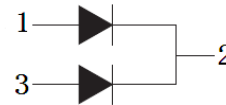


SCHOTTKY BARRIER DIODE

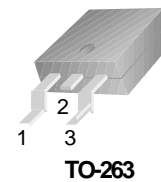
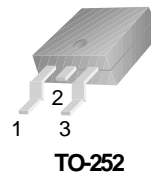
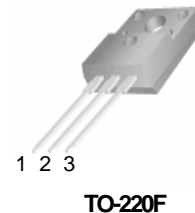
APPLICATIONS

- 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 |           |
| MBR1045CT  | TO-220  | A              | K | A | Tube      |
| MBR1045FCT | TO-220F | A              | K | A | Tube      |
| MBR1045YCT | TO-263  | A              | K | A | Tape Reel |
| MBR1045DCT | TO-252  | A              | K | A | Tape Reel |

ABSOLUTE RATINGS (Tc=25°C)

| Parameter   |  | Symbol             | Value    | Unit |
|---|--|--------------------|----------|------|
| Repetitive peak reverse voltage   |  | V <sub>RRM</sub>   | 45       | V    |
| Maximum DC blocking voltage   |  | V <sub>DC</sub>    | 45       | 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>   | 160      | 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          |
|-----------|--------------------------|-------------------|------------|------------|------------|---------------|
| $I_R$     | $T_j = 25^\circ\text{C}$ | $V_R = V_{RRM}$   |            |            | 60         | $\mu\text{A}$ |
| $V_F$     | $T_j = 25^\circ\text{C}$ | $I_F = 5\text{A}$ |            | 0.53       | 0.60       | 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)**

