

**ULTRAFST RECOVERY RECTIFIERS**

**Reverse Voltage - 600 V**

**Forward Current - 15 A**

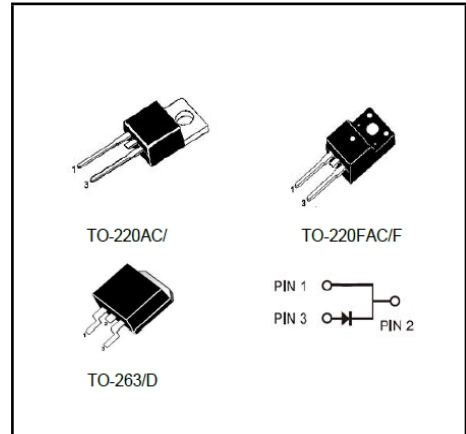


**FEATURES**

- ◆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-220AC TO-220FAC TO-263/DC
- ◆Solder bath temperature 275°C maximum, 10s per JESD22-106



**Primary Characteristic**

|                          |              |
|--------------------------|--------------|
| <b>I<sub>o</sub></b>     | <b>15A</b>   |
| <b>V<sub>RRM</sub></b>   | <b>600V</b>  |
| <b>I<sub>FSM</sub></b>   | <b>320A</b>  |
| <b>V<sub>F</sub></b>     | <b>1.0V</b>  |
| <b>T<sub>J</sub> Max</b> | <b>150°C</b> |

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

| Parameter  | Symbols                                 | Value      | Units       |
|--|---|------------|-------------|
| Maximum Repetitive Peak Reverse Voltage                      | <b>V<sub>RRM</sub></b>                  | 600        | <b>V</b>    |
| Maximum RMS voltage  | <b>V<sub>RMS</sub></b>                  | 600        | <b>V</b>    |
| Maximum DC Blocking Voltage                                  | <b>V<sub>DC</sub></b>                   | 600        | <b>V</b>    |
| Maximum Average Forward Rectified Current                    | <b>I<sub>o</sub></b>                    | 15         | <b>A</b>    |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave      | <b>I<sub>FSM</sub></b>                  | 250        | <b>A</b>    |
| Operating Temperature Range                                  | <b>T<sub>J</sub></b>                    | -40 ~ +150 | <b>°C</b>   |
| Storage Temperature Range                                    | <b>T<sub>STG</sub></b>                  | -40 ~ +150 | <b>°C</b>   |
| Typical Thermal Resistance (Note1) TO-220AC TO-263 TO-220FAC | <b>R<sub>θJA</sub>/ R<sub>θJC</sub></b> | 2/4        | <b>°C/W</b> |

**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)                                | <b>V<sub>F</sub></b>  | 0.92     | -    | <b>V</b>  |
| at IF=3A   |                       |          |      |           |
|  |                       | TA=125°C |      |           |
| at IF=5A   |                       | TA=25°C  |      |           |
|  |                       | TA=125°C |      |           |
| at IF=15A  |                       | TA=25°C  | 1.20 |           |
|  | TA=125°C              | 1.00     | -    |           |
| Maximum Reverse Current at V <sub>R</sub> =600V            | <b>I<sub>R</sub></b>  | 0.03     | 1    | <b>uA</b> |
|  |                       | 11       | -    | <b>uA</b> |
| Maximum Reverse Recovery Time at IF=0.5A, IR=1A, IRR=0.25A | <b>T<sub>RR</sub></b> | -        | 50   | <b>nS</b> |

