

## SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE RANGE: 30 - 100 V**  
**CURRENT: 30 A**

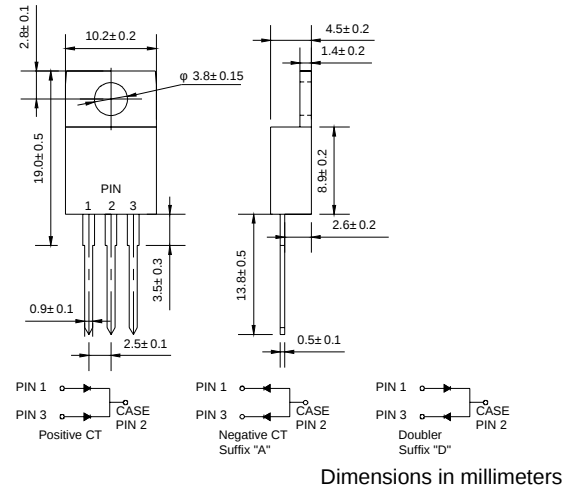
### FEATURES

- ◇ High surge capacity.
- ◇ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ◇ Metal silicon junction, majority carrier conduction.
- ◇ High current capacity, low forward voltage drop.
- ◇ Guard ring for over voltage protection.

### MECHANICAL DATA

- ◇ Case: JEDEC TO-220AB, molded plastic body
- ◇ Terminals: Solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Position: Any
- ◇ Weight: 0.071ounce, 2.006 grams

### TO-220AB



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

|                                                                                        |                    | MBR<br>2530CT   | MBR<br>2535CT | MBR<br>2540CT | MBR<br>2545CT | MBR<br>2550CT | MBR<br>2560CT | MBR<br>2580CT | MBR<br>25100CT | UNITS |
|----------------------------------------------------------------------------------------|--------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|-------|
| Maximum recurrent peak reverse voltage                                                 | V <sub>RRM</sub>   | 30              | 35            | 40            | 45            | 50            | 60            | 80            | 100            | V     |
| Maximum RMS Voltage                                                                    | V <sub>RMS</sub>   | 21              | 25            | 28            | 32            | 35            | 42            | 56            | 70             | V     |
| Maximum DC blocking voltage                                                            | V <sub>DC</sub>    | 30              | 35            | 40            | 45            | 50            | 60            | 80            | 100            | V     |
| Maximum average forw ard total device<br>rectified current @T <sub>C</sub> = 130°C     | I <sub>F(AV)</sub> | 30              |               |               |               |               |               |               |                | A     |
| Peak forw ard surge current 8.3ms single half<br>sine-w ave superimposed on rated load | I <sub>FSM</sub>   | 150             |               |               |               |               |               |               |                | A     |
| Maximum forward<br>voltage<br>(Note 1)                                                 | V <sub>F</sub>     | -               |               |               |               | 0.75          |               | 0.85          |                | V     |
| (I <sub>F</sub> =15A,T <sub>C</sub> =25 °C )                                           |                    | -               |               |               |               | 0.65          |               | -             |                |       |
| (I <sub>F</sub> =15A,T <sub>C</sub> =125 °C )                                          |                    | 0.82            |               |               |               | -             |               | -             |                |       |
| (I <sub>F</sub> =30A,T <sub>C</sub> =25°C )                                            |                    | 0.73            |               |               |               | -             |               | -             |                |       |
| Maximum reverse current @T <sub>C</sub> =25°C                                          | I <sub>R</sub>     | 0.2             |               |               |               | 1.0           |               |               |                | m A   |
| at rated DC blocking voltage @T <sub>C</sub> =125°C                                    |                    | 40              |               |               |               | 50            |               |               |                |       |
| Maximum thermal resistance (Note2)                                                     | R <sub>θJC</sub>   | 1.5             |               |               |               |               |               |               |                | °C/W  |
| Operating junction temperature range                                                   | T <sub>J</sub>     | - 55 ---- + 150 |               |               |               |               |               |               |                | °C    |
| Storage temperature range                                                              | T <sub>STG</sub>   | - 55 ---- + 150 |               |               |               |               |               |               |                | °C    |

