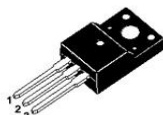
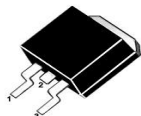


TO-220AB/CT



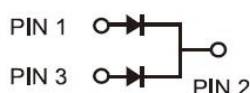
ITO-220AB/FCT



TO-263/DC



TO-252/CS



### 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*5A  |
| $V_{RRM}$     | 45V   |
| $I_{FSM}$     | 230A  |
| $V_F$         | 0.48V |
| $T_{jmax}$    | 150°C |
| Assembly code | BU    |

### 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                                   | $V_{RRM}$       | 45          | V    |
| Working Peak Reverse Voltage                                              | $V_{RWM}$       | 45          | V    |
| Maximum DC Blocking Voltage                                               | $V_{DC}$        | 45          | V    |
| Maximum Average Forward Rectified Current                                 | Per Leg         | 5           | A    |
|                                                                           | Total           | 10          |      |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave                  | $I_{FSM}$       | 230         | A    |
| Operating Temperature Range                                               | $T_J$           | 150         | °C   |
| Storage Temperature Range                                                 | $T_{STG}$       | -40 to +150 | °C   |
| Typical Thermal Resistance (Note1)<br>TO-220AB, TO-263, TO-252<br>TO-220F | $R_{\theta JC}$ | 2<br>4      | °C/W |

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> =2A                          | TA=25°C  |                | 0.43           | -    |      |
|                                                | TA=125°C |                | 0.34           | -    |      |
| at I <sub>F</sub> =3A                          | TA=25°C  |                | 0.46           | -    |      |
|                                                | TA=125°C |                | 0.39           | -    |      |
| at I <sub>F</sub> =5A                          | TA=25°C  |                | 0.52           | 0.59 |      |
|                                                | TA=125°C |                | 0.48           | -    |      |
| Maximum Reverse Current at V <sub>R</sub> =45V | TA=25°C  |                | I <sub>R</sub> | 20   |      |
|                                                | TA=125°C | 7              |                | -    | mA   |