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

**RATINGS AND CHARACTERISTIC CURVES**

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

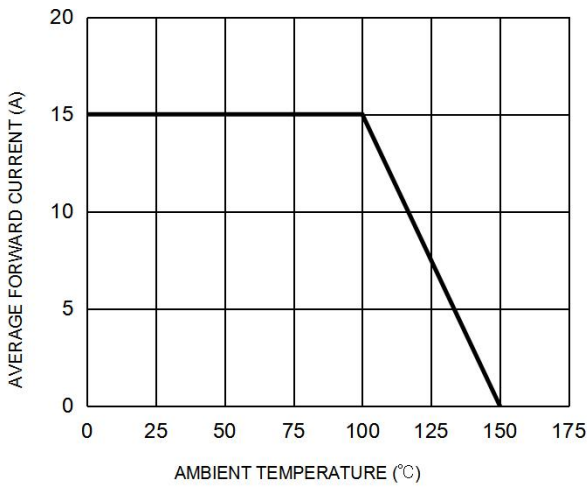


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

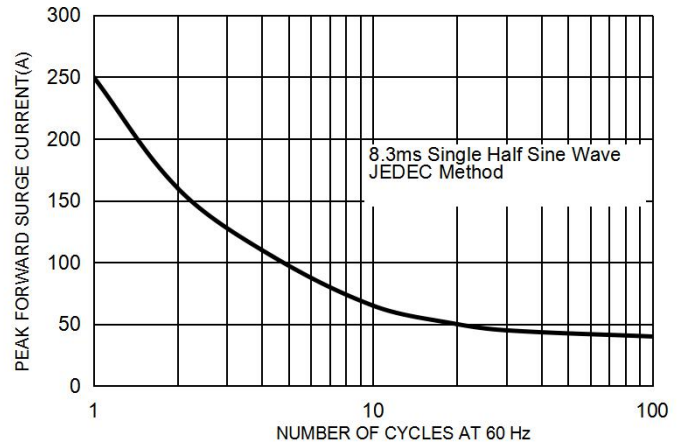


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

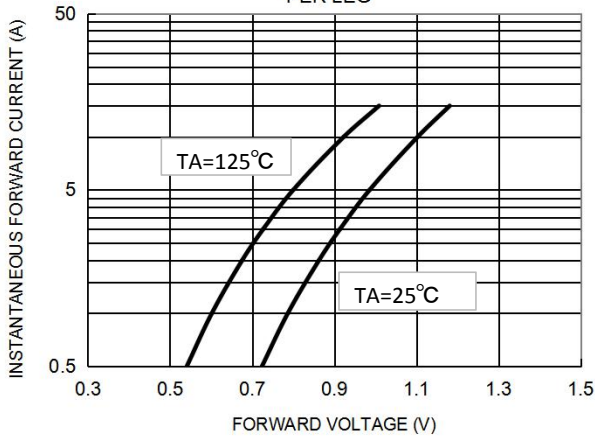
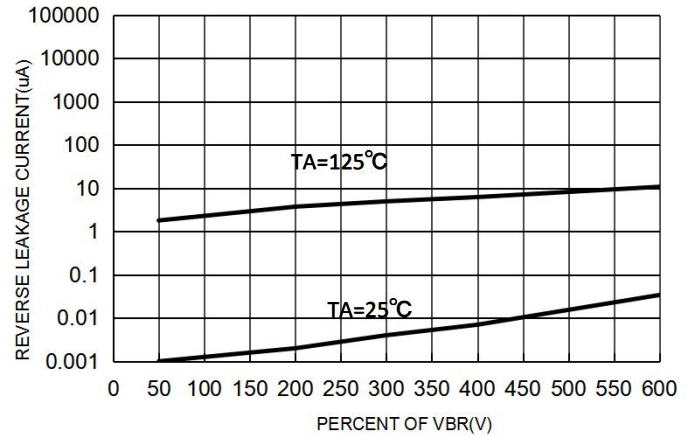
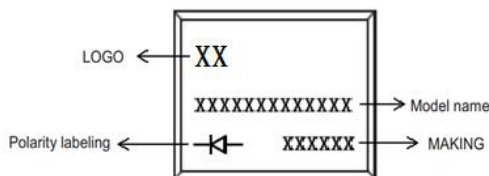


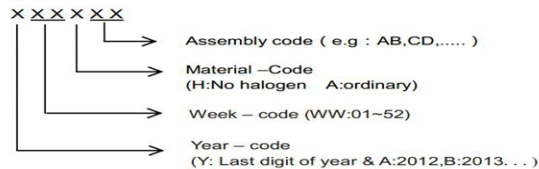
FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



