

## High Efficiency Rectifiers

**Reverse Voltage - 400V**

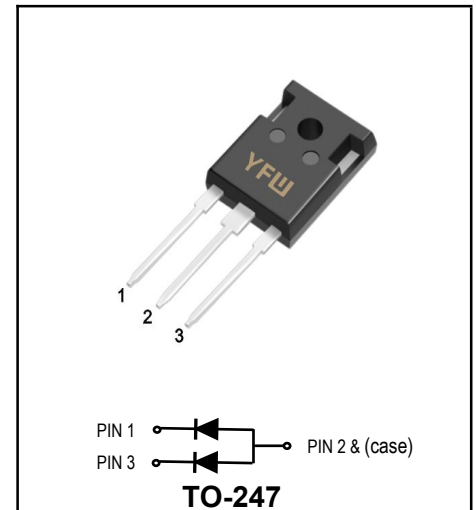
**Forward Current - 40A**

### Features

- ◆ Glass passivated chip junctions
- ◆ High Speed 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

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



### Maximum Ratings & Electrical Characteristics

| Parameter                                                                          | Symbols         | Value     | Units         |
|------------------------------------------------------------------------------------|-----------------|-----------|---------------|
| Maximum Repetitive Peak Reverse Voltage                                            | $V_{RRM}$       | 400       | V             |
| Maximum RMS voltage                                                                | $V_{RMS}$       | 280       | V             |
| Maximum DC Blocking Voltage                                                        | $V_{DC}$        | 400       | V             |
| Average Forward Current                                                            | $I_F$           | 40<br>20  | A             |
| Max. Forward Surge Current ,8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$       | 500       | A             |
| Typical Forward Voltage at $I_F=20A$                                               | $V_F$           | 1.3       | V             |
| Max. DC Reverse Current at<br>Rated DC Blocking Voltage                            | $I_R$           | 5<br>250  | $\mu A$       |
| Typical Reverse Recovery Time (Note 1)                                             | $T_{RR}$        | 50        | nS            |
| Typical Thermal Resistance (Note2)                                                 | $R_{\theta JC}$ | 1.5       | $^{\circ}C/W$ |
| Operating Temperature Range                                                        | $T_J$           | -55~ +150 | $^{\circ}C$   |
| Storage Temperature Range                                                          | $T_{STG}$       | -55~ +150 | $^{\circ}C$   |

#### NOTES:

1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .
2. Thermal resistance from junction to case.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

