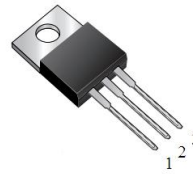


## MBR20100LCT&MBR20100LFCT

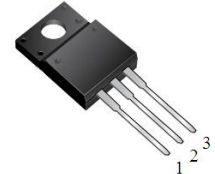
### 20.0AMPS. SCHOTTKY BARRIER RECTIFIERS

#### FEATURE

- . High current capability
- . Low forward voltage drop
- . Low power loss, high efficiency
- . High surge capability
- . High temperature soldering guaranteed  
260°C /10seconds, 0.25"(6.35mm)from case.



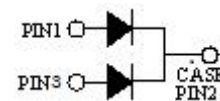
TO-220AB  
MBR20100LCT



ITO-220AB  
MBR20100LFCT

#### MECHANICAL DATA

- . Case: Molded with UL-94 Class V-0 recognized  
Flame Retardant Epoxy
- . Mounting position: any



Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

#### MAXIMUM RATINGS (T<sub>C</sub>=25°C unless otherwise noted)

| Parameter   | Symbol                            | MBR20100LCT&MBR20100LFCT | Units |
|---|-----------------------------------|--------------------------|-------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>                  | 100                      | V     |
| Maximum RMS Voltage   | V <sub>RMS</sub>                  | 70                       | V     |
| Maximum DC blocking Voltage   | V <sub>DC</sub>                   | 100                      | V     |
| Maximum Average Forward Rectified Current<br>at T <sub>C</sub> =100°C                               | I <sub>F(AV)</sub>                | 10.0<br>20.0             | A     |
| Peak Forward Surge Current 8.3ms single half sine-wave<br>superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                  | 150.0                    | A     |
| Typical Junction Capacitance (Note 1)   | C <sub>J</sub>                    | 790                      | pF    |
| Operation Junction Temperature and Storage Temperature  | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150              | °C    |
| Maximum Mounting torque, M3 or 6-32 srew  |                                   | 1.1N•m (10 lbf•in)       |       |

#### ELECTRICAL CHARACTERISTICS-(per leg) (T<sub>A</sub>=25°C unless otherwise noted)

| Parameter               | Symbol         | Test conditions       | Typ                  | Max  | Units |    |
|-------------------------|----------------|-----------------------|----------------------|------|-------|----|
| Forward voltage drop    | V <sub>F</sub> | T <sub>J</sub> =25°C  | I <sub>F</sub> =3A   | 0.56 | ---   | V  |
|                         |                |                       | I <sub>F</sub> =5A   | 0.61 | ---   |    |
|                         |                |                       | I <sub>F</sub> =10A  | 0.71 | 0.78  |    |
|                         |                | T <sub>J</sub> =125°C | I <sub>F</sub> =3A   | 0.45 | ---   |    |
|                         |                |                       | I <sub>F</sub> =5A   | 0.50 | ---   |    |
|                         |                |                       | I <sub>F</sub> =10A  | 0.58 | 0.65  |    |
| Reverse leakage current | I <sub>R</sub> | T <sub>J</sub> =25°C  | V <sub>R</sub> =100V | ---  | 100   | μA |
|                         |                | T <sub>J</sub> =125°C | V <sub>R</sub> =100V | ---  | 10    | mA |

#### THERMAL CHARACTERISTICS(T<sub>C</sub>=25°C unless otherwise noted)

| Parameter                           | Symbol            | MBR20100LCT | MBR20100LFCT | Units |
|-------------------------------------|-------------------|-------------|--------------|-------|
| Typical Thermal Resistance (Note 2) | R <sub>(JC)</sub> | 2.0         | 3.0          | °C/W  |

