

ULTRAFST RECOVERY RECTIFIERS

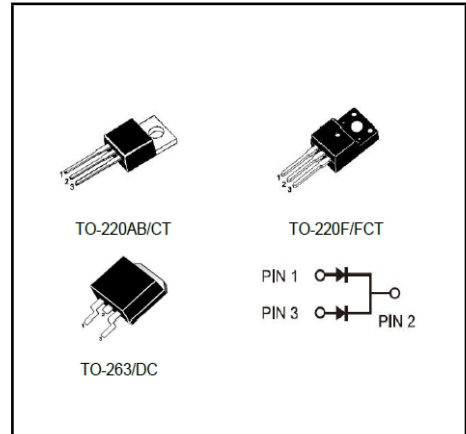
Reverse Voltage -200 V

Forward Current - 20 A



FEATURES

- ◆High speed switching capability
- ◆High current capability
- ◆High forward surge capability
- ◆Low power losses · High efficiency
- ◆For use in low voltage, high frequency inverters
- ◆Lead free in comply with EU RoHS 2011/65/EU directives



MECHANICAL DATA

- ◆Case: TO-220AB TO-220F TO-263/DC
- ◆Solder bath temperature 275°C maximum, 10s per JESD22-106

Primary Characteristic

| | |
|--------------------------|--------------|
| I_o | 2*10A |
| V_{RRM} | 200V |
| I_{FSM} | 180A |
| V_F | 0.81V |
| T_J Max | 150°C |

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

| Parameter | Symbols | Value | Units |
|--|---|------------|-------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 200 | V |
| Maximum RMS voltage | V_{RMS} | 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, 8.3ms Single Half Sine-wave | I_{FSM} | 180 | A |
| Operating Temperature Range | T_J | 150 | °C |
| Storage Temperature Range | T_{STG} | -40 ~ +150 | °C |
| Typical Thermal Resistance (Note1) TO-220AB TO-263 TO-220F | R_{θJA}/ R_{θJC} | 2/4 | °C/W |

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

Electrical Characteristics (Per Leg) unless otherwise specified

| Characteristics | Symbols | Value | | Units |
|--|-----------------------|----------|------|-----------|
| | | Typ | Max | |
| Forward Voltage Drop(Note2) | V_F | 0.77 | - | V |
| at IF=2A | | | | |
| | | TA=125°C | | |
| at IF=3A | | TA=25°C | | |
| | | TA=125°C | | |
| at IF=10A | | TA=25°C | 0.93 | |
| | TA=125°C | 0.81 | - | |
| Maximum Reverse Current at V _R =200V | I_R | 0.10 | 1 | uA |
| | | 5 | - | uA |
| Maximum Reverse Recovery Time at IF=0.5A, IR=1A, IRR=0.25A | T_{RR} | - | 35 | nS |

