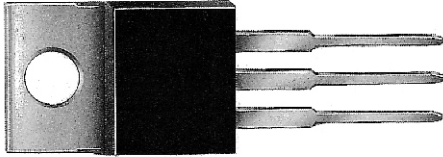


# UF1600 thru UF1608

## ULTRAFAST SWITCHING RECTIFIERS



**CHENG-YI  
ELECTRONIC**



### FEATURES

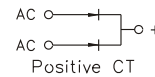
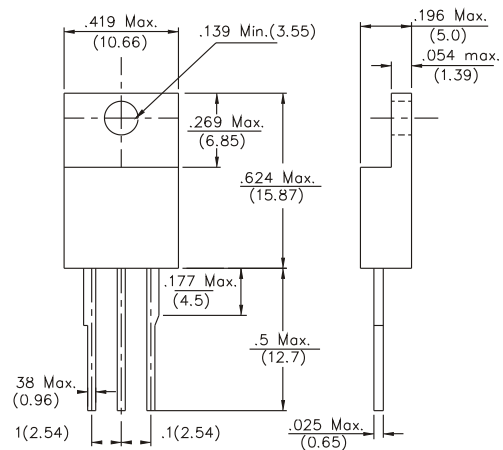
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228.
- Low power loss, high efficiency.
- Low forward voltage, high current capability.
- High surge capacity.
- Ultra fast recovery times, high voltage.

### MECHANICAL DATA

- Case: TO-220AB molded plastic
- Terminals: Lead solderable per MIL-STD-202, Method 208
- Polarity: As marked.
- Mounting position: Any
- Weight: 0.08 ounces, 2.24 grams.

VOLTAGE RANGE  
-50 TO 800 VOLTS  
CURRENT  
-16.0 Amperes

### TO-220AB



Dimensions in inches and (millimeters)

### 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%.

| TYPY NUMBER   | UF1600      | UF1601 | UF1602 | UF1603 | UF1604 | UF1606 | UF1608 | UNITS    |
|---|-------------|--------|--------|--------|--------|--------|--------|----------|
| Maximum Recurrent Peak Reverse Voltage  | 50          | 100    | 200    | 300    | 400    | 600    | 800    | V        |
| Maximum RMS Voltage   | 35          | 70     | 140    | 210    | 280    | 420    | 560    | V        |
| Maximum DC Blocking Voltage   | 50          | 100    | 200    | 300    | 400    | 600    | 800    | V        |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) lead length @ T <sub>c</sub> =100°C               | 16          |        |        |        |        |        |        | A        |
| Peak Forward Surge Current,<br>8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method)    | 125         |        |        |        |        |        |        | A        |
| Maximum Instantaneous Forward Voltage at 8.0A   | 1.0         |        | 1.3    |        | 1.7    |        |        | V        |
| Maximum D.C Reverse Current @ T <sub>A</sub> =25°C<br>at Rated D.C Blocking Voltage @ T <sub>A</sub> =125°C | 10<br>500   |        |        |        |        |        |        | μA<br>μA |
| Maximum Reverse Recovery Time (Note 1)  | 50          |        |        |        |        | 100    |        | Ns       |
| Typical Junction Capacitance (Note 2)   | 170         |        |        |        |        | 130    |        | pF       |
| Typical Junction Resistance (Note 3) R <sub>θ</sub> JA  | 30          |        |        |        |        |        |        | °C / W   |
| Operating and Storage Temperature Range T <sub>j</sub> , T <sub>STG</sub>                                   | -65 to +150 |        |        |        |        |        |        | °C       |

Notes : 1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

2. Measured at 1 MHz and applied reverse voltage of 4.0V D.C.

3. Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm) P.C.B. Mounted.

# UF1600 thru UF1608

## ULTRAFAST SWITCHING RECTIFIERS



**CHENG-YI  
ELECTRONIC**

### RATING AND CHARACTERISTICS CURVES UF1600 THRU UF1608

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

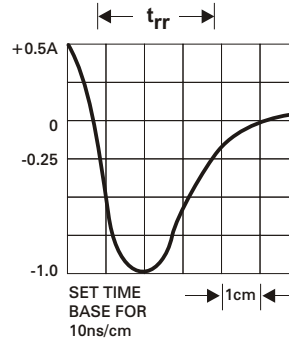
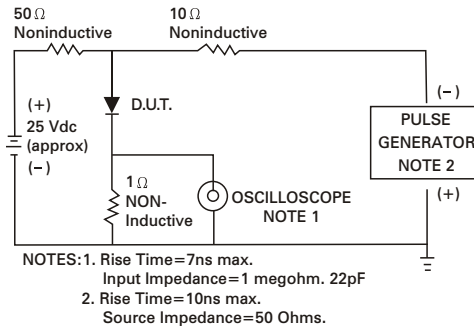


Fig. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

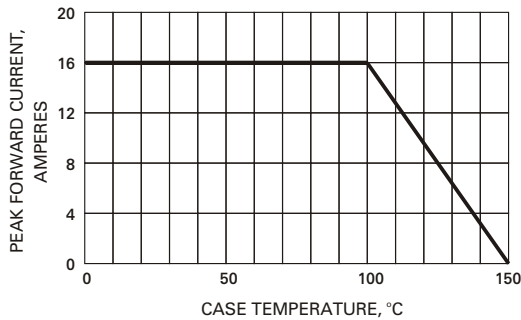


Fig. 2 - TYPICAL REVERSE CHARACTERISTICS

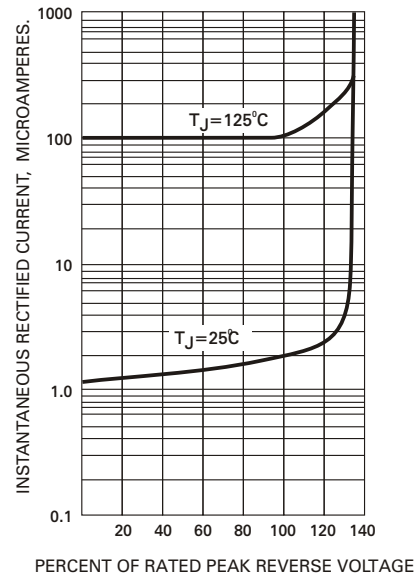


Fig. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

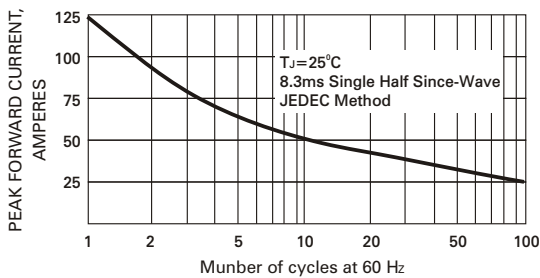


Fig. 5 - TYPICAL FORWARD CHARACTERISTICS

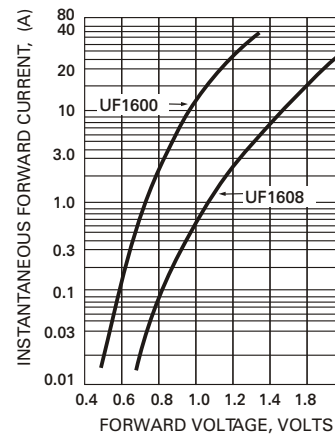


Fig. 4 - TYPICAL JUNCTION CAPACITANCE