#### Notes:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Thermal Resistance from Junction to Case

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

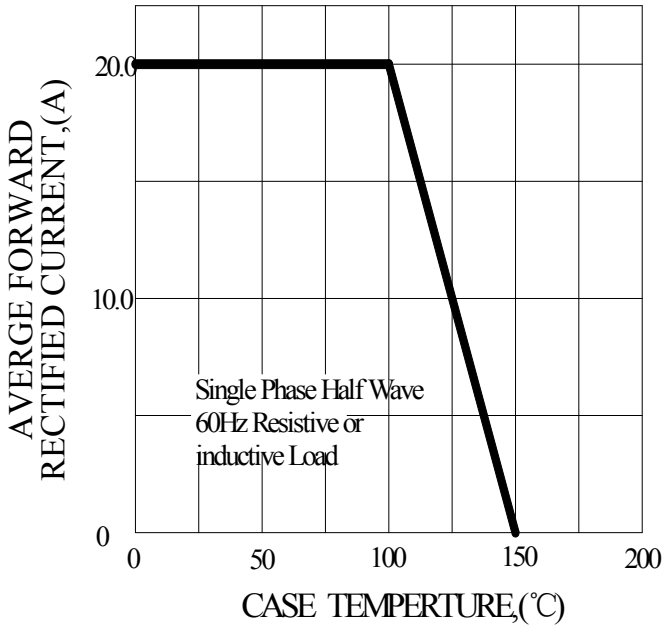


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

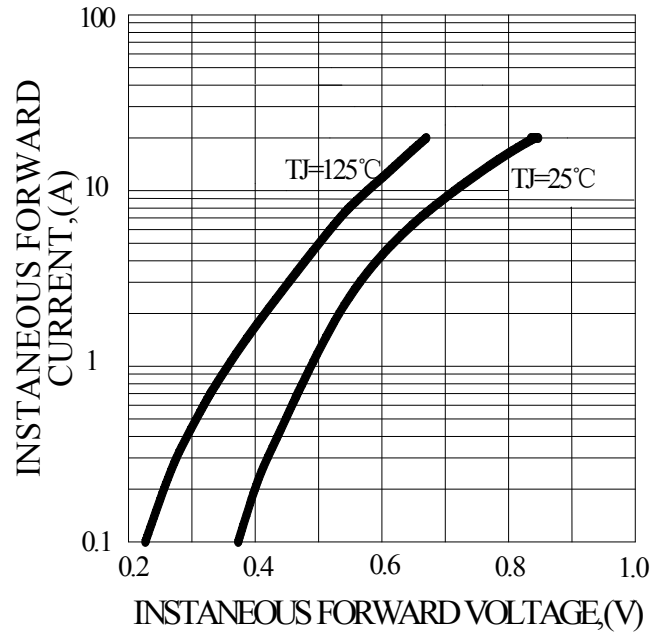


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

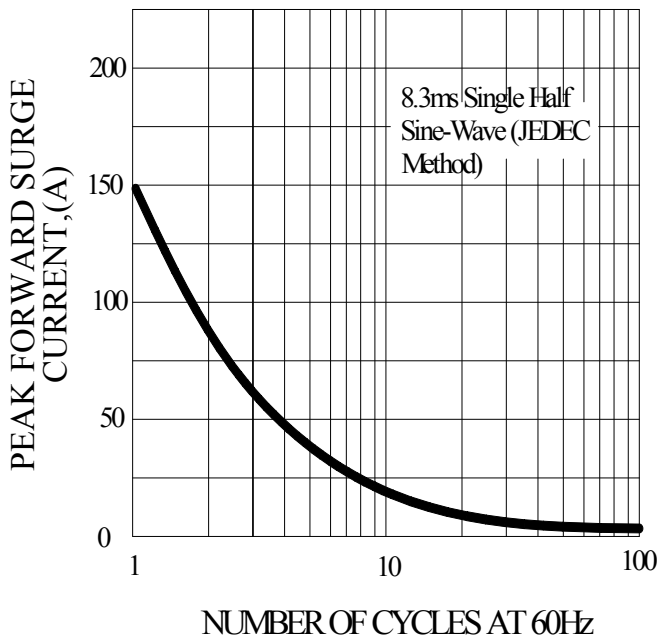
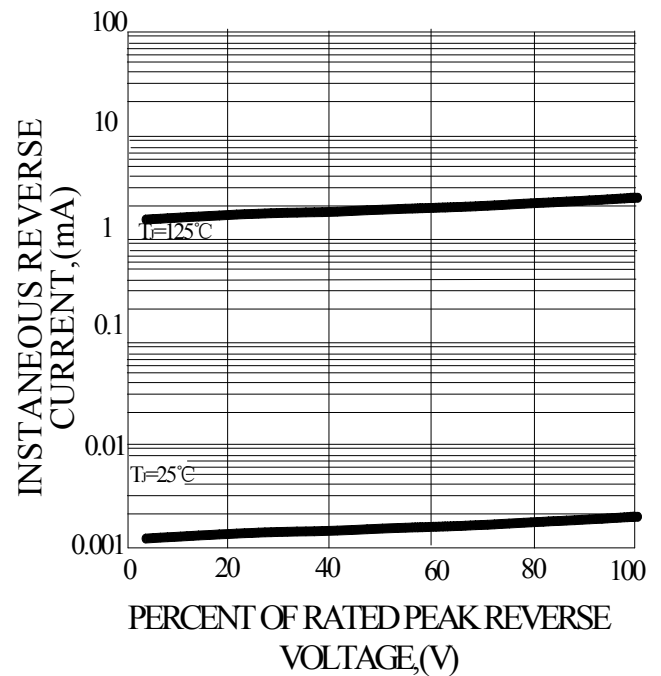
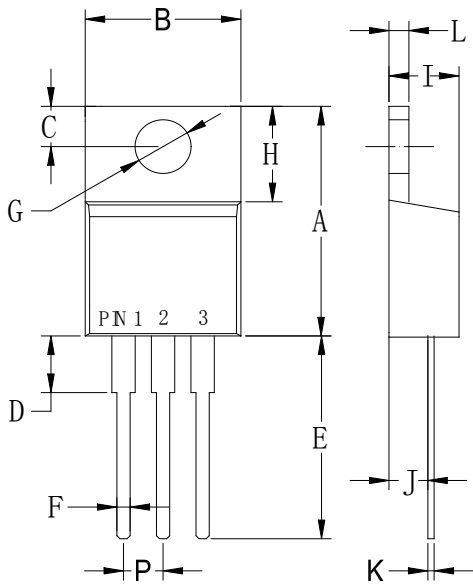


