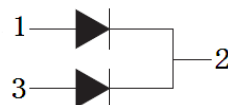


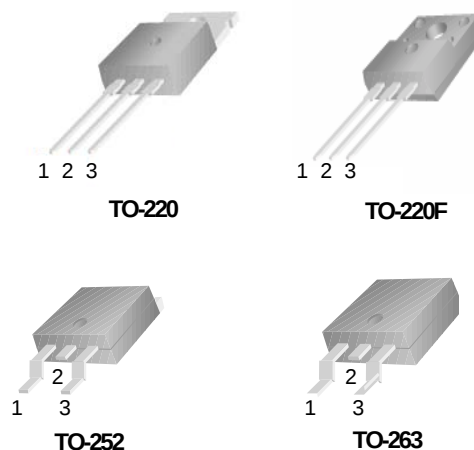
## APPLICATIONS

- High frequency switch power supply
- Free wheeling diodes, polarity protection applications



## FEATURES

- Common cathode structure
- Low power loss, high efficiency
- High Operating Junction Temperature
- Guard ring for overvoltage protection, High reliability
- RoHS product



## ORDER INFORMATION

| Product     | Package | Pin Assignment |   |   | Packing   |
|-------------|---------|----------------|---|---|-----------|
|             |         | 1              | 2 | 3 |           |
| MBR10100CT  | TO-220  | A              | K | A | Tube      |
| MBR10100FCT | TO-220F | A              | K | A | Tube      |
| MBR10100YCT | TO-263  | A              | K | A | Tape Reel |
| MBR10100DCT | TO-252  | A              | K | A | Tape Reel |

## ABSOLUTE RATINGS (T<sub>c</sub>=25°C)

| Parameter                                                                           |                                                  | Symbol             | Value    | Unit |
|-------------------------------------------------------------------------------------|--------------------------------------------------|--------------------|----------|------|
| Repetitive peak reverse voltage                                                     |                                                  | V <sub>RRM</sub>   | 100      | V    |
| Maximum DC blocking voltage                                                         |                                                  | V <sub>DC</sub>    | 100      | V    |
| Average forward current                                                             | T <sub>C</sub> =150°C<br>(TO-220/263/<br>TO-252) | I <sub>F(AV)</sub> | 10       | A    |
|                                                                                     | T <sub>C</sub> =125°C<br>(TO-220F)               |                    | 5        |      |
| Surge non repetitive forward current<br>8.3 ms single half-sine-wave (JEDEC Method) |                                                  | I <sub>FSM</sub>   | 152      | A    |
| Maximum junction temperature                                                        |                                                  | T <sub>j</sub>     | 150      | °C   |
| Storage temperature range                                                           |                                                  | T <sub>STG</sub>   | -40~+150 | °C   |

ELECTRICAL CHARACTERISTICS

| Parameter | Tests conditions           |                   | Value(min) | Value(typ) | Value(max) | Unit          |
|-----------|----------------------------|-------------------|------------|------------|------------|---------------|
| $I_R$     | $T_j = 25^{\circ}\text{C}$ | $V_R = V_{RRM}$   |            |            | 5          | $\mu\text{A}$ |
| $V_F$     | $T_j = 25^{\circ}\text{C}$ | $I_F = 5\text{A}$ |            | 0.80       | 0.85       | V             |

THERMAL CHARACTERISTICS

| Parameter                                |         | Symbol        | Value(min) | Value(max) | Unit                 |
|------------------------------------------|---------|---------------|------------|------------|----------------------|
| Thermal resistance from junction to case | TO-220  | $R_{th(j-c)}$ |            | 2.0        | $^{\circ}\text{C/W}$ |
|                                          | TO-263  |               |            | 2.0        |                      |
|                                          | TO-252  |               |            | 3.0        |                      |
|                                          | TO-220F |               |            | 4.0        |                      |

ELECTRICAL CHARACTERISTICS (curves)

