

## Features:

- Schottky barrier chip
- Guard ring for over voltage protection
- Low power loss, high efficiency
- Low reverse leakage current
- High surge current capability
- Plastic material has UL flammability classification 94V-0

## Mechanical Data:

|                   |  |
|-------------------|--|
| Case              | : TO-220AB Type, molded plastic                                      |
| Terminals         | : Pure tin plated, lead free solderable per MIL-STD-750, method 2026 |
| Polarity          | : As marked on the body  |
| Weight            | : 0.08 ounces, 2.24 grams  |
| Mounting Position | : Any  |
| Reverse Voltage   | : 40 to 45 Volts   |
| Forward Current   | : 30 Amperes   |

## Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| Characteristics   | Symbol             | MBR3040CT   | MBR3045CT | Unit |
|---|--------------------|-------------|-----------|------|
| Max. Recurrent Peak Reverse Voltage   | V <sub>RRM</sub>   | 40          | 45        | V    |
| Max. RMS Voltage  | V <sub>RMS</sub>   | 28          | 31.5      |      |
| Max. DC Blocking Voltage  | V <sub>DC</sub>    | 40          | 45        |      |
| Max. Average Forward  | I <sub>F(AV)</sub> | 30          |           | A    |
| Peak Forward Surge Current<br>8.3ms Single Half Sine-Wave<br>Super Imposed on Rated Load (JEDEC Method) | I <sub>FSM</sub>   | 200         |           |      |
| Max. Forward Voltage at 15A per leg   | V <sub>F</sub>     | 0.7         |           | V    |
| Max. DC Reverse Current<br>Rated DC Blocking Voltage  | I <sub>R</sub>     | 0.1<br>20   |           | mA   |
| Typical Thermal Resistance, Junction to Case  | R <sub>θJC</sub>   | 1.5         |           | °C/W |
| Operating Temperature Range   | T <sub>J</sub>     | -55 to +150 |           | °C   |
| Storage Temperature Range   | T <sub>STG</sub>   | -55 to +150 |           | °C   |

## Notes:

1. Mounted on 14mm × 14mm pad areas, 1oz. FR4 P.C.B.
2. Free air, mounted on recommended copper pad area.
3. Pulse test: 300us pulse width, 1% duty cycle.
4. Pulse test: Pulse width ≤ 40ms
5. The typical data above is for reference only

