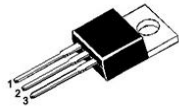
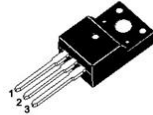


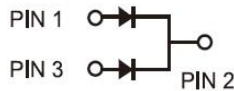
## SCHOTTKY BARRIER RECTIFIER



TO-220AB/MBR



ITO-220 /MBRF



Lead Free Package and Finish

## FEATURES

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

## APPLICATIONS

Low VF Schottky barrier rectifier are designed for high frequency, miniature switched mode power supplies such as adapters ,lighting and on-board DC/DC conerters

## Primary Characteristic

|            |       |
|------------|-------|
| $I_O$      | 2*10A |
| $V_{RRM}$  | 200V  |
| $I_{FSM}$  | 250A  |
| $V_F$      | 0.76V |
| $T_{jmax}$ | 150°C |

## 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

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

| Characteristics   | Symbol          | Value       | Unit |
|---|-----------------|-------------|------|
| Maximum Repetitive Peak Reverse Voltage                 | $V_{RRM}$       | 200         | V    |
| Working Peak Reverse Voltage                            | $V_{RWM}$       | 200         | V    |
| Maximum DC Blocking Voltage                             | $V_{DC}$        | 200         | V    |
| Maximum Average Forward Rectified Current               | Per Leg         | 10          | A    |
|   | Total           | 20          |      |
| Peak Forward Surge Current,8.3 ms Single Half Sine-wave | $I_{FSM}$       | 250         | A    |
| Operating Temperature Range                             | $T_J$           | 150         | °C   |
| Storage Temperature Range                               | $T_{STG}$       | -40 to +150 | °C   |
| Typical Thermal Resistance (Note1)                      | $R_{\theta JC}$ | 2           | °C/W |
| TO-220AB  |                 | 4           |      |
| ITO-220   |                 |             |      |

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> =3A                           | TA=25°C  |                | 0.76           | -    |      |
|   | TA=125°C |                | 0.63           | -    |      |
| at I <sub>F</sub> =5A                           | TA=25°C  |                | 0.80           | -    |      |
|   | TA=125°C |                | 0.68           | -    |      |
| at I <sub>F</sub> =10A                          | TA=25°C  |                | 0.87           | 0.95 |      |
|   | TA=125°C |                | 0.76           | -    |      |
| Maximum Reverse Current at V <sub>R</sub> =200V | TA=25°C  |                | I <sub>R</sub> | 1    |      |
|   | TA=125°C |                | 1              | -    | mA   |

