

### **ULTRAFAST RECOVERY RECTIFIERS**





TO-220AB/CT

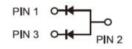
TO-220F/FCT

#### **FEATURES**

- High speed switching capability
- High current capability
- High forward surge capability
- Low power losses, High efficiency
- High reliability
- For use in low voltage, high frequency inverters







TO-263/DC

### **APPLICATIONS**

Fast recovery diode, mainly used for rectification, used in high-power equipment, The express and ultrafast recovery diodes are suitable for high frequency and ultra high frequency circuits, respectively

### **MECHANICAL DATA**

Case: Molded plasticPolarity: As markedMounting 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

| Primary Characteristic |       |  |  |
|------------------------|-------|--|--|
| I <sub>o</sub>         | 2*8A  |  |  |
| $V_{RRM}$              | 200V  |  |  |
| I <sub>FSM</sub>       | 150A  |  |  |
| $V_{F}$                | 0.87V |  |  |
| T₃max                  | 150℃  |  |  |
| Assembly code          | JQ    |  |  |

| 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   | num Average Forward Rectified Per Leg |                   | 8           | Α    |  |
| Current   | Total                                 | IO                | 16          | · A  |  |
| Peak Forward Surge Current,8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) |                                       | I <sub>FSM</sub>  | 150         | Α    |  |
| Operating Temperature Range   |                                       | T」                | 150         | °C   |  |
| Storage Temperature Range   |                                       | T <sub>STG</sub>  | -40 to +150 | °C   |  |
| Typical Thermal Resistance (Note1)  |                                       |                   |             |      |  |
| TO-220AB,TO-263   |                                       | R <sub>0 JC</sub> | 2           | °C/W |  |
| TO-220F   |                                       |                   | 4           |      |  |

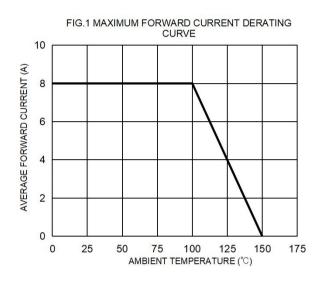
Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

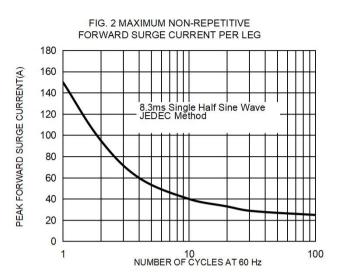
| Electrical Characteristics (Per Leg) unless otherwise specified            |          |                  |       |      |      |
|--|----------|------------------|-------|------|------|
| Characteristics  |          | Symbol           | Value |      | Unit |
| Forward Voltage Drop(Note2)  |          |                  | Тур.  | Max. |      |
| at I <sub>F</sub> =2A  | TA=25°C  | V <sub>F</sub>   | 0.82  | -    | V    |
|  | TA=125°C |                  | 0.72  | -    |      |
| at 1 = 2 A   | TA=25°C  |                  | 0.86  | -    |      |
| at I <sub>F</sub> =3A  | TA=125°C |                  | 0.75  | -    |      |
| at I <sub>F</sub> =8A  | TA=25°C  |                  | 0.96  | 1.00 |      |
|  | TA=125°C |                  | 0.87  | -    |      |
| Maximum Reverse Current at V <sub>R</sub> =200V                            | TA=25°C  | - I <sub>R</sub> | 0.05  | 1    | μA   |
|  | TA=125°C |                  | 5     | -    | μA   |
| Maximum Reverse Recovery Time at I <sub>F</sub> =0.5A, I <sub>R</sub> =1A, |          | Trr              | -     | 35   | ns   |

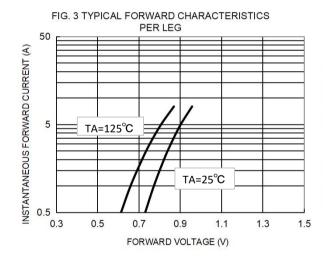
Note2:Pulse test: 300 µs pulse width, 1 % duty cycle

