

**30.0Amp Super Fast Recovery Rectifiers**
**Features**

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed  
260°C/10 seconds at terminals

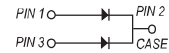
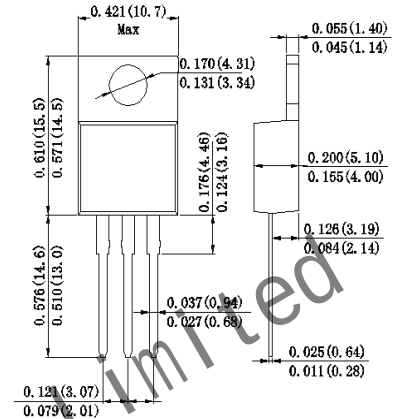
**Mechanical Data**

**Case** : Molded plastic body

**Terminals** : Solder plated, solderable per MIL-STD-750,Method 2026

**Polarity** : Polarity symbol marking on body

**Mounting Position** : Any

**TO-220AB**


Dimensions in inches and (millimeters)

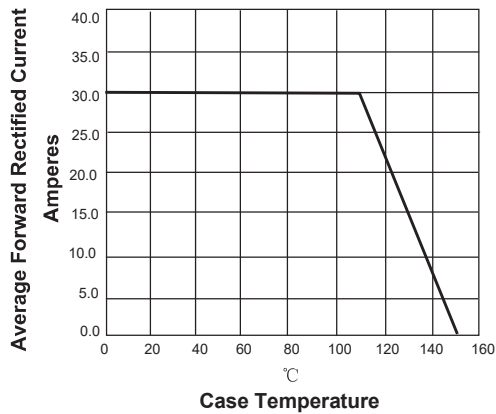
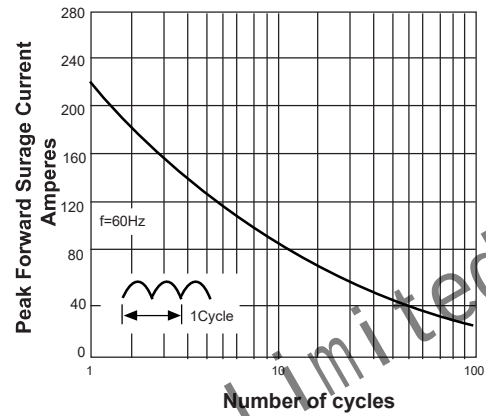
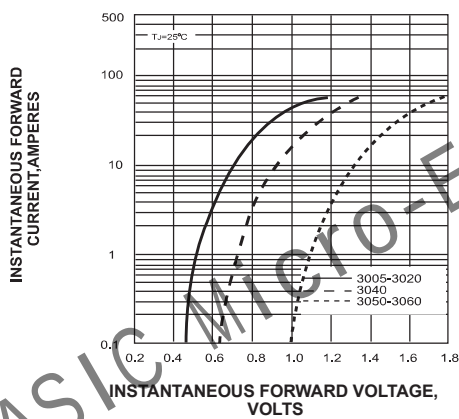
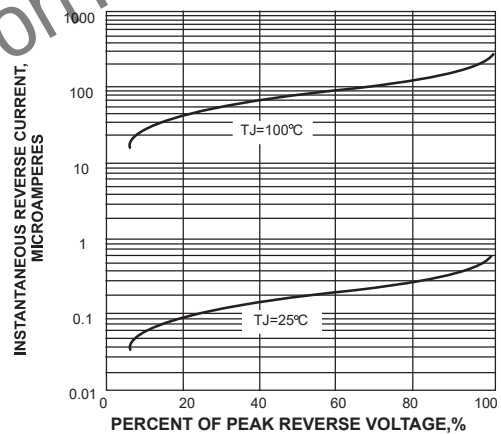
**Maximum Ratings And Electrical Characteristics**

