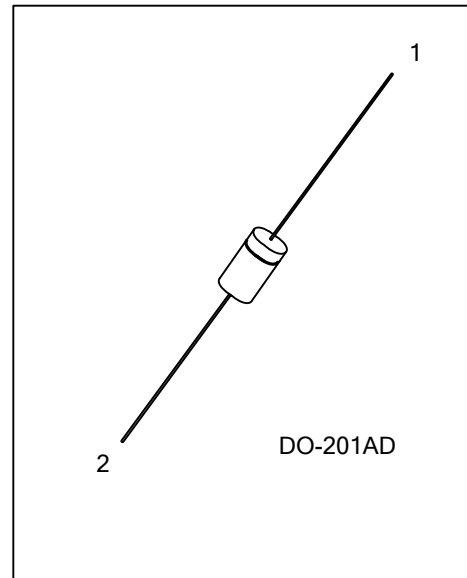
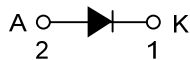


**MBR20100**

Preliminary

**DIODE****SCHOTTKY BARRIER  
RECTIFIER****■ FEATURES**

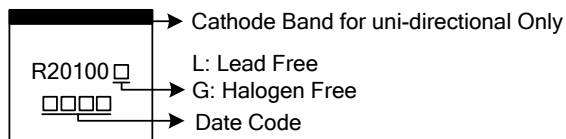
- \* 20 Amps Total (10 Amps Per Diode Leg)
- \* Guard Ring for Transient Protection
- \* Low Forward Voltage Drop
- \* High Surge Capability
- \* Low Power Loss/High Efficiency

**■ SYMBOL****■ ORDERING INFORMATION**

| Ordering Number  |                  | Package  | Pin Assignment |   | Packing  |
|------------------|------------------|----------|----------------|---|----------|
| Lead Free        | Halogen Free     |          | 1              | 2 |          |
| MBR20100L-Z21D-B | MBR20100G-Z21D-B | DO-201AD | K              | A | Tape Box |

Note: Pin Assignment: A: Anode K: Cathode

|                                                                                   |                                                                                          |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <br>MBR20100L-Z21D-B<br>(1) Packing Type<br>(2) Package Type<br>(3) Green Package | (1) B: Tape Box<br>(2) Z21D: DO-201AD<br>(3) L: Lead Free, G: Halogen Free and Lead Free |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|

**■ MARKING**

### ■ ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C, unless otherwise specified)

| PARAMETER                                                                | SYMBOL              | RATINGS    | UNIT |
|--------------------------------------------------------------------------|---------------------|------------|------|
| Maximum Repetitive Peak Reverse Voltage                                  | V <sub>RRM</sub>    | 100        | V    |
| Maximum DC Blocking Voltage                                              | V <sub>R</sub>      | 100        | V    |
| Working Peak Reverse Voltage                                             | V <sub>RWM</sub>    | 100        | V    |
| Maximum PMS Reverse Voltage                                              | V <sub>R(RMS)</sub> | 90         | V    |
| Average Forward Rectified Output Current                                 | I <sub>O</sub>      | 20         | A    |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single Half-Sine-Wave | I <sub>FSM</sub>    | 150        | A    |
| Junction Capacitance (Note 4)                                            | C <sub>J</sub>      | 1000       | pF   |
| Operating Temperature                                                    | T <sub>J</sub>      | -55 ~ +150 | °C   |
| Storage Temperature                                                      | T <sub>STG</sub>    | -55 ~ +150 | °C   |

### ■ THERMAL RESISTANCES CHARACTERISTICS

| PARAMETER           | SYMBOL          | RATINGS | UNIT |
|---------------------|-----------------|---------|------|
| Junction to Ambient | θ <sub>JA</sub> | 20      | °C/W |

### ■ ELECTRICAL CHARACTERISTICS

| PARAMETER                                      | SYMBOL         | TEST CONDITIONS                            | MIN | TYP | MAX  | UNIT |
|------------------------------------------------|----------------|--------------------------------------------|-----|-----|------|------|
| Instantaneous Forward Voltage Drop<br>(Note 3) | V <sub>F</sub> | I <sub>F</sub> =20A, T <sub>C</sub> =25°C  |     |     | 0.84 | V    |
|                                                |                | I <sub>F</sub> =20A, T <sub>C</sub> =125°C |     |     | 0.74 | V    |
| Instantaneous Reverse Current (Note 3)         | I <sub>R</sub> | Rated DC Voltage, T <sub>C</sub> =25°C     |     |     | 0.1  | mA   |
|                                                |                | Rated DC Voltage, T <sub>C</sub> =125°C    |     |     | 30   | mA   |

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. 2.0μs Pulse Width, f = 1.0KHz.

3. Pulse Test: Pulse Width = 300μs, Duty Cycle ≤ 2.0%.

4. Applied V<sub>R</sub> = 4.0V and f = 1.0MHz.

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