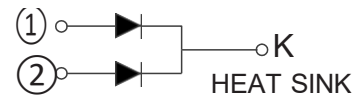


## SCHOTTKY BARRIER GLASS PASSIVATED RECTIFIERS

### FEATURES

- ◆ High current capability
- ◆ Low forward voltage drop
- ◆ Low power loss, high efficiency
- ◆ High surge capability
- ◆ High temperature soldering guaranteed
- ◆ Mounting position: any

### TO-263(D<sup>2</sup>PAK)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| MCHARACTERISTICS                                                                                                 | SYMBOL             | MBRB<br>4045 | MBRB<br>4060 | MBRB<br>40100 | MBRB<br>40150 | MBRB<br>40200 | UNITS |
|------------------------------------------------------------------------------------------------------------------|--------------------|--------------|--------------|---------------|---------------|---------------|-------|
| Maximum repetitive peak reverse voltage                                                                          | V <sub>RRM</sub>   | 45           | 60           | 100           | 150           | 200           | V     |
| Maximum RMS voltage                                                                                              | V <sub>RMS</sub>   | 32           | 42           | 70            | 105           | 140           | V     |
| Maximum DC blocking voltage                                                                                      | V <sub>DC</sub>    | 45           | 60           | 100           | 150           | 200           | V     |
| Maximum average forward rectified current<br>per diode<br>per device                                             | I <sub>F(AV)</sub> | 20<br>40     |              |               |               |               | A     |
| Peak forward surge current<br>8.3ms single half sine-wave<br>superimposed onrated load (JEDEC Method) per device | I <sub>FSM</sub>   | 250          |              | 200           |               |               | A     |
| Maximum instantaneous forward voltage at 20A DC Per leg                                                          | V <sub>F</sub>     | 0.70         | 0.75         | 0.85          | 0.95          |               | V     |
| Maximum DC reverse current<br>at rated DC blocking voltage<br>T <sub>A</sub> =25℃<br>T <sub>A</sub> =125℃        | I <sub>R</sub>     | 0.1          |              |               |               |               | mA    |
|                                                                                                                  |                    | 20           | 30           | 10            |               |               |       |
| Typical junction capacitance (NOTE 1)                                                                            | C <sub>J</sub>     | 800          | 600          |               |               |               | pF    |
| Typical thermal resistance (NOTE 2)                                                                              | R <sub>θJA</sub>   | 45           |              |               |               |               | ℃/W   |
| Operating junction temperature range                                                                             | T <sub>J</sub>     | -55 to +150  |              |               |               |               | ℃     |
| Storage temperature range                                                                                        | T <sub>STG</sub>   | -55 to +150  |              |               |               |               | ℃     |

**Note:** 1. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.

2. PCB. Mounted on 10cm x 10cm x 1mm copper pad areas

The typical data above is for reference only.

## Typical Characteristics

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

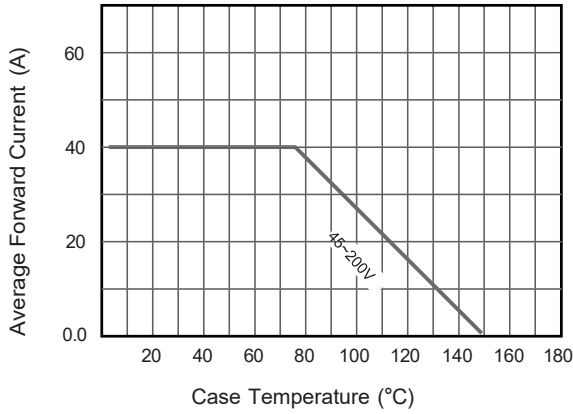


Fig.2 Typical Reverse Characteristics

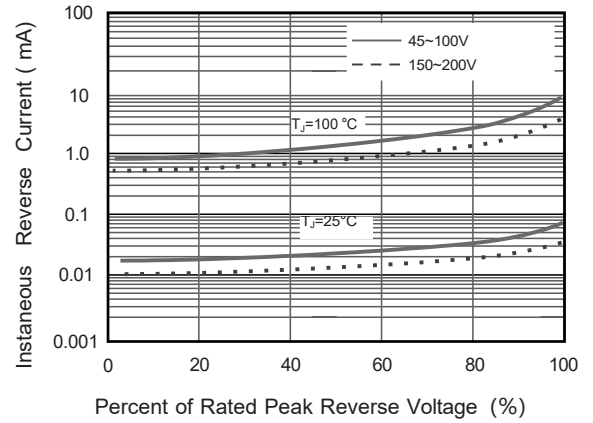


Fig.3 Typical Forward Characteristic(per leg)

