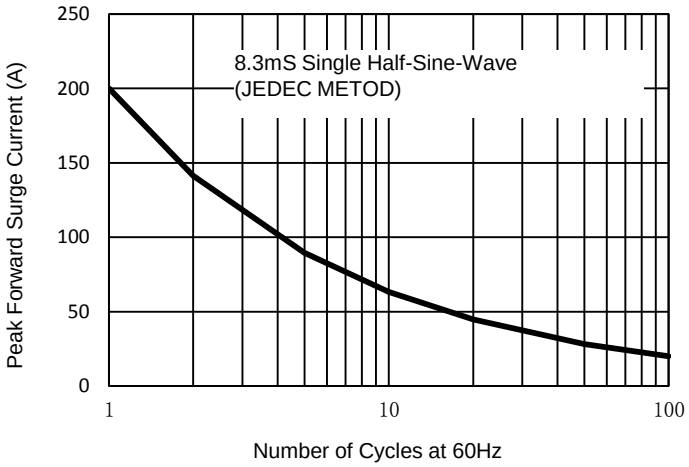



Fig. 3 - Typical Reverse Characteristics

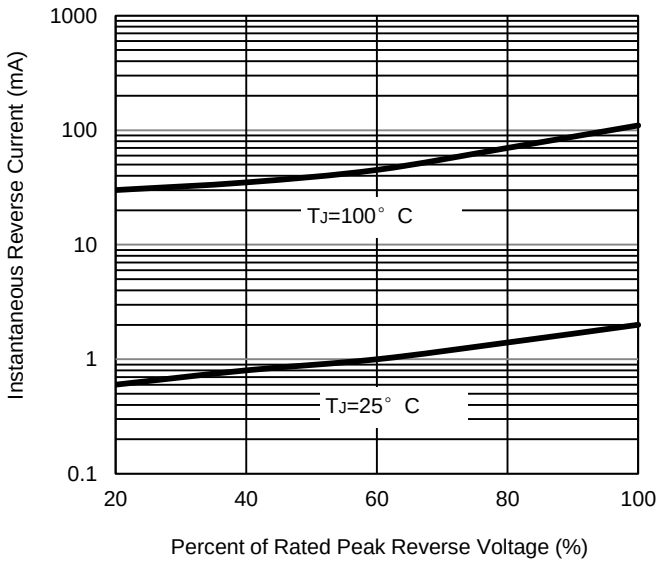



Fig. 4 - Typical Forward Characteristics

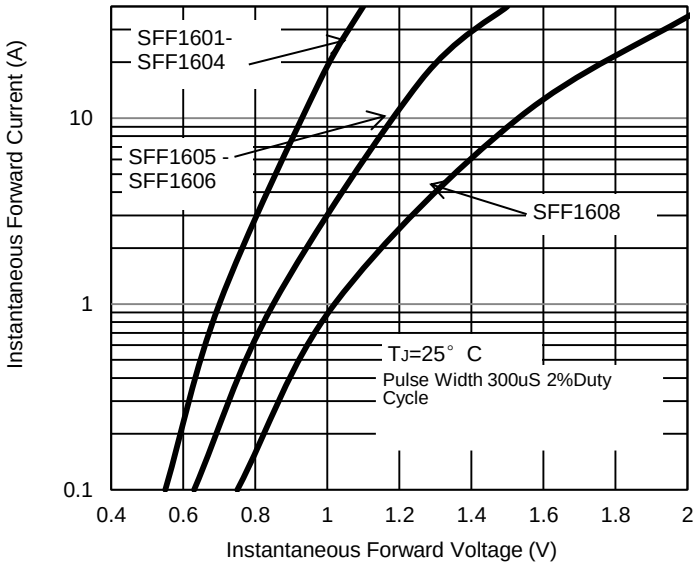
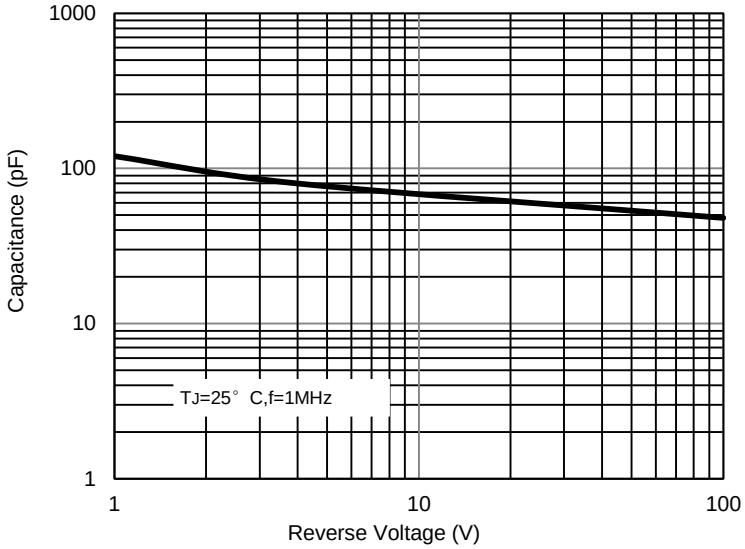



Fig. 5 - Typical Junction Capacitance




The curve above is for reference only.

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