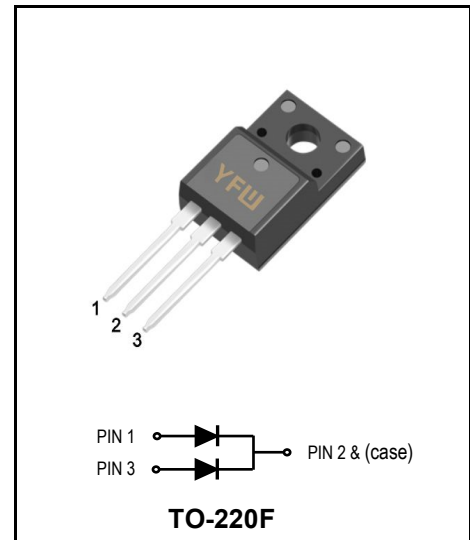


**Super Fast Rectifiers**
**Reverse Voltage - 400V**
**Forward Current - 10A**
**FEATURES**

- Glass passivated chip junctions
- Super fast recovery time for switching mode application
- High Forward Surge Capability
- Low Reverse Current
- Lead free in compliance with EU RoHS 2011/65/EU directive


**MECHANICAL DATA**

- Circuit figure: Common Cathode
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (TA=25°C)**

| RATINGS  | SYMBOL          | Value      | Units |
|--|-----------------|------------|-------|
| Maximum repetitive reverse voltage   | $V_{RRM}$       | 400        | V     |
| Maximum RMS voltage  | $V_{RMS}$       | 280        | V     |
| Maximum DC blocking voltage  | $V_{DC}$        | 400        | V     |
| Maximum average forward current  | $I_{AV}$        | 10         | A     |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$       | 150        | A     |
| Typical thermal resistance per diode (Note 1)                                      | $R_{\theta-JC}$ | 4.0        | °C/W  |
| Operation Junction Temperature and Storage Temperature                             | $T_J, T_{STG}$  | -55 ~ +150 | °C    |

**CHARACTERISTICS**

|  |          |          |         |
|--|----------|----------|---------|
| Typical forward voltage per leg at 5A                        | $V_F$    | 1.25     | V       |
| Maximum average reverse current at rated DC blocking voltage | $I_R$    | 5<br>250 | $\mu A$ |
| Typical reverse recovery time (Note 2)                       | $T_{RR}$ | 35       | nS      |

Notes: 1. Thermal resistance from junction to case.  
2. Test conditions:  $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$ .

