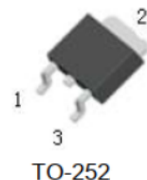


### 20.0Amp Schottky Barrier Rectifiers

#### Features

- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed  
250 °C/10 seconds at terminals
- Component in accordance to  
RoHS 2011/65/EU



#### Mechanical Data

- **Case:** TO252  
Molding compound meets  
UL 94 V-0 flammability rating
- **Terminals:** Solder plated, solderable per  
MIL-STD-750, Method 2026
- **Polarity :** Polarity symbol marking on body
- **Mounting Position:** Any



#### Maximum Ratings & Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise specified)

| Parameter                                                                          | Symbol             | MBR 2040    | MBR 2045 | MBR 2060 | MBR 20100 | MBR 20150 | MBR 20200 | Unit |
|------------------------------------------------------------------------------------|--------------------|-------------|----------|----------|-----------|-----------|-----------|------|
| Maximum repetitive peak reverse voltage                                            | V <sub>RRM</sub>   | 40          | 45       | 60       | 100       | 150       | 200       | V    |
| Maximum RMS voltage                                                                | V <sub>RMS</sub>   | 28          | 31.5     | 42       | 70        | 105       | 140       | V    |
| Maximum DC blocking voltage                                                        | V <sub>DC</sub>    | 40          | 45       | 60       | 100       | 150       | 200       | V    |
| Maximum average forward rectified current at T <sub>C</sub> =125°C                 | I <sub>F(AV)</sub> | 20          |          |          |           |           |           | A    |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I <sub>FSM</sub>   | 150         |          |          |           |           |           | A    |
| Thermal resistance from junction to case                                           | R <sub>θJC</sub>   | 1.3         |          |          |           |           |           | °C/W |
| Junction temperature                                                               | T <sub>J</sub>     | -55 to +150 |          |          |           |           |           | °C   |
| Storage temperature range                                                          | T <sub>STG</sub>   | -55 to +150 |          |          |           |           |           | °C   |

#### Electrical Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

| Parameter                                                |                      | Symbol         | MBR 2040CS | MBR 2045CS | MBR 2060CS | MBR 20100CS | MBR 20150CS | MBR 20200CS | Unit |
|----------------------------------------------------------|----------------------|----------------|------------|------------|------------|-------------|-------------|-------------|------|
| Maximum instantaneous forward voltage per diode at 10.0A |                      | V <sub>F</sub> | 0.55       |            | 0.70       | 0.85        | 0.95        |             | V    |
| Maximum DC reverse current at rated DC blocking voltage  | T <sub>A</sub> =25℃  | I <sub>R</sub> | 0.5        |            |            | 0.05        |             |             | mA   |
|                                                          | T <sub>A</sub> =125℃ |                | 50         |            |            | 10          |             |             |      |

Characteristic Curves (T<sub>A</sub>=25 °C unless otherwise noted)

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

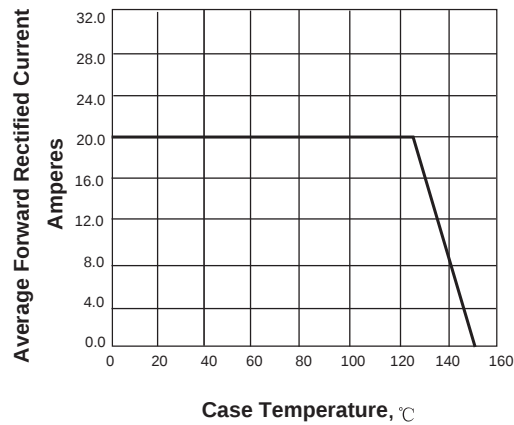


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

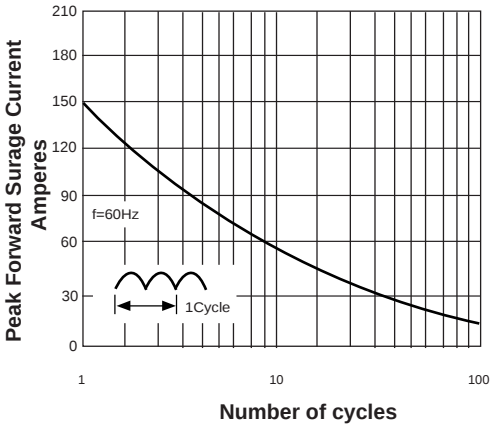


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

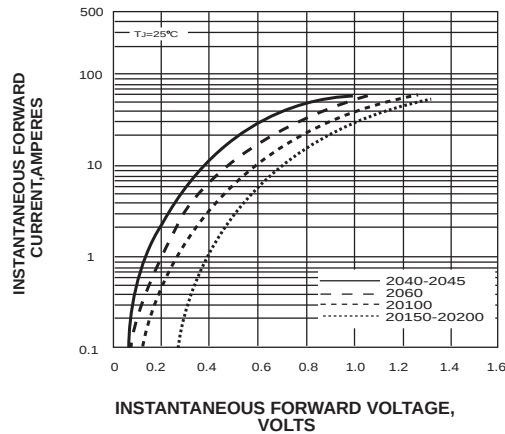


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