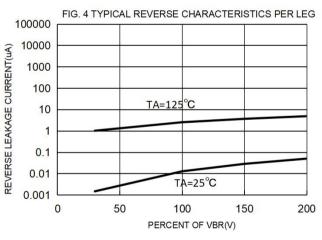


## RATINGS AND CHARACTERISTIC CURVES





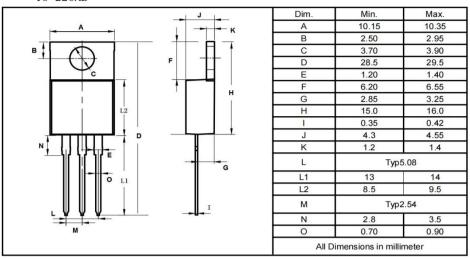




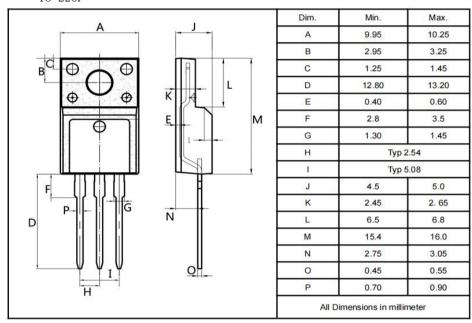


# Package Outline Dimensions millimeters

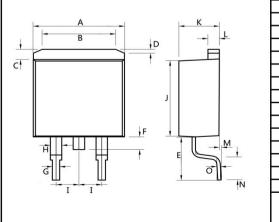
TO-220AB



TO-220F





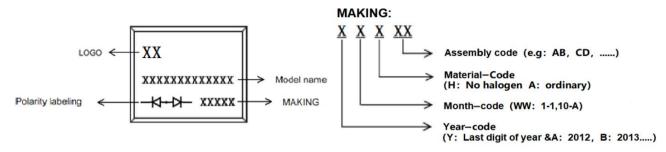


| Dim. | Min.    | Max.  |  |
|------|---------|-------|--|
| Α    | 10.10   | 10.35 |  |
| В    | 6       | 8     |  |
| С    | 1.2     | 1.5   |  |
| D    | 0.55    | 1.0   |  |
| E    | 4.3     | 5.3   |  |
| F    | 1.4     | 1.6   |  |
| G    | 0.75    | 0.85  |  |
| Н    | 1.2     | 1.5   |  |
| I    | Typ2.54 |       |  |
| J    | 8.5 9.5 |       |  |
| K    | 4.3 4.  |       |  |
| L    | 1.25    | 1.35  |  |
| M    | 0.02    | 0.23  |  |
| N    | 2.2     | 2.8   |  |
| 0    | 0.3     | 0.4   |  |

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## Marking on the body



| Ordering information |          |               |                |                            |  |
|----------------------|----------|---------------|----------------|----------------------------|--|
| Part Number          | Package  | Unit Weight   | Base Quantity  | Delivery mode              |  |
| MUR1620CTR           | TO-220AB | 0.07oz(1.96g) | 50 pcs / tube  | 1000pcs/box 5000pcs/carton |  |
| MUR1620FCTR          | TO-220F  | 0.06oz(1.74g) | 50 pcs / tube  | 1000pcs/box 5000pcs/carton |  |
| MUR1620DCR           | TO-263   | 0.04oz(1.16g) | 50 pcs / tube  | 1000pcs/box 5000pcs/carton |  |
| MUR1620DCR-R         | TO-263   | 0.04oz(1.16g) | 800 pcs / reel | 1600pcs/box 8000pcs/carton |  |

Note: For Halogen Free molding compound, add "H" suffix to part number above.

### packing instruction

| PKG                           | 最小包装     | 内盒        | 外箱                                     |
|-------------------------------|----------|-----------|--|
| TO-220AB<br>TO-220F<br>TO-263 |          |           | 200<br>200<br>200<br>200<br>200<br>200 |
|                               | 50pcs/管  | 1000pcs/盒 | 5000pcs/箱                              |
| TO-263-R                      |          |           |  |
|                               | 800pcs/盘 | 1600pcs/盒 | 8000pcs/箱                              |

### **Notice**

- 1. All product, product specifications and data are subject to change without notice to improve. The right to explain is owned by LINGXUN electronics company.
- 2. Confirm that operation temperature is within the specified range described in the product specification. Avoid applying power exceeding normal rated power;

exceeding the power rating under steady-state loading condition may negatively affect product performance and reliability.

3. LINGXUN electronics shall not be in any way responsible or liable for failure induced under deviant condition from what is defined in this document.