**Marking on the body**



**MAKING:**



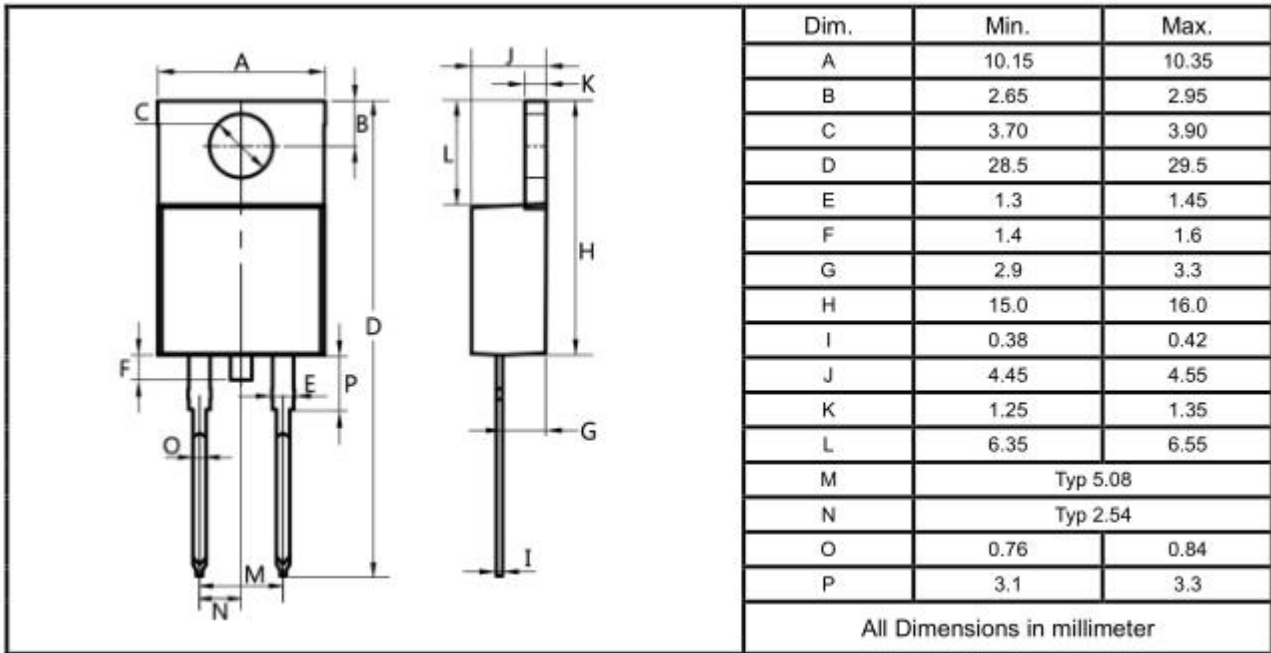
**Ordering information**

| Part Number | Package   | Unit Weight   | Base Quantity  | Delivery mode              |
|-------------|-----------|---------------|----------------|----------------------------|
| MUR1560AC   | TO-220AC  | 0.067oz(1.9g) | 50 pcs / tube  | 1000pcs/box 5000pcs/carton |
| MUR1560FAC  | TO-220FAC | 0.06oz(1.7g)  | 50 pcs / tube  | 1000pcs/box 5000pcs/carton |
| MUR1560DC   | TO-263    | 0.04oz(1.16g) | 50 pcs / tube  | 1000pcs/box 5000pcs/carton |
| MUR1560DC-R | TO-263    | 0.04oz(1.16g) | 800 pcs / reel | 800pcs/box4000pcs/carton   |