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

RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

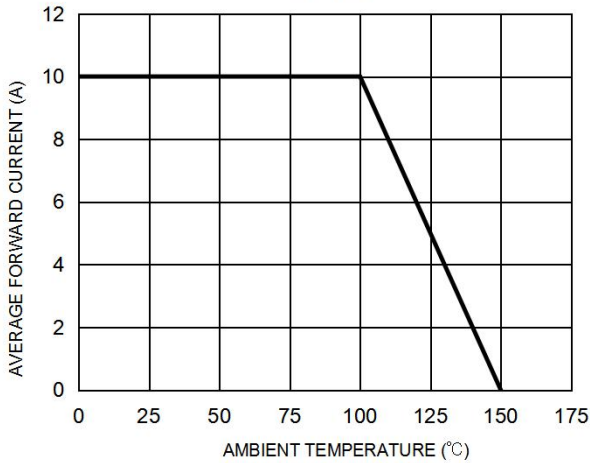


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

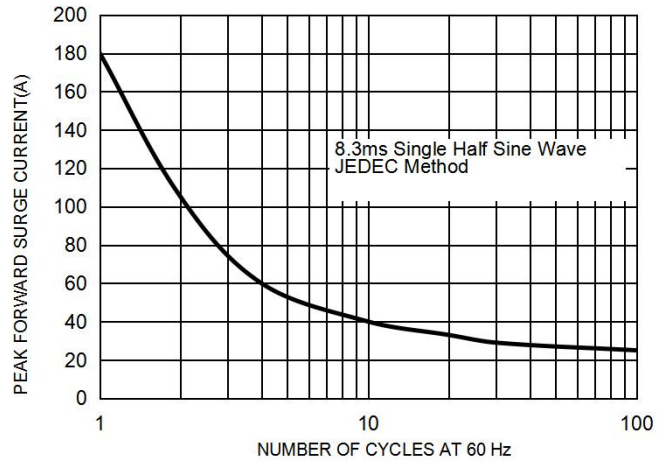


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

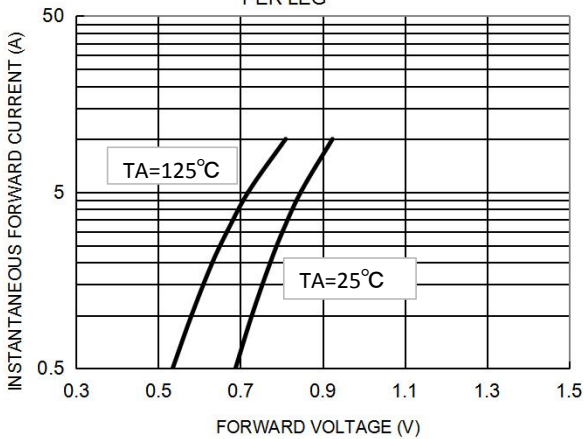
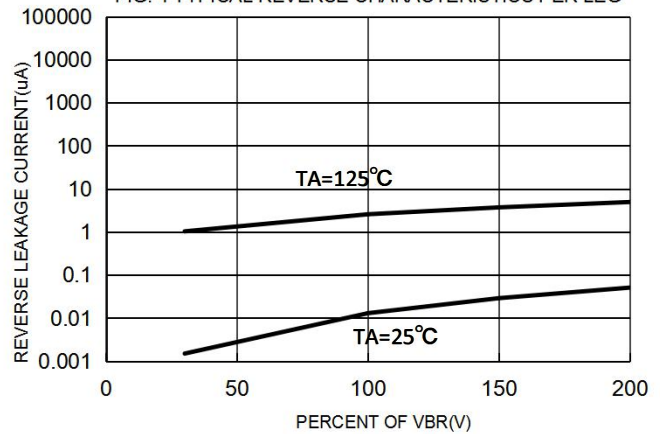
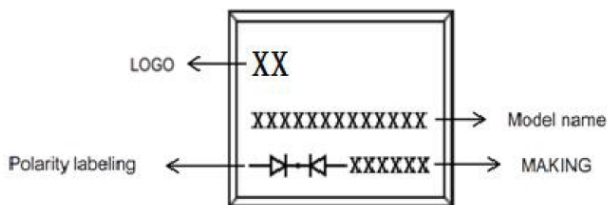


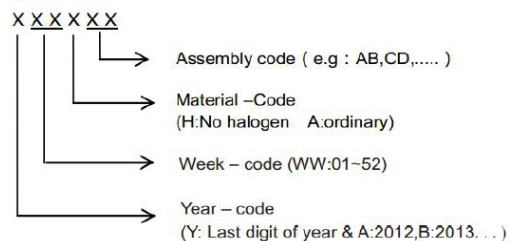
FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Marking on the body



MAKING:



