

## 2.0Amp Fast Recovery Surface Mounted Rectifiers

### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated Junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed  
250°C/10 seconds at terminals

### Mechanical Data

**Case** : Molded plastic body

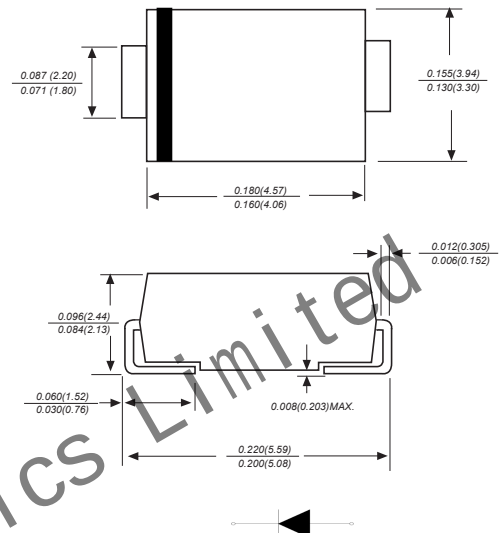
**Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity** : Polarity symbol marking on body

**Mounting Position** : Any

**Weight** : 0.0035 ounce, 0.098 grams

**DO-214AA/SMB**  



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

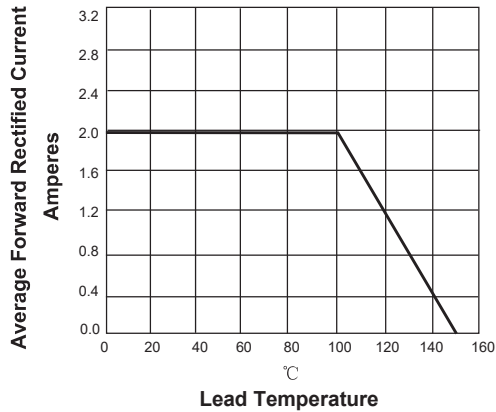
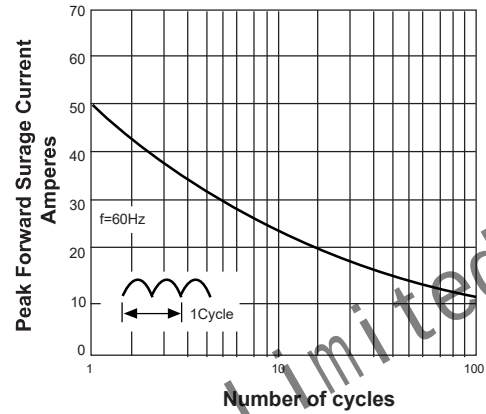
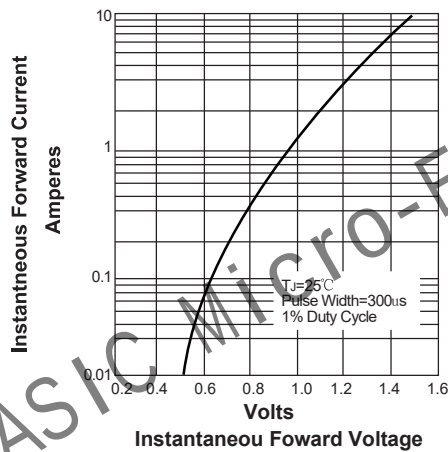
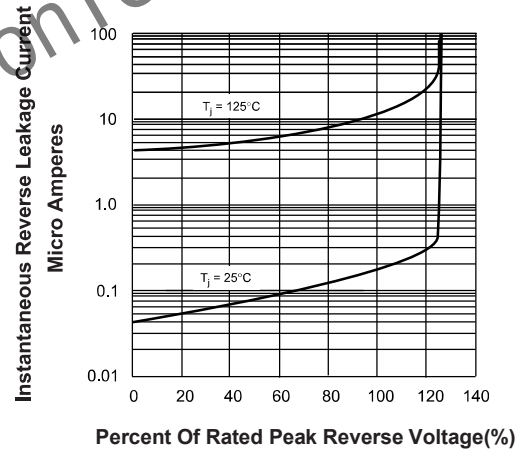
Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter                                                                                                   | SYMBOLS                          | ASFRS<br>2AMX0 | ASFRS<br>2BMX0 | ASFRS<br>2DMX0 | ASFRS<br>2GMX0 | ASFRS<br>2JMX0 | ASFRS<br>2KMX0 | ASFRS<br>2MMX0 | UNITS |
|-------------------------------------------------------------------------------------------------------------|----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------|
| Maximum repetitive peak reverse voltage                                                                     | V <sub>RRM</sub>                 | 50             | 100            | 200            | 400            | 600            | 800            | 1000           | V     |
| Maximum RMS voltage                                                                                         | V <sub>RMS</sub>                 | 35             | 70             | 140            | 280            | 420            | 560            | 700            | V     |
| Maximum DC blocking voltage                                                                                 | V <sub>DC</sub>                  | 50             | 100            | 200            | 400            | 600            | 800            | 1000           | V     |
| Maximum average forward rectified current<br>at T <sub>L</sub> =100°C                                       | I <sub>(AV)</sub>                | 2.0            |                |                |                |                |                |                | A     |
| Peak forward surge current, 8.3ms single half<br>sine-wave superimposed on rated load                       | I <sub>FSM</sub>                 | 50.0           |                |                |                |                |                |                | A     |
| Maximum instantaneous forward voltage at 2.0A                                                               | V <sub>F</sub>                   | 1.30           |                |                |                |                |                |                | V     |
| Maximum DC reverse current    T <sub>A</sub> =25°C<br>at rated DC blocking voltage    T <sub>A</sub> =125°C | I <sub>R</sub>                   | 5.0<br>500     |                |                |                |                |                |                | uA    |
| Maxinum reverse recovery time(Note 1)                                                                       | T <sub>rr</sub>                  | 150            |                |                |                | 250            | 500            |                | ns    |
| Typical junction capacitance (Note2)                                                                        | C <sub>J</sub>                   | 50.0           |                |                |                |                |                |                | pF    |
| Typical thermal resistance                                                                                  | R <sub>qJA</sub>                 | 85.0           |                |                |                |                |                |                | °C/W  |
| Operating junction and storage temperature range                                                            | T <sub>J</sub> ,T <sub>STG</sub> | -55 to +150    |                |                |                |                |                |                | °C    |