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

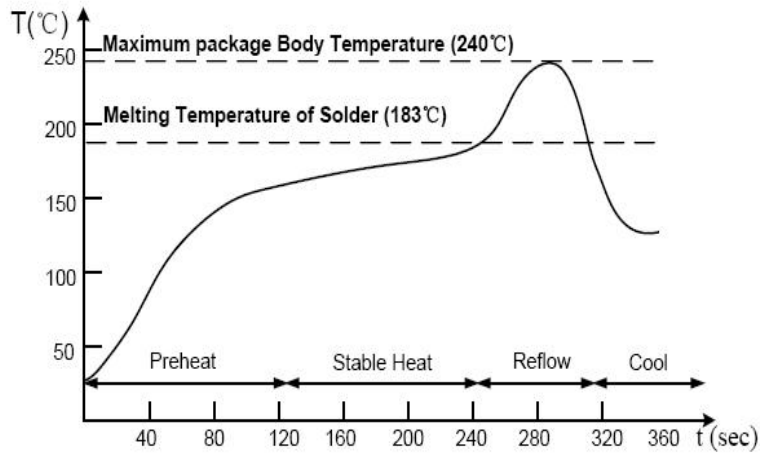
| Parameter                                                                                                | SYMBOLS           | ASFMUR<br>3005CTUX0 | ASFMUR<br>3010CTUX0 | ASFMUR<br>3020CTUX0 | ASFMUR<br>3040CTUX0 | ASFMUR<br>3050CTUX0 | ASFMUR<br>3060CTUX0 | UNITS |
|----------------------------------------------------------------------------------------------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------|
| Maximum repetitive peak reverse voltage                                                                  | V <sub>RRM</sub>  | 50                  | 100                 | 200                 | 400                 | 500                 | 600                 | V     |
| Maximum RMS voltage                                                                                      | V <sub>RMS</sub>  | 35                  | 70                  | 140                 | 280                 | 350                 | 420                 | V     |
| Maximum DC blocking voltage                                                                              | V <sub>DC</sub>   | 50                  | 100                 | 200                 | 400                 | 500                 | 600                 | V     |
| Maximum average forward rectified current at T <sub>c</sub> =110°C per device per diode                  | I <sub>(AV)</sub> | 30.0<br>15.0        |                     |                     |                     |                     |                     | A     |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load                       | I <sub>FSM</sub>  | 220.0               |                     |                     |                     |                     |                     | A     |
| Maximum instantaneous forward voltage per diode at 15.0A                                                 | V <sub>F</sub>    | 1.0                 |                     |                     | 1.5                 | 2.2                 |                     | V     |
| Maximum DC reverse current at rated DC blocking voltage<br>T <sub>A</sub> =25°C<br>T <sub>A</sub> =125°C | I <sub>R</sub>    | 10<br>500           |                     |                     |                     |                     |                     | u A   |
| Maximum reverse recovery time                                                                            | T <sub>rr</sub>   | 35                  |                     |                     | 60                  |                     |                     | ns    |
| Typical thermal resistance                                                                               | R <sub>qjc</sub>  | 3.5                 |                     |                     |                     |                     |                     | °C/W  |
| Operating junction temperature range                                                                     | T <sub>J</sub>    | -55 to +150         |                     |                     |                     |                     |                     | °C    |
| Storage temperature range                                                                                | T <sub>STG</sub>  | -55 to +150         |                     |                     |                     |                     |                     | °C    |

**Note:** 1.Reverse recovery time test condition:  $I_F=0.5\text{A}$   $I_R=1.0\text{A}$   $I_{rr}=0.25\text{A}$

## Ratings And Characteristic Curves

**FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT**

**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**

**FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS**

**FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS**


## Suggested Soldering Temperature Profile



### Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

## Package Information

### Tube Package

| Package | Tube (mm)    | Q'TY/Tube (Kpcs) | Box Size (mm) | QTY/Box (Kpcs) | Carton Size (mm) | Q'TY/Carton (Kpcs) |
|---------|--------------|------------------|---------------|----------------|------------------|--------------------|
| TO      | 525*31.9*6.4 | 0.05             | 545*150*45    | 1.0            | 575*245*170      | 5.0                |