



**TO-220AB**

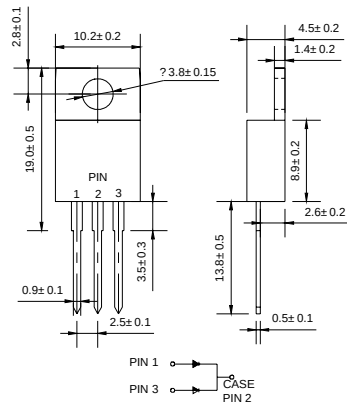


## FEATURES

- Low forward voltage
- High current capability
- High forward surge capability
- Low power losses, High efficiency
- Guarding for over voltage protection

## MECHANICAL DATA

- **Case:** Molded plastic
- **Polarity:** As marked
- **Mounting Position:** Any
- **Molded Plastic:** UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275°C maximum, 10s per JESD 22-B106



Dimensions in millimeters

## Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified

| Characteristics                                          | Symbol          | Value       | Unit |
|----------------------------------------------------------|-----------------|-------------|------|
| Maximum Repetitive Peak Reverse Voltage                  | $V_{RRM}$       | 100         | V    |
| Working Peak Reverse Voltage                             | $V_{RWM}$       | 100         | V    |
| Maximum DC Blocking Voltage                              | $V_{DC}$        | 100         | V    |
| Maximum Average Forward Rectified Current                | Per Leg         | 15          | A    |
|                                                          | Total           | 30          |      |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave | $I_{FSM}$       | 350         | A    |
| Operating Temperature Range                              | $T_J$           | 150         | °C   |
| Storage Temperature Range                                | $T_{STG}$       | -40 to +150 | °C   |
| Typical Thermal Resistance (Note1)                       | $R_{\theta JC}$ |             | °C/W |
| TO-220AB, TO-263                                         |                 | 2           |      |
| TO-220F                                                  |                 | 4           |      |

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

## Electrical Characteristics (Per Leg) unless otherwise specified

| Characteristics                                 |          | Symbol         | Value          |      | Unit |
|-------------------------------------------------|----------|----------------|----------------|------|------|
| Forward Voltage Drop(Note2)                     |          | V <sub>F</sub> | Typ.           | Max. | V    |
| at I <sub>F</sub> =5A                           | TA=25°C  |                | 0.73           | -    |      |
|                                                 | TA=125°C |                | 0.59           | -    |      |
| at I <sub>F</sub> =10A                          | TA=25°C  |                | 0.79           | 0.87 |      |
|                                                 | TA=125°C |                | 0.66           | -    |      |
| at I <sub>F</sub> =15A                          | TA=25°C  |                | 0.83           | 0.89 |      |
|                                                 | TA=125°C |                | 0.70           | -    |      |
| Maximum Reverse Current at V <sub>R</sub> =100V | TA=25°C  |                | I <sub>R</sub> | 0.6  |      |
|                                                 | TA=125°C | 0.6            |                | -    | mA   |

Note2: Pulse test: 300 μs pulse width, 1 % duty cycle

## RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

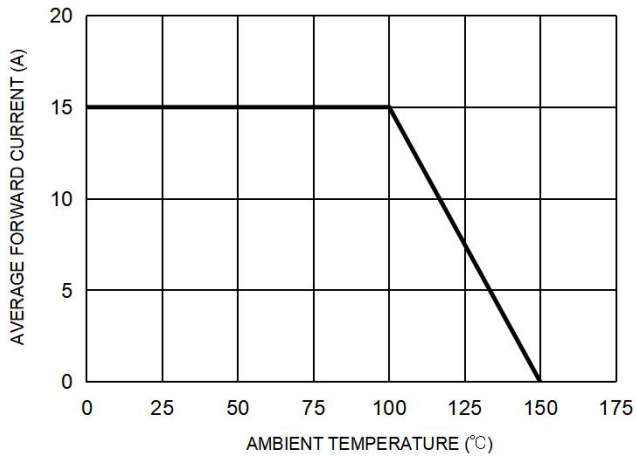


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

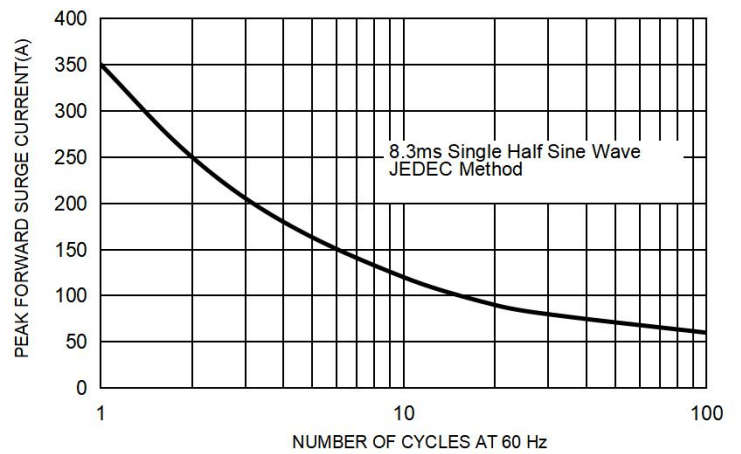


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

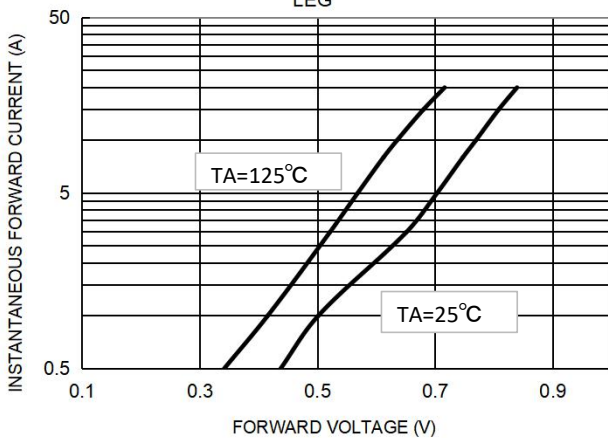


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

