

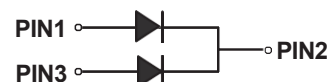
## SCHOTTKY BARRIER RECTIFIER

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C, 0.25" (6.35mm) from case for 10 seconds

### TO-220AB

PIN



## 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 current derate by 20%.

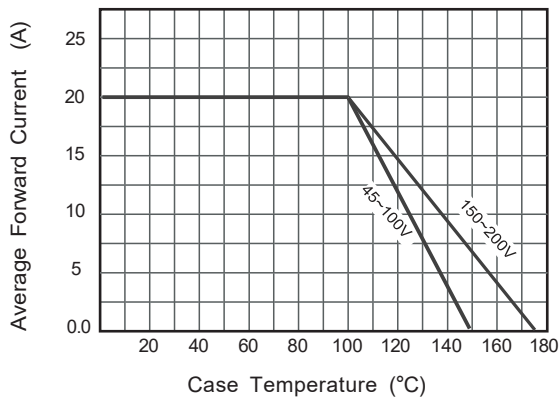
| Parameter                                                                                             | SYMBOLS         | MBR 2045CT  | MBR 2060CT | MBR 20100CT | MBR 20150CT | MBR 20200CT | UNITS         |
|-------------------------------------------------------------------------------------------------------|-----------------|-------------|------------|-------------|-------------|-------------|---------------|
| Marking Code                                                                                          |                 |             |            |             |             |             |               |
| Maximum repetitive peak reverse voltage                                                               | $V_{RRM}$       | 45          | 60         | 100         | 150         | 200         | V             |
| Maximum RMS voltage                                                                                   | $V_{RMS}$       | 32          | 42         | 70          | 135         | 140         | V             |
| Maximum DC blocking voltage                                                                           | $V_{DC}$        | 45          | 60         | 100         | 150         | 200         | V             |
| Maximum average forward rectified current (see fig.1)                                                 | $I_{(AV)}$      | 20.0        |            |             |             |             | A             |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)      | $I_{FSM}$       | 200         |            |             |             |             | A             |
| Maximum instantaneous forward voltage at 10.0A                                                        | $V_F$           | 0.65        | 0.75       | 0.85        | 0.90        | 0.92        | V             |
| Maximum DC reverse current<br>at rated DC blocking voltage<br>$T_A=25^{\circ}C$<br>$T_A=100^{\circ}C$ | $I_R$           | 1.0         |            | 0.02        |             | 50.0        |               |
|                                                                                                       |                 | 15.0        | 50.0       | 50.0        | 50.0        | 50.0        | mA            |
| Typical thermal resistance (NOTE 2)                                                                   | $R_{\theta JC}$ | 2.0         |            |             | 1.5         |             | $^{\circ}C/W$ |
| Operating junction temperature range                                                                  | $T_J$           | -55 to +150 |            |             | -55 to +175 |             | $^{\circ}C$   |
| storage temperature range                                                                             | $T_{STG}$       | -55 to +150 |            |             | -55 to +175 |             | $^{\circ}C$   |

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

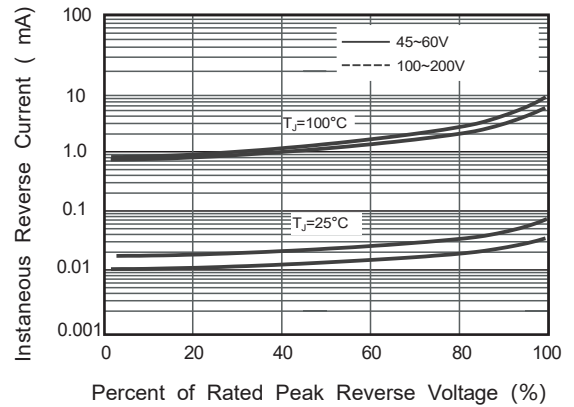
2. Thermal resistance from junction to case.

## Ratings And Characteristic Curves

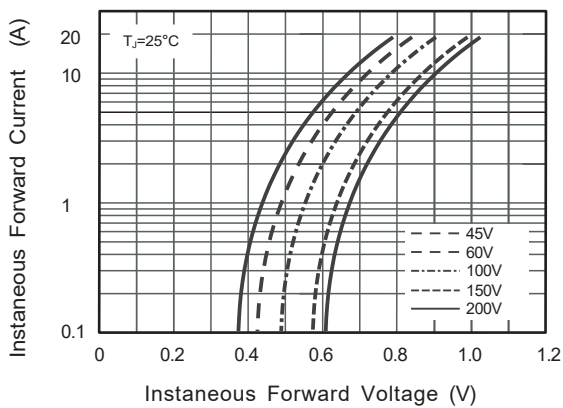
**Fig.1 Typical Forward Current Derating Curve**



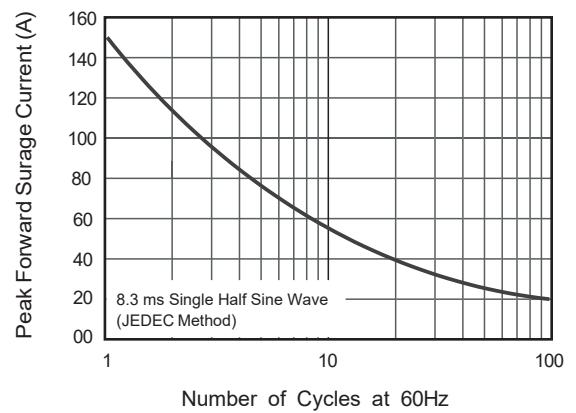
**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Forward Characteristic(per leg)**



**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**



The curve above is for reference only.