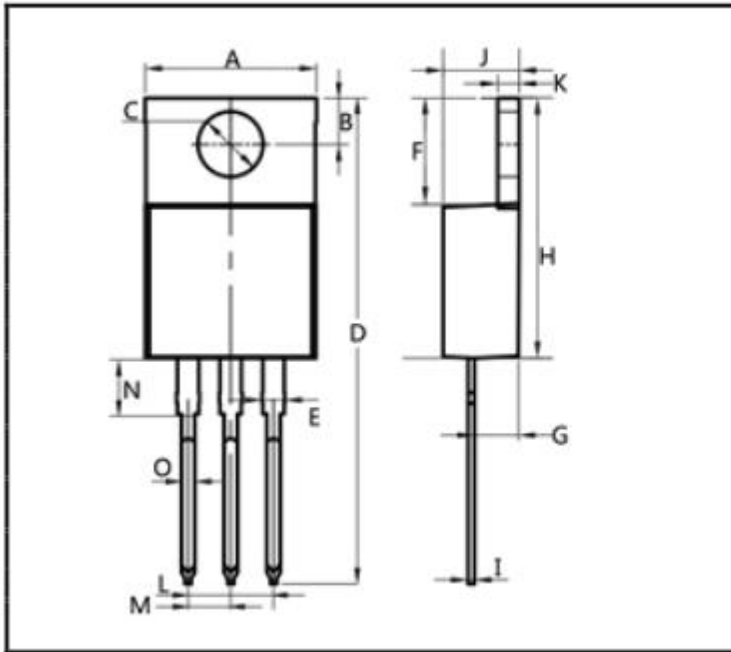
Ordering information

| Part Number | Package | Unit Weight | Base Quantity | Delivery mode |
|-------------|----------|---------------|----------------|----------------------------|
| MUR2020CT | TO-220AB | 0.07oz(1.96g) | 50 pcs / tube | 1000pcs/box 5000pcs/carton |
| MUR2020FCT | TO-220F | 0.06oz(1.74g) | 50 pcs / tube | 1000pcs/box 5000pcs/carton |
| MUR2020DC | TO-263 | 0.04oz(1.16g) | 50 pcs / tube | 1000pcs/box 5000pcs/carton |
| MUR2020DC-R | TO-263 | 0.04oz(1.16g) | 800 pcs / reel | 800pcs/box4000pcs/carton |

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

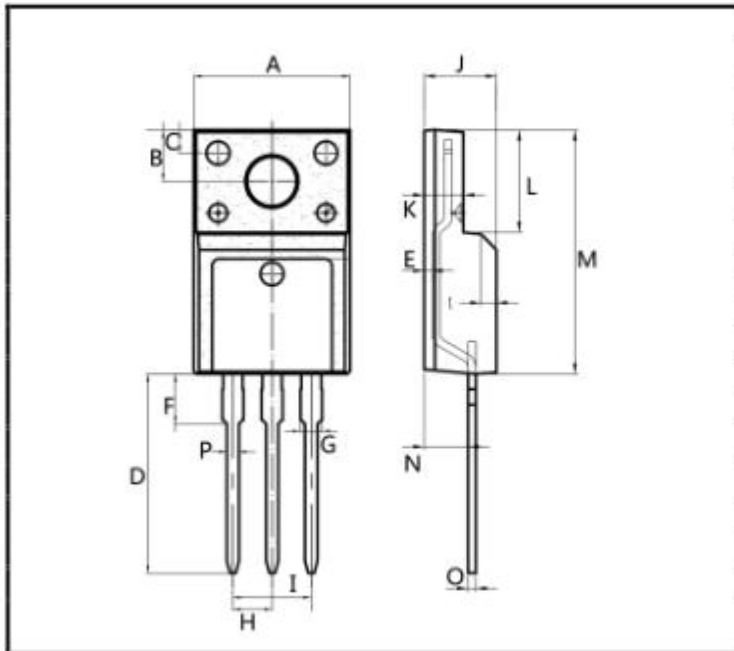
Package Outline Dimensions millimeters

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 | | |

TO-220F



| 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