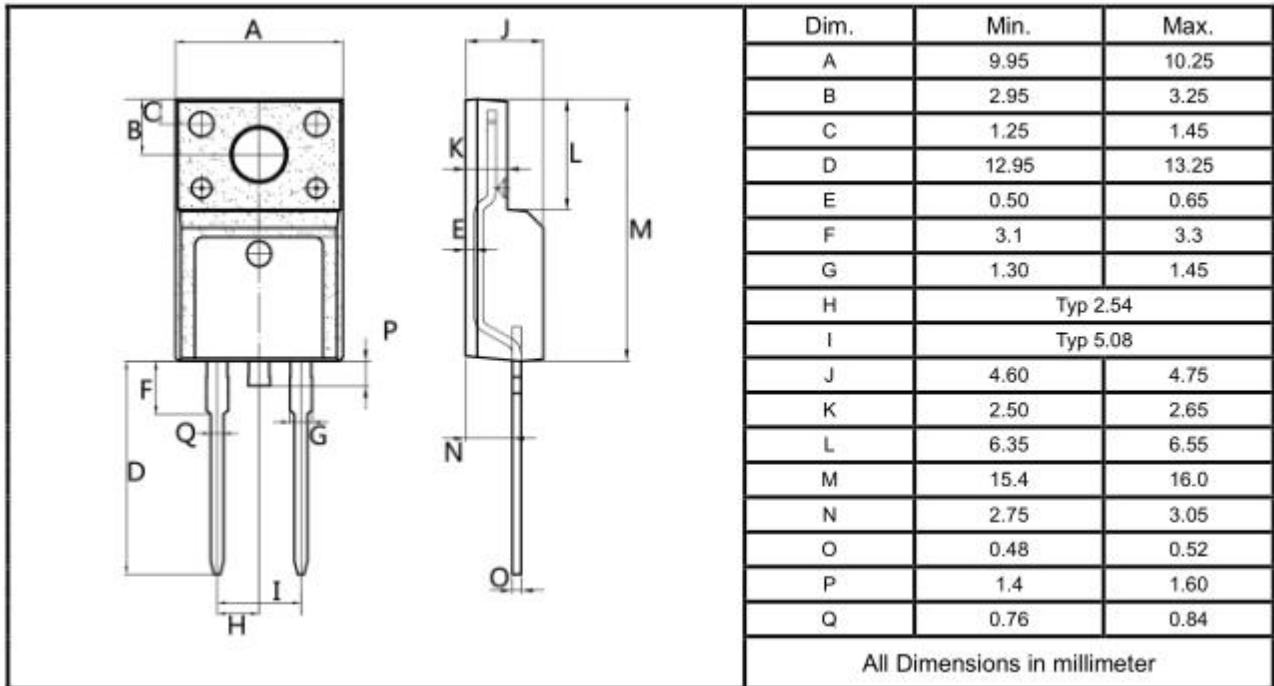
Note: For Halogen Free molding compound, add "H" suffix to part number above.

Package Outline Dimensions millimeters

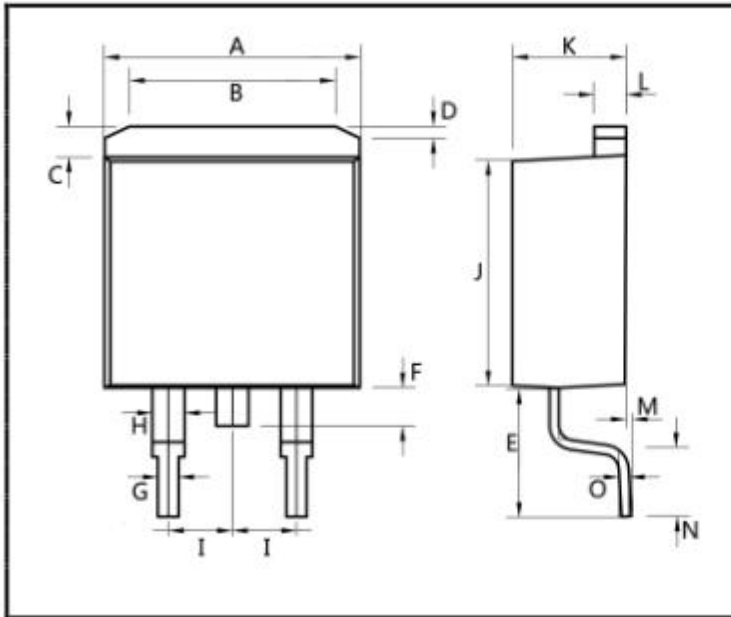
**TO-220AC**



**TO-220FAC**



TO-263



| Dim. | Min.     | Max. |
|------|----------|------|
| A    | 10.1     | 10.2 |
| B    | 7.4      | 7.6  |
| C    | 1.3      | 1.5  |
| D    | 0.55     | 0.75 |
| E    | 5.0      | 6.0  |
| F    | 1.4      | 1.6  |
| G    | 0.78     | 0.86 |
| H    | 1.2      | 1.3  |
| I    | Typ 2.54 |      |
| J    | 8.4      | 8.6  |
| K    | 4.45     | 4.55 |
| L    | 1.25     | 1.35 |
| M    | 0.02     | 0.1  |
| N    | 2.4      | 2.8  |
| O    | 0.36     | 0.40 |

All Dimensions in millimeter

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