



# FUKUCOM COMPANY LTD.

## 福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
KWUN TONG, KOWLOON, HONG KONG.

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|   |                       |                                 |
|---|-----------------------|---------------------------------|
|  | RECTIFIER SPECIALISTS | <b>SF301<br/>THRU<br/>SF306</b> |
|---|-----------------------|---------------------------------|

### TECHNICAL SPECIFICATIONS OF SUPER FAST RECTIFIER

VOLTAGE RANGE - 50 to 600 Volts

CURRENT - 30 Amperes

#### FEATURES

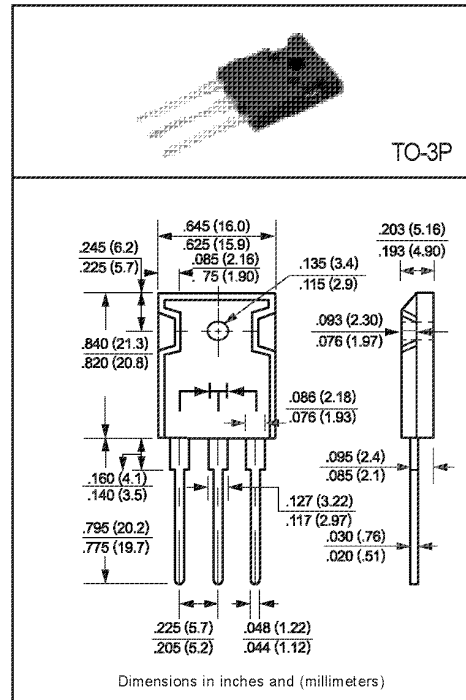
- \* Low switching noise
- \* Low forward voltage drop
- \* Low thermal resistance
- \* High current capability
- \* Super fast switching speed
- \* High reliability
- \* Good for switching mode circuit

#### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Mounting position: Any
- \* Weight: 5.60 grams

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



|  | SYMBOL   | SF301        | SF302 | SF303 | SF304 | SF305 | SF306 | UNITS |       |
|--|----------|--------------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage   | VRRM     | 50           | 100   | 150   | 200   | 400   | 600   | Volts |       |
| Maximum RMS Voltage  | VRMS     | 35           | 70    | 105   | 140   | 280   | 420   | Volts |       |
| Maximum DC Blocking Voltage  | Vbc      | 50           | 100   | 150   | 200   | 400   | 600   | Volts |       |
| Maximum Average Forward Rectified Current<br>at Tc = 100°C   | IO       | 30           |       |       |       |       |       | Amps  |       |
| Peak Forward Surge Current 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC Method) | IFSM     | 300          |       |       |       |       |       | Amps  |       |
| Maximum Instantaneous Forward Voltage at 15.0A DC  | VF       | 1.0          |       |       |       |       |       | Volts |       |
| Maximum DC Reverse Current   | IR       | @Tc = 25°C   |       |       |       |       |       | 10    | uAmps |
| at Rated DC Blocking Voltage   |          | @Tc = 100°C  |       |       |       |       |       | 500   | uAmps |
| Maximum Reverse Recovery Time (Note 1)   | trr      | 35           |       |       |       |       |       | nSec  |       |
| Typical Thermal Resistance   | RθJC     | 1            |       |       |       |       |       | °C/W  |       |
| Typical Junction Capacitance (Note 2)  | CJ       | 120          |       |       |       |       |       | pF    |       |
| Operating and Storage Temperature Range  | TJ, Tstg | -65 to + 150 |       |       |       |       |       | °C    |       |

NOTES : 1. Test Conditions: IF = 0.5A, IR = 1.0A, IRR = 0.25A  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
 3. Suffix "A" = Common Anode.  
 Suffix "C" = Common Cathode.  
 Suffix "D" = In serial.



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### RATING AND CHARACTERISTIC CURVES ( SF301 THRU SF306)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

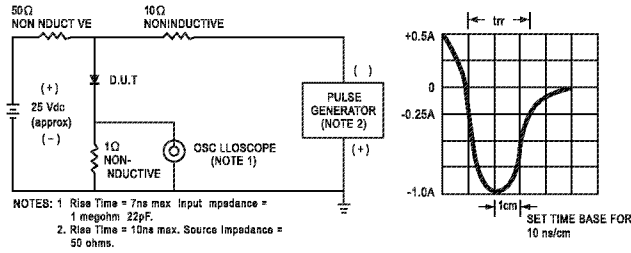


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

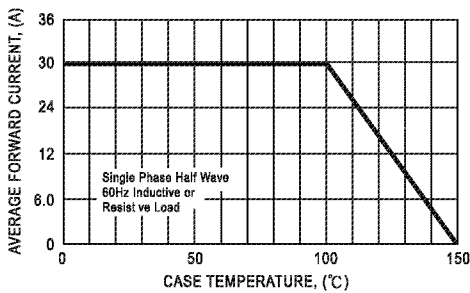


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

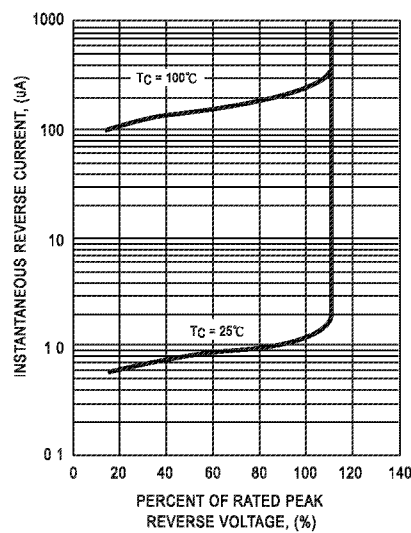


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

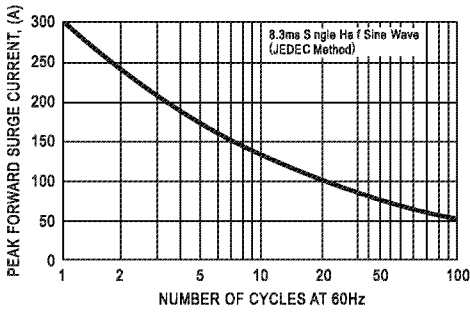


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

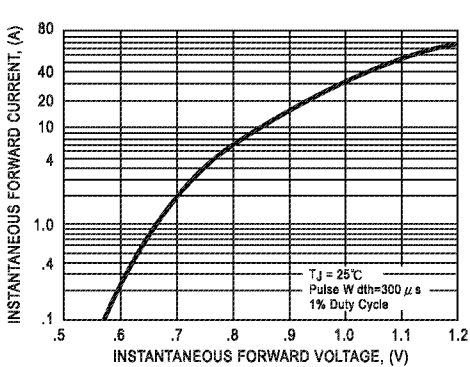


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