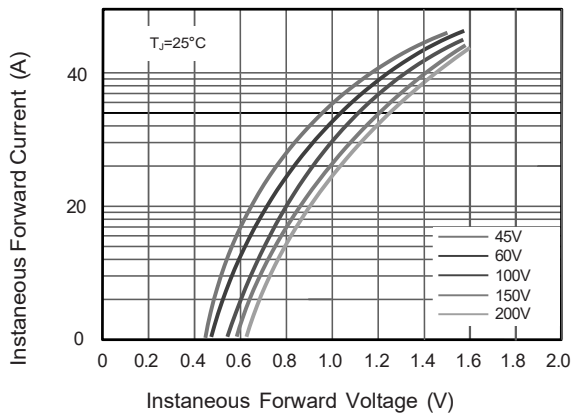


Fig.4 Typical Junction Capacitance

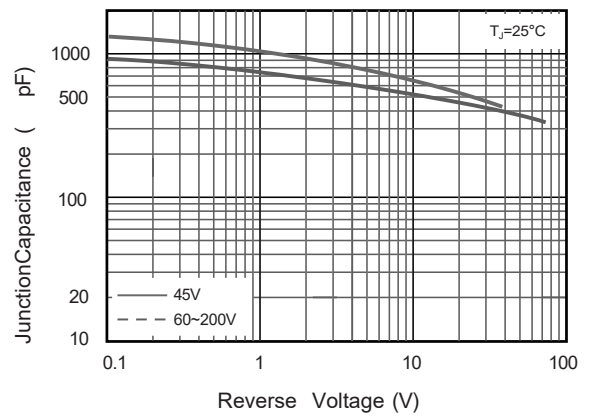


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

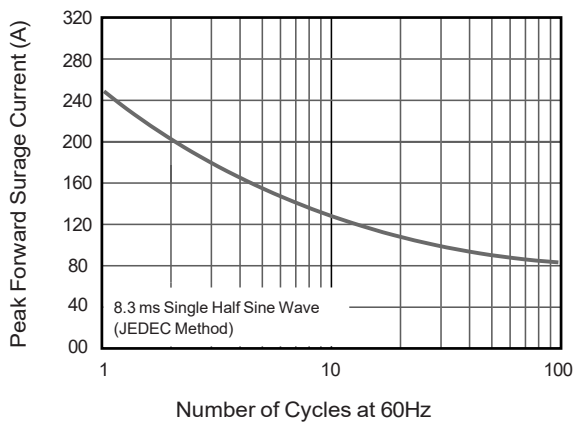
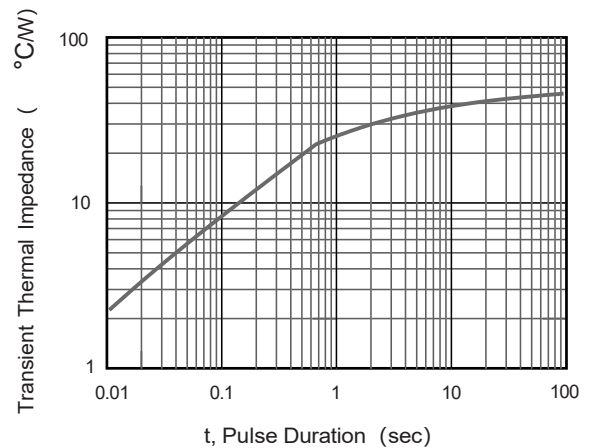


Fig.6- Typical Transient Thermal Impedance



The curve above is for reference only.