FIG.4-TYPICAL REVERSE CHARACTERISTICS



**PACKAGE OUTLINE DIMENSIONS**

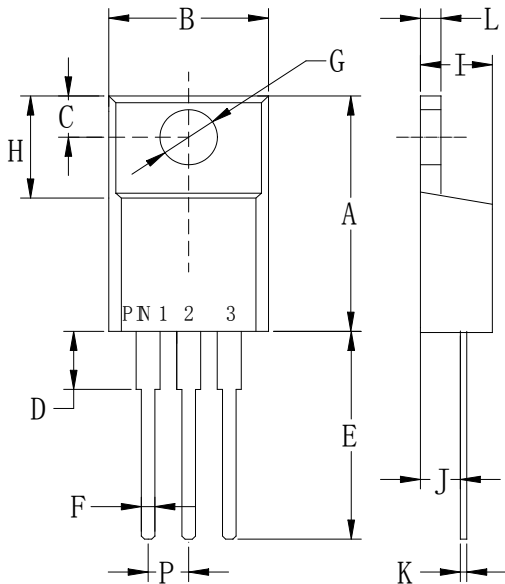
**TO-220AB**



| TO-220AB |              |              |
|----------|--------------|--------------|
| Dim      | Min          | Max          |
| A        | .573 (14.55) | .603 (15.32) |
| B        | —            | .412 (10.5)  |
| C        | .103 (2.62)  | .113 (2.87)  |
| D        | .140 (3.56)  | .160 (4.06)  |
| E        | .510 (13.0)  | .560 (14.3)  |
| F        | .027 (0.68)  | .037 (0.94)  |
| G        | .148 (3.74)  | .154 (3.91)  |
| H        | .230 (5.84)  | .270 (6.86)  |
| I        | .175 (4.44)  | .185 (4.86)  |
| J        | .100 (2.54)  | .110 (2.79)  |
| K        | .014 (0.35)  | .025 (0.64)  |
| L        | .045 (1.14)  | .055 (1.40)  |
| P        | .095 (2.41)  | .105 (2.67)  |

Dimensions in inches and (millimeters)