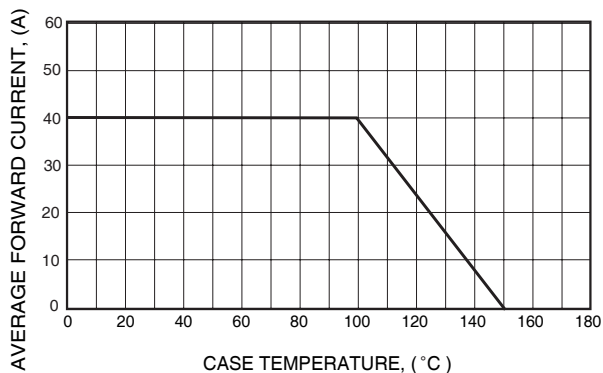


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

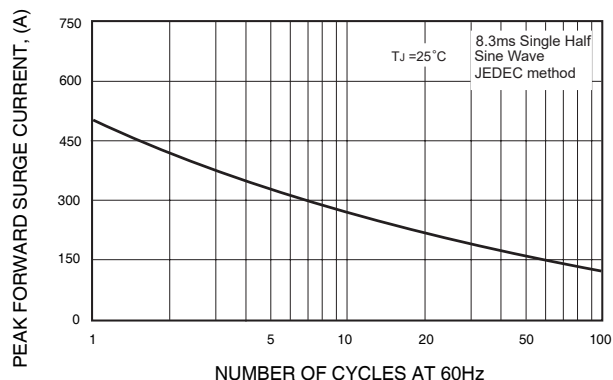


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

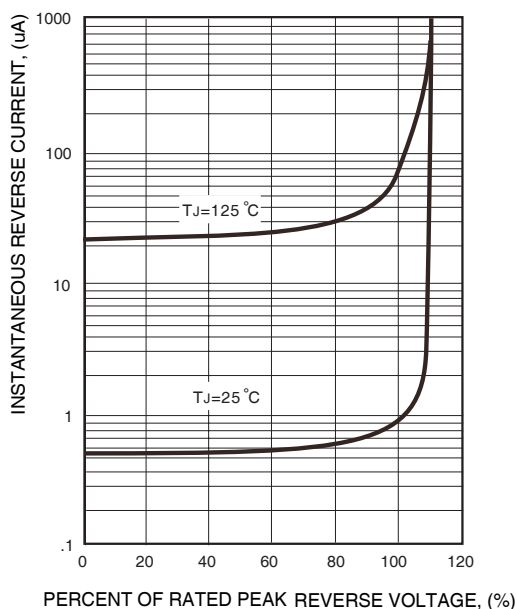
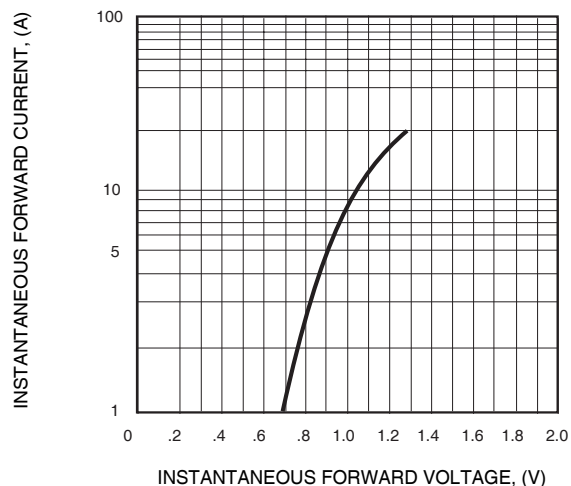
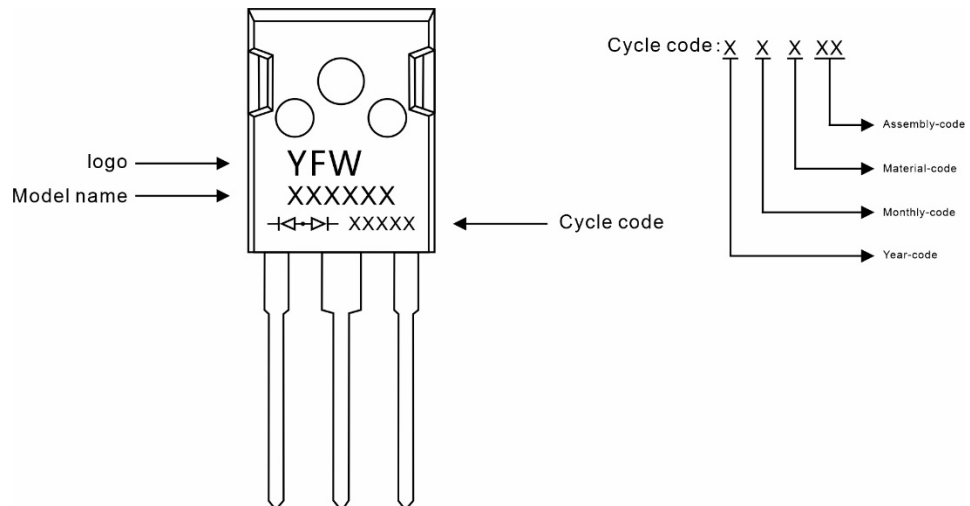


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



**Marking Diagram**



**Ordering information**

| Model name  | Package | Unit Weight    | Base Quantity | Packing Quantity          |
|-------------|---------|----------------|---------------|---------------------------|
| MUR4040SPTR | TO-247  | 0.209oz(5.93g) | 30pcs/tube    | 600PCS/Box 2400PCS/Carton |

**Package Dimensions**

**TO-247**

| Symbol | Dimensions in mm |       | Dimensions in Inch |       |
|--------|------------------|-------|--------------------|-------|
|        | Min.             | Max.  | Min.               | Max.  |
| A      | 4.90             | 5.10  | 0.193              | 0.201 |
| A1     | 1.90             | 2.10  | 0.075              | 0.083 |
| A2     | 2.29             | 2.54  | 0.090              | 0.100 |
| b      | 1.00             | 1.40  | 0.039              | 0.055 |
| b1     | 2.00             | 2.20  | 0.079              | 0.087 |
| b2     | 3.00             | 3.20  | 0.118              | 0.126 |
| c      | 0.50             | 0.70  | 0.020              | 0.028 |
| D      | 15.75            | 16.05 | 0.620              | 0.632 |
| E      | 20.20            | 20.80 | 0.795              | 0.819 |
| e      | 5.45 (BSC)       |       | 0.215 (BSC)        |       |
| e1     | 10.90 (BSC)      |       | 0.429 (BSC)        |       |
| F      | 6.05             | 6.25  | 0.238              | 0.246 |
| F1     | 5.80             | 6.00  | 0.228              | 0.236 |
| L      | 20.10            | 20.40 | 0.791              | 0.803 |
| L1     | 4.05             | 4.35  | 0.159              | 0.171 |
| Φ      | 3.50             | 3.70  | 0.138              | 0.146 |

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