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

2. Thermal resistance from junction to case.

FIG.1 – PEAK FORWARD SURGE CURRENT

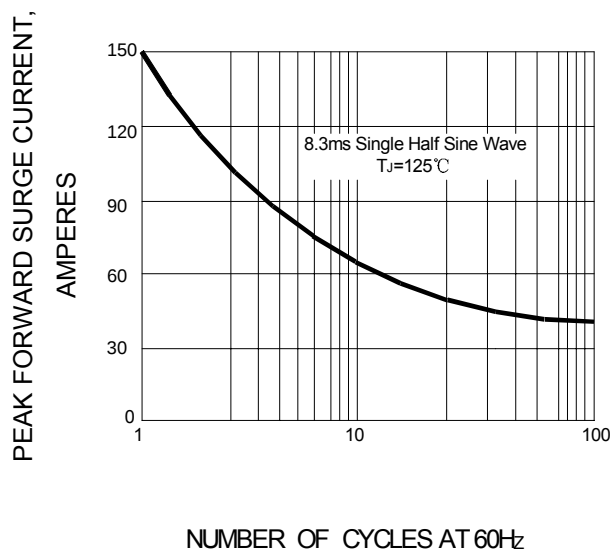


FIG.2 – FORWARD DERATING CURVE

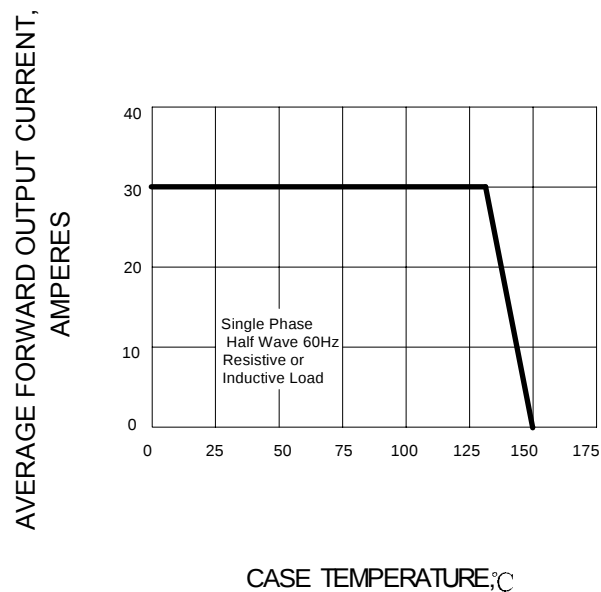


FIG.3 – TYPICAL FORWARD CHARACTERISTIC

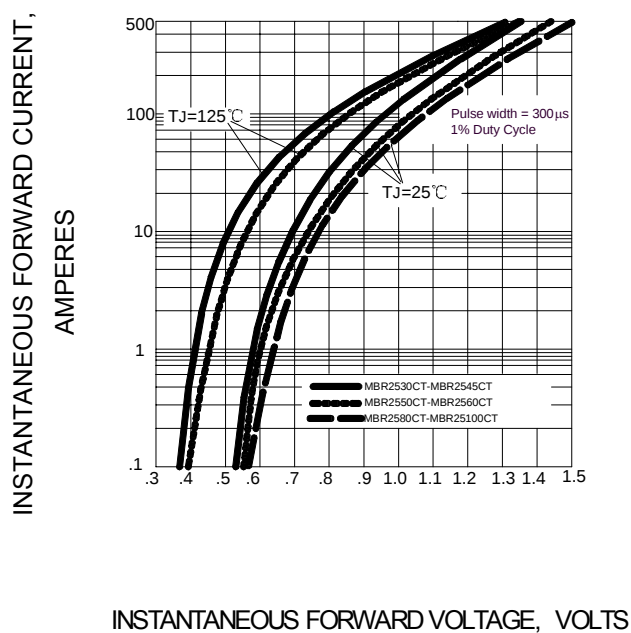


FIG.4 – TYPICAL REVERSE CHARACTERISTIC