**ITO-220AB**

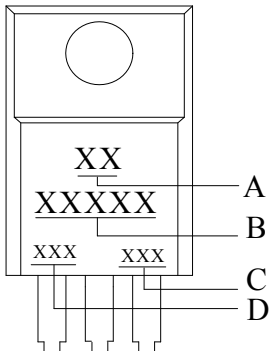


| ITO-220AB |             |             |
|-----------|-------------|-------------|
| Dim       | Min         | Max         |
| A         | .571 (14.5) | .610 (15.5) |
| B         | .383 (9.72) | .406 (10.3) |
| C         | .110 (2.80) | .126 (3.20) |
| D         | .133 (3.38) | .162 (4.10) |
| E         | .512 (13.0) | .551 (14.0) |
| F         | .028 (0.70) | .035 (0.90) |
| G         | .114 (2.90) | .138 (3.50) |
| H         | .268 (6.80) | .291 (7.40) |
| I         | .162 (4.10) | .185 (4.70) |
| J         | .102 (2.60) | .110 (2.80) |
| K         | .018 (0.45) | .026 (0.65) |
| L         | .097 (2.46) | .113 (2.86) |
| P         | .890 (2.25) | .113 (2.85) |

Dimensions in inches and (millimeters)

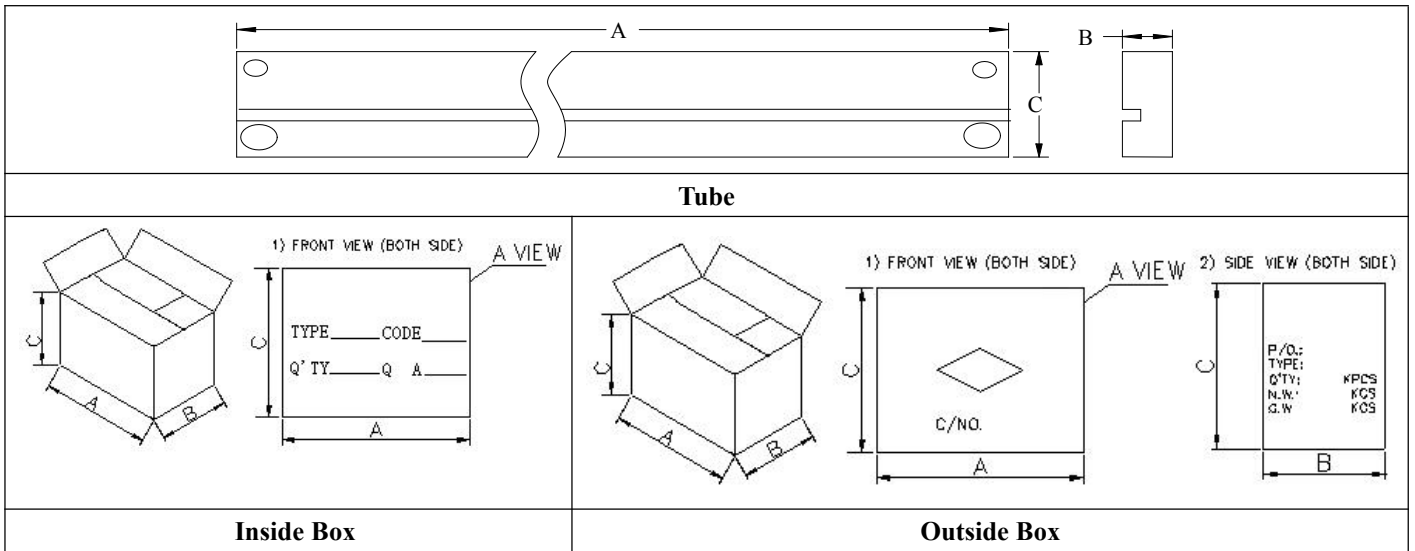
## Marking and packaging illustration

### 1、Marking



| SYMBOL   | Explanation         |
|----------|---------------------|
| <b>A</b> | Trademark           |
| <b>B</b> | Product Name        |
| <b>C</b> | Date Code           |
| <b>D</b> | Product Information |

### 2、Packaging



| 类别                                 | A (mm) | B (mm) | C (mm) |
|------------------------------------|--------|--------|--------|
| T0-220<br>Tube (50EA per tube )    | 530±5  | 7±0.8  | 33±1   |
| T0-220<br>Inside Box (1K per box)  | 542±5  | 82±2   | 78±1   |
| T0-220<br>outside Box (6K per box) | 555±5  | 285±5  | 245±5  |

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