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

### RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

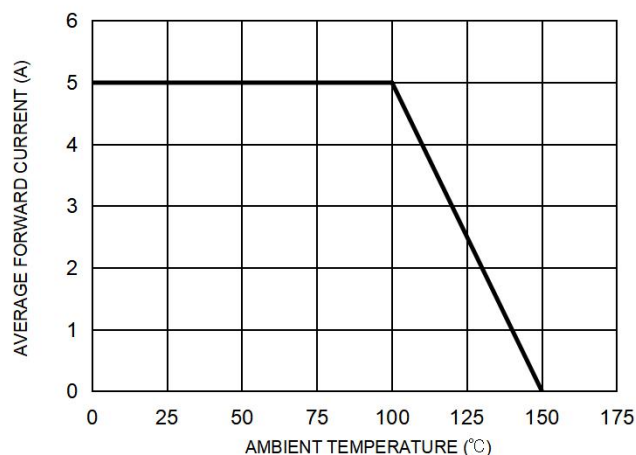


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

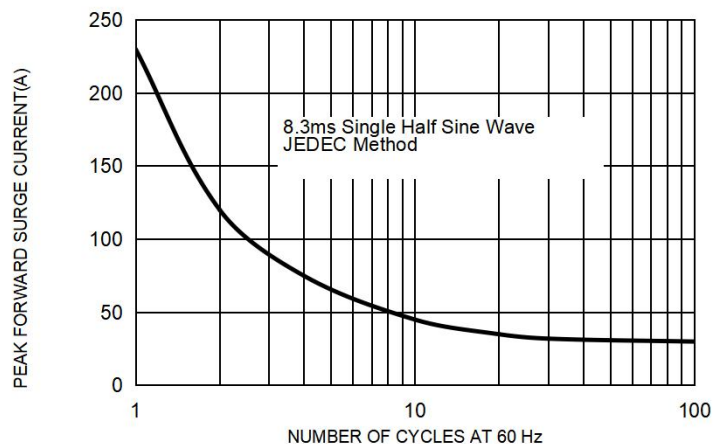


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

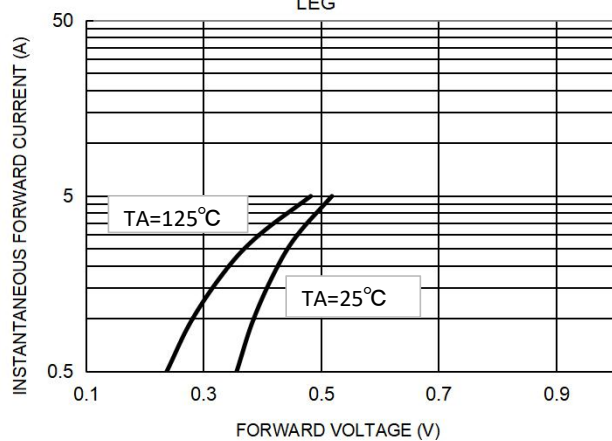
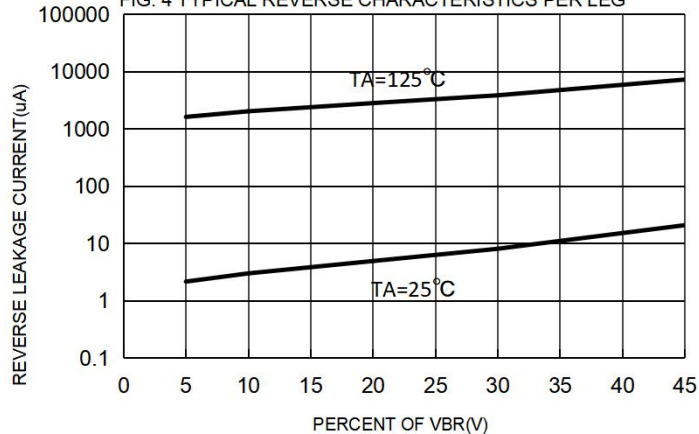
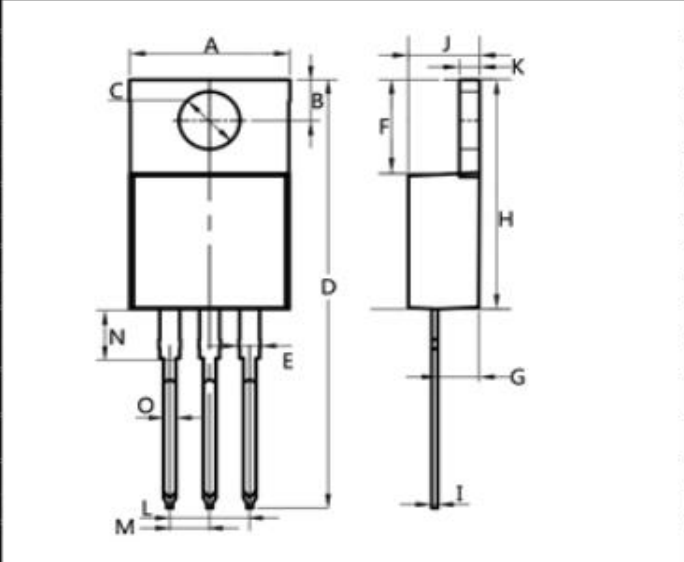


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

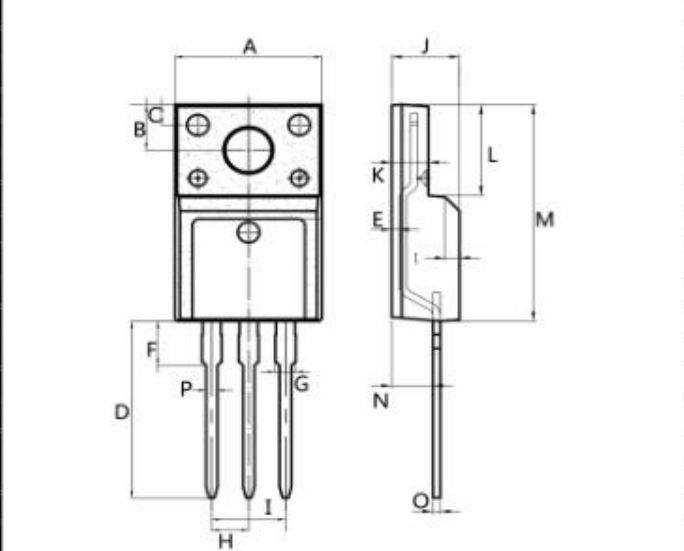


Package Outline Dimensions millimeters

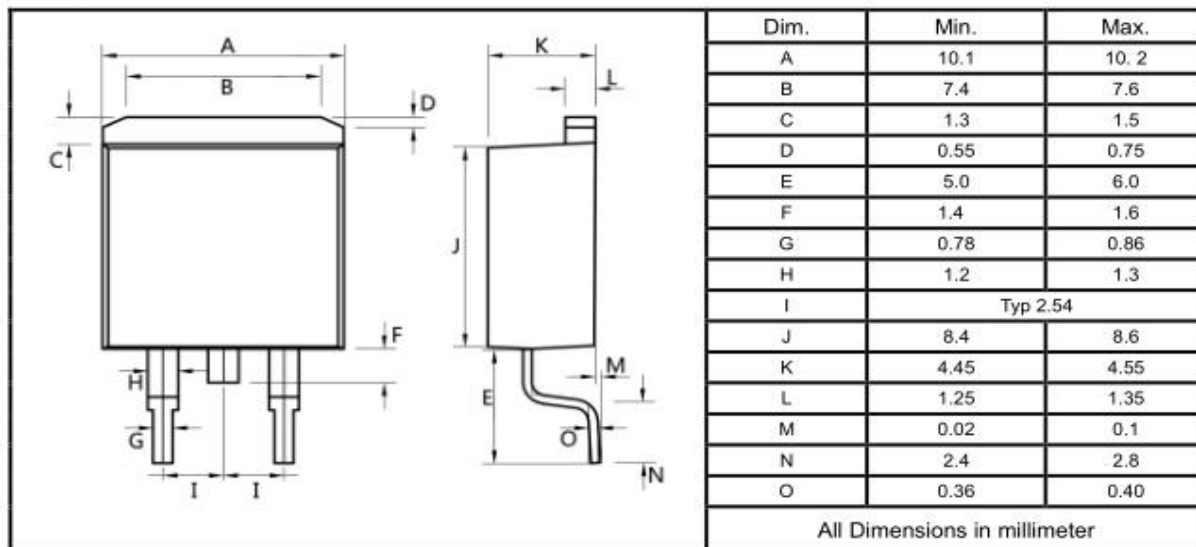
**TO-220AB**

|                                                                                   |                              |          |       |
|-----------------------------------------------------------------------------------|------------------------------|----------|-------|
|  | 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-220AB**

|                                                                                     |                              |          |       |
|-------------------------------------------------------------------------------------|------------------------------|----------|-------|
|  | 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 |          |       |

**TO-263**



**TO-252**