## Ratings and Characteristic Curves

FIG.1-FORWARD CURRENT DERATING CURVE

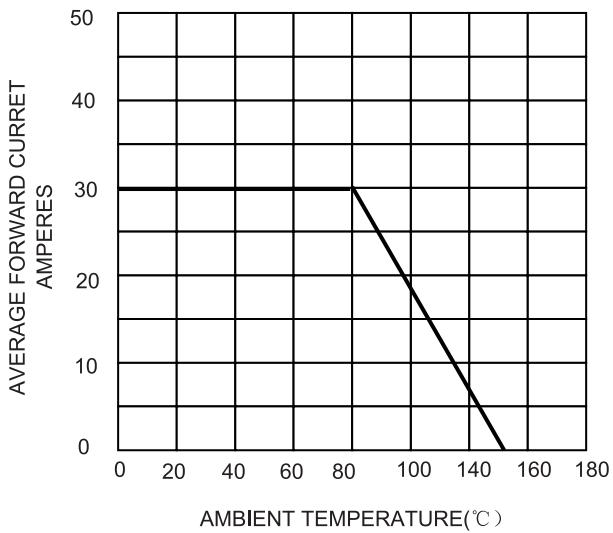


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

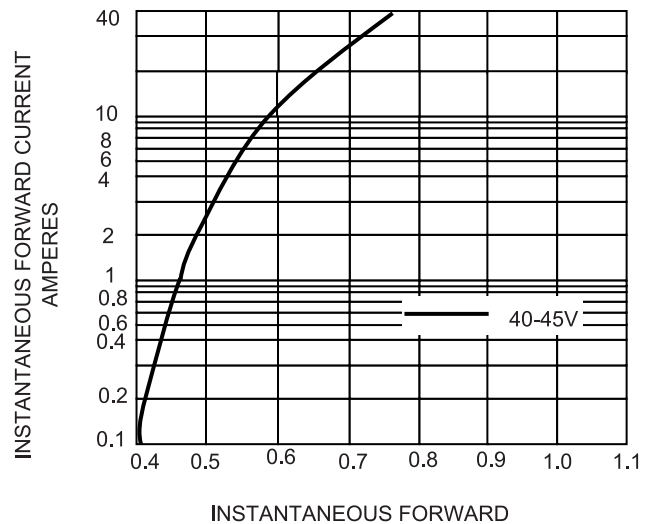


FIG.3-TYPICAL REVERSE CHARACTERISTICS

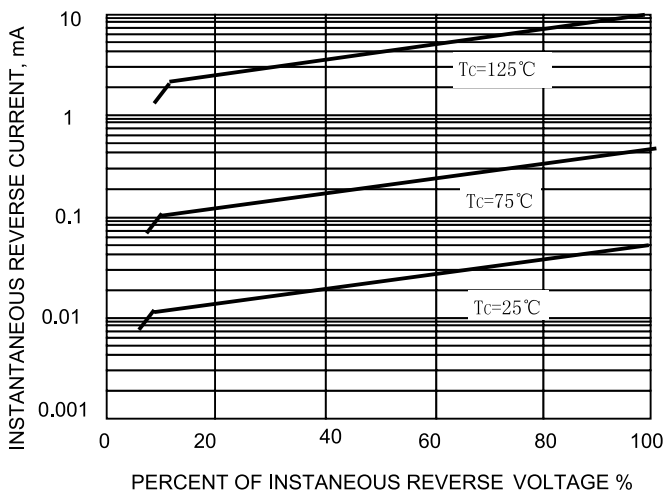
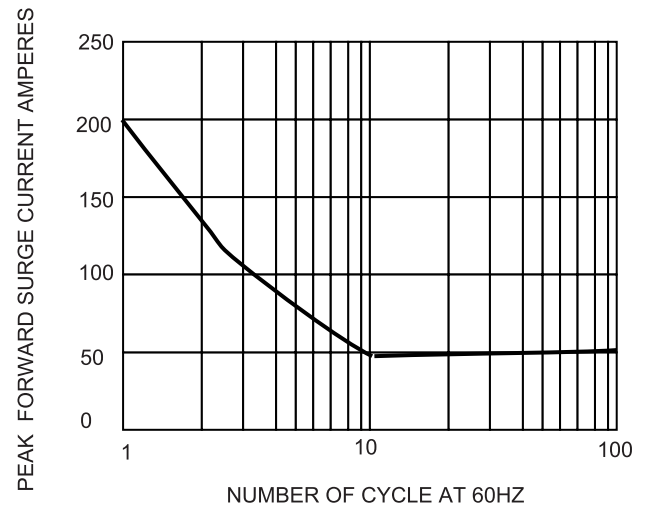
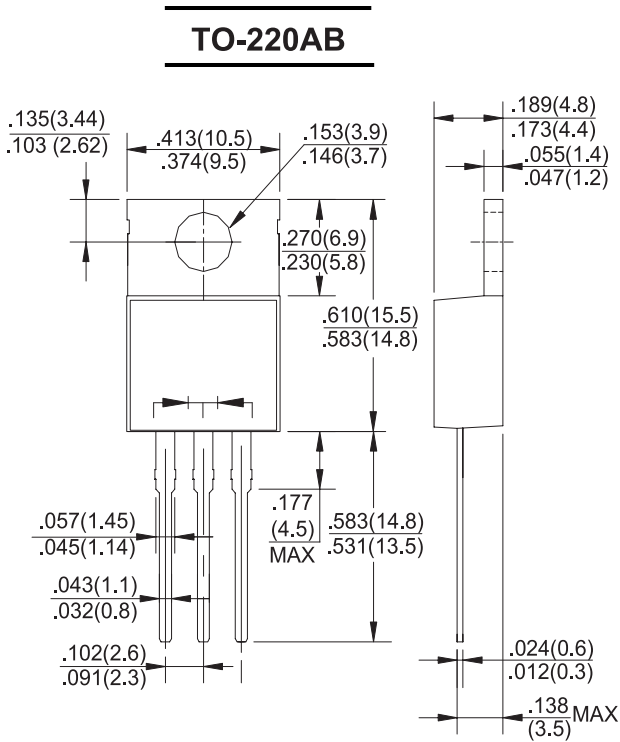


FIG.4-MAXIMUM NON-REPETITIVE SURGE CURRENT



## Dimensions:



Dimensions : Inches (Millimetres)

## Part Number Table

| Description                 | Part Number |
|-----------------------------|-------------|
| Schottky Barrier Rectifiers | MBR3040CT   |
|                             | MBR3045CT   |

**Important Notice :** This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.

Newark.com/multicomp-pro  
 Farnell.com/multicomp-pro  
 Element14.com/multicomp-pro