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

## RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

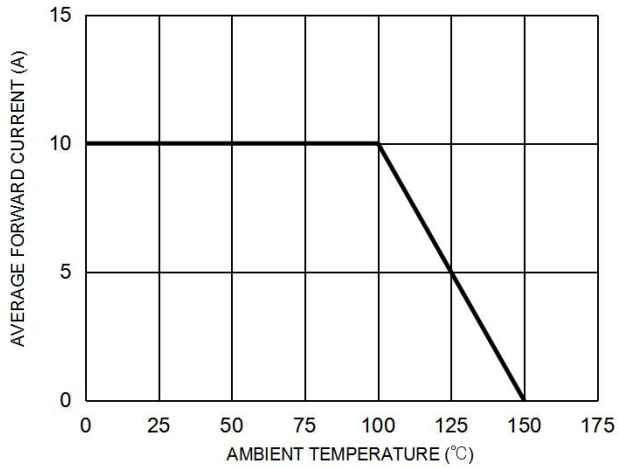


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

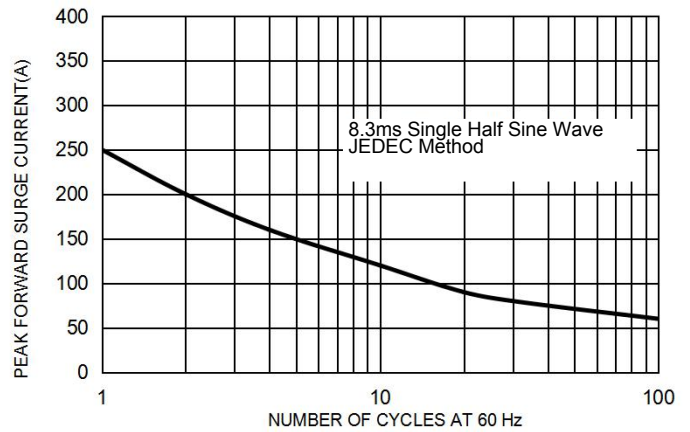


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

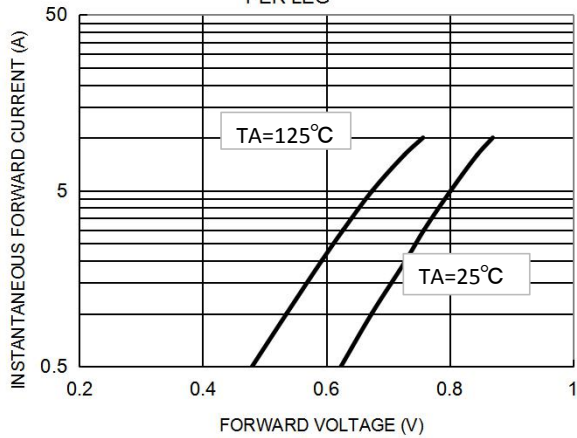
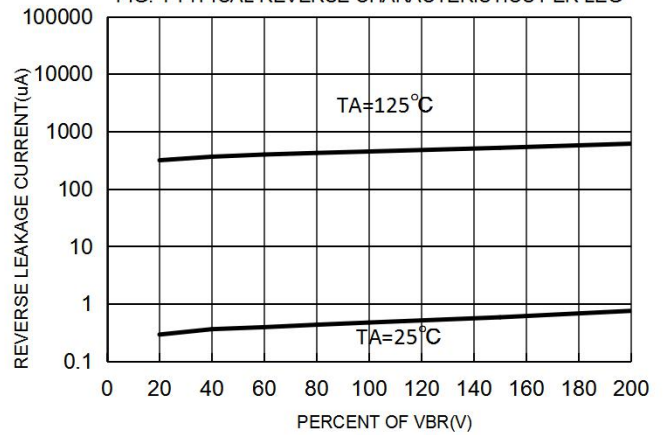
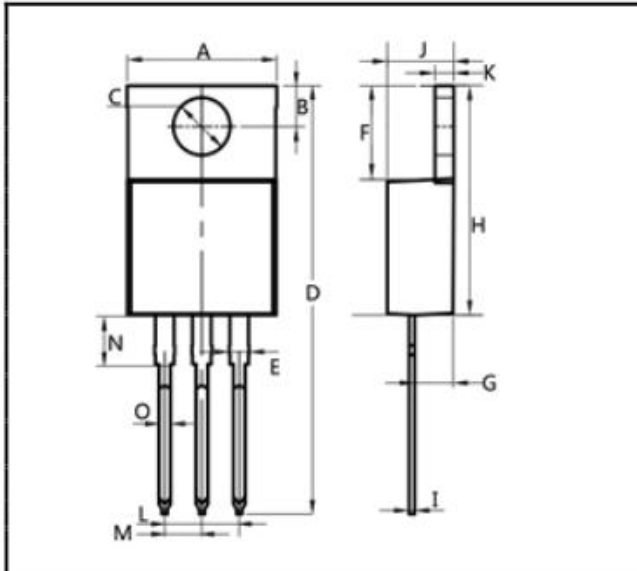


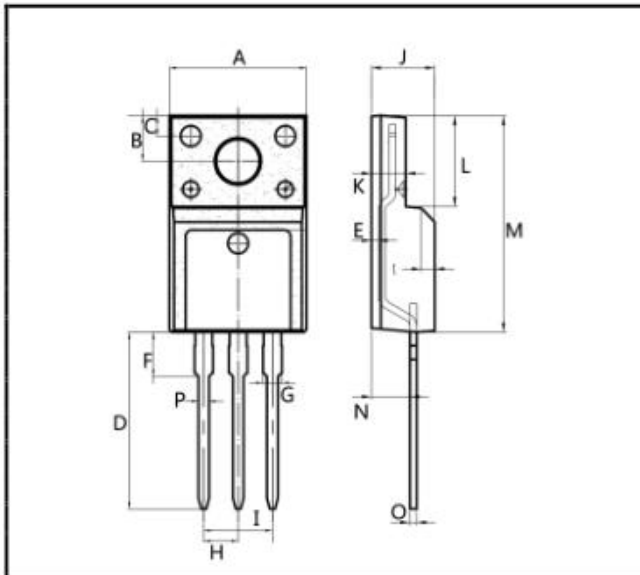
FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



TO-220AB

|   |      |          |       |
|---|------|----------|-------|
|  | Dim. | Min.     | Max.  |
|   | A    | 10.15    | 10.35 |
|   | B    | 2.65     | 2.95  |
|   | C    | 3.70     | 3.90  |
|   | D    | 28.5     | 29.5  |
|   | E    | 1.30     | 1.45  |
|   | F    | 6.35     | 6.55  |
|   | G    | 2.9      | 3.3   |
|   | H    | 15.0     | 16.0  |
|   | I    | 0.38     | 0.42  |
|   | J    | 4.45     | 4.55  |
|   | K    | 1.25     | 1.35  |
|   | L    | Typ 5.08 |       |
|   | M    | Typ 2.54 |       |
|   | N    | 3.1      | 3.3   |
|   | O    | 0.76     | 0.84  |
| All Dimensions in millimeter  |      |          |       |

ITO-220

|   |      |          |       |
|---|------|----------|-------|
|  | Dim. | Min.     | Max.  |
|   | A    | 9.95     | 10.25 |
|   | B    | 2.95     | 3.25  |
|   | C    | 1.25     | 1.45  |
|   | D    | 12.95    | 13.25 |
|   | E    | 0.50     | 0.65  |
|   | F    | 3.1      | 3.3   |
|   | G    | 1.30     | 1.45  |
|   | H    | Typ 2.54 |       |
|   | I    | Typ 5.08 |       |
|   | J    | 4.60     | 4.75  |
|   | K    | 2.50     | 2.65  |
|   | L    | 6.35     | 6.55  |
|   | M    | 15.4     | 16.0  |
|   | N    | 2.75     | 3.05  |
|   | O    | 0.48     | 0.52  |
|   | P    | 0.76     | 0.84  |
| All Dimensions in millimeter  |      |          |       |

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