**Ratings And Characteristic Curves**

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

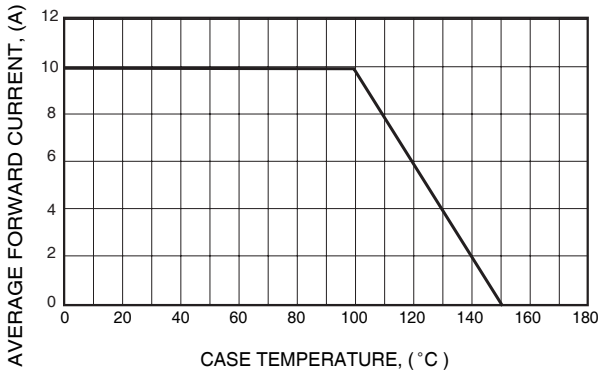


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

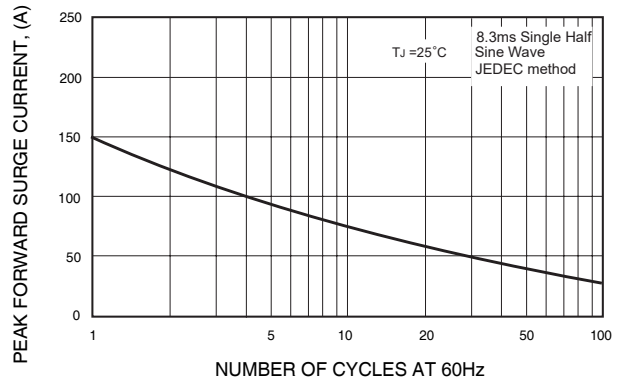


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

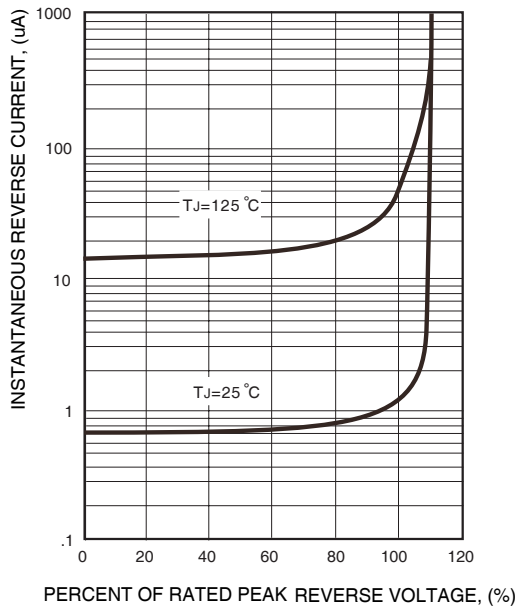


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

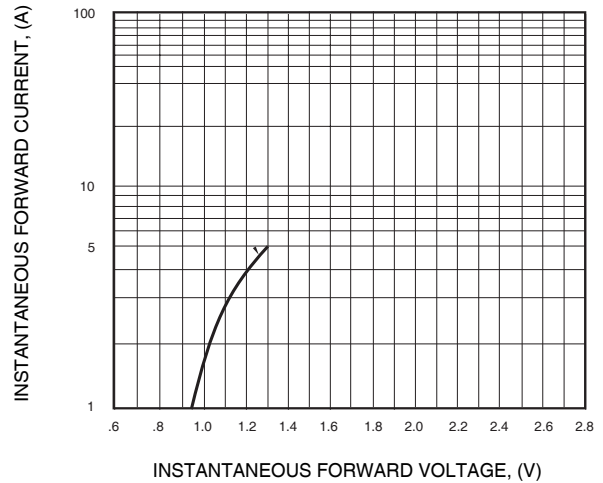
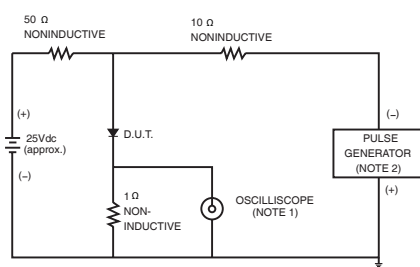
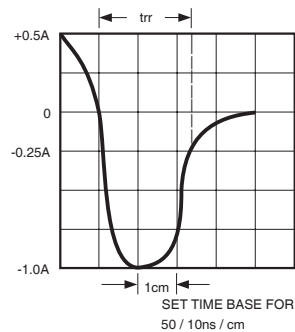


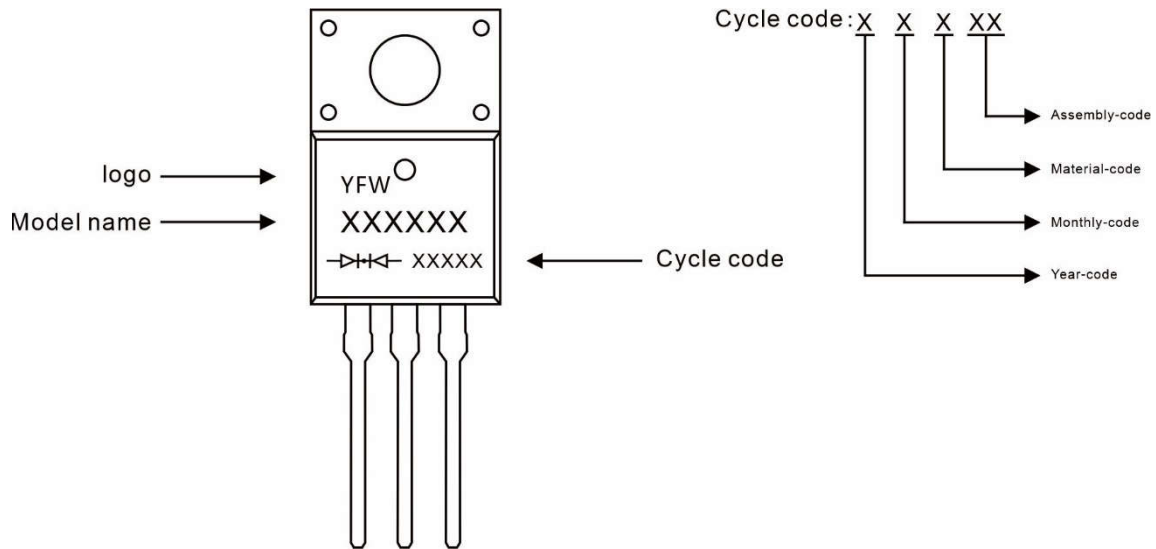
FIG.6- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.



**Marking Diagram**



**Ordering information**

| Model name | Package | Unit Weight   | Base Quantity | Packing Quantity           |
|------------|---------|---------------|---------------|----------------------------|
| MUR1040DF  | TO-220F | 0.06oz(1.74g) | 50pcs/tube    | 1000PCS/Box 5000PCS/Carton |

**Package Dimensions**

**TO-220F**

| Symbol | Millimeter |       | Inches |       |
|--------|------------|-------|--------|-------|
|        | Min.       | Max.  | Min.   | Max.  |
| A      | 4.50       | 4.90  | 0.177  | 0.193 |
| A1     | 2.34       | 2.74  | 0.092  | 0.108 |
| A2     | 2.66       | 2.86  | 0.105  | 0.113 |
| b      | 0.75       | 0.85  | 0.030  | 0.033 |
| b1     | 1.24       | 1.44  | 0.049  | 0.057 |
| c      | 0.40       | 0.60  | 0.016  | 0.024 |
| D      | 10.00      | 10.32 | 0.394  | 0.406 |
| E      | 15.75      | 16.05 | 0.620  | 0.632 |
| e      | 2.44       | 2.64  | 0.096  | 0.104 |
| e1     | 4.88       | 5.28  | 0.192  | 0.208 |
| F      | 3.10       | 3.5   | 0.122  | 0.138 |
| L      | 13.50      | 13.90 | 0.531  | 0.547 |
| L1     | 2.90       | 3.30  | 0.114  | 0.130 |
| Φ      | 3.10       | 3.30  | 0.122  | 0.130 |

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