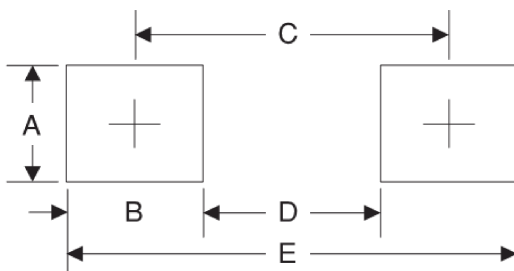
**Note:** 1.Reverse recovery time test condition:  $I_F=0.5\text{A}$   $I_R=1.0\text{A}$   $I_{rr}=0.25\text{A}$

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

## Ratings And Characteristic Curves

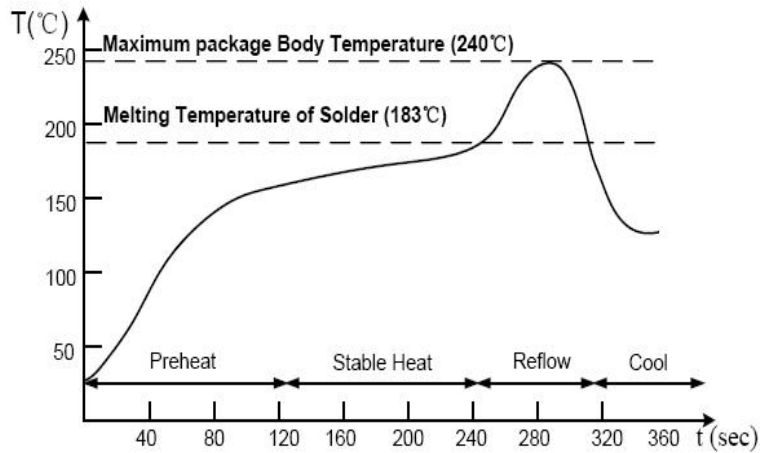
**FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT**

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

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

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


## Suggested Pad Layout



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A      | 2.30      | 0.091       |
| B      | 2.00      | 0.078       |
| C      | 4.10      | 0.161       |
| D      | 2.10      | 0.083       |
| E      | 6.10      | 0.240       |

## Suggested Soldering Temperature Profile

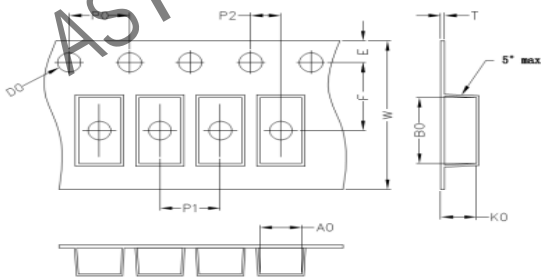


### Note

- 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

### Carrier Dimension(mm)



| A0   | B0   | K0   | D0   | E    | F         |
|------|------|------|------|------|-----------|
| 3.80 | 5.40 | 2.45 | 1.55 | 1.75 | 5.50      |
| P0   | P1   | P2   | T    | W    | Tolerance |
| 4.0  | 8.0  | 2.0  | 0.25 | 12   | 0.1       |

### Package Specifications

| Package | Reel Size | Reel DIA. (mm) | Q'TY/Reel (Kpcs) | Box Size (mm) | QTY/Box (Kpcs) | Carton Size (mm) | Q'TY/Carton (Kpcs) |
|---------|-----------|----------------|------------------|---------------|----------------|------------------|--------------------|
| SMB     | 13'       | 330            | 3.0              | 340           | 6.0            | 360*360*360      | 48                 |