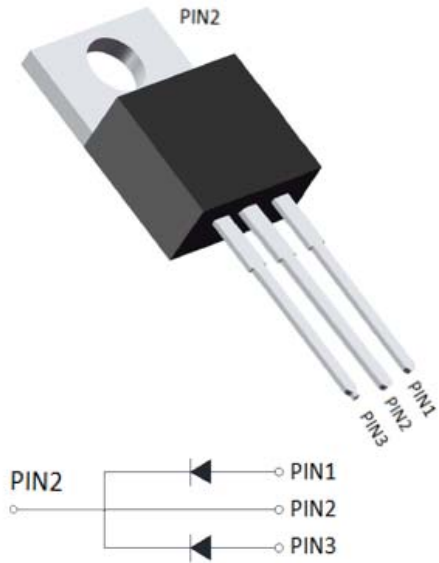


## Schottky Diodes



### Features

- High frequency operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

### Mechanical Data

- **Package:** TO-220AB  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER  | SYMBOL           | UNIT             | MBRL30200CT |
|--|------------------|------------------|-------------|
| Device marking code  |                  |                  | MBRL30200CT |
| Repetitive Peak Reverse Voltage  | VRRM             | V                | 200         |
| Average Rectified Output Current @60Hz sine wave, R-load, T <sub>a</sub> (FIG 1)         | I <sub>O</sub>   | A                | 30          |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T <sub>a</sub> =25°C | I <sub>FSM</sub> | A                | 220         |
| Current Squared Time @1ms≤t≤8.3ms T <sub>j</sub> =25°C                                   | I <sup>2</sup> t | A <sup>2</sup> s | 200         |
| Storage Temperature  | T <sub>stg</sub> | °C               | -55 ~ +150  |
| Junction Temperature   | T <sub>j</sub>   | °C               | -55 ~ +150  |

### ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL            | UNIT | TEST CONDITIONS  | MBRL30200CT |
|---|-------------------|------|--|-------------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>FM</sub>   | V    | I <sub>FM</sub> =15.0A                                     | 0.88        |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>RRM1</sub> | mA   | V <sub>RM</sub> =V <sub>RRM</sub><br>T <sub>a</sub> =25°C  | 0.1         |
|   | I <sub>RRM2</sub> |      | V <sub>RM</sub> =V <sub>RRM</sub><br>T <sub>a</sub> =100°C | 20          |

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS



# MBRL30200CT

## ■ Thermal Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER          |                           | SYMBOL         | UNIT | MBRL30200CT |
|--------------------|---------------------------|----------------|------|-------------|
| Thermal Resistance | Between junction and case | R $\theta$ J-C | °C/W | 2.0         |

## ■ Ordering Information (Example)

| PREFERRED P/N | UNIT WEIGHT(g)  | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|-----------------|-----------------------|-------------------------|----------------------------|---------------|
| MBRL30200CT   | Approximate 1.9 | 50                    | 1000                    | 5000                       | Tube          |

## ■ Characteristics (Typical)

FIG1:Io -Tc Curve

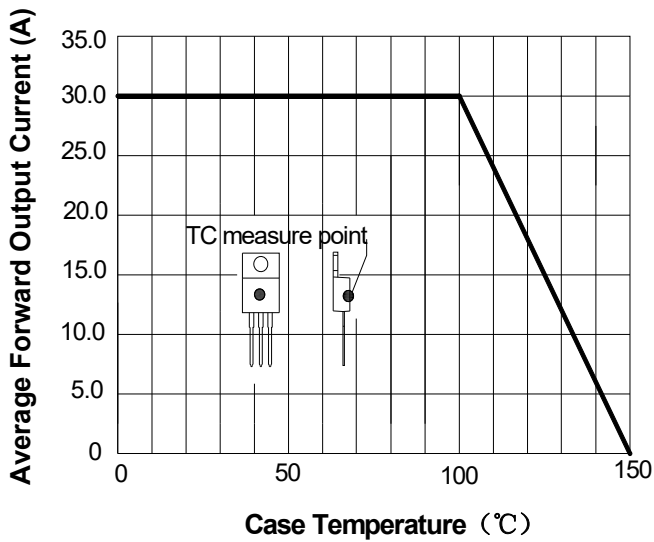


FIG2:Surge Forward Current Capability

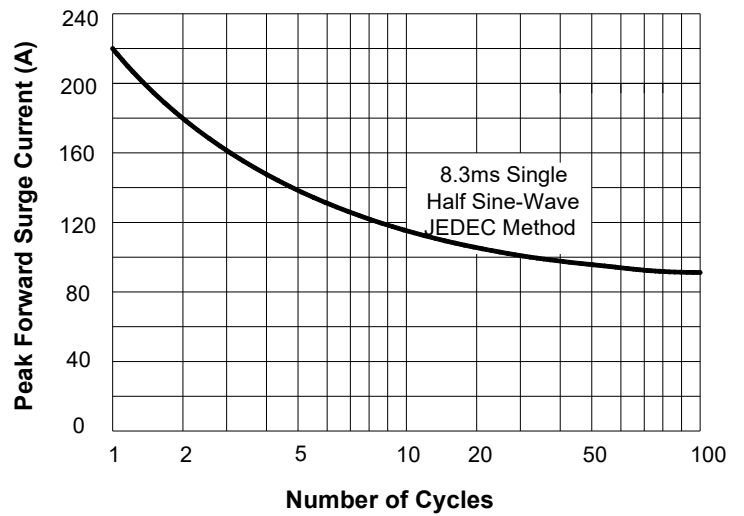


FIG3: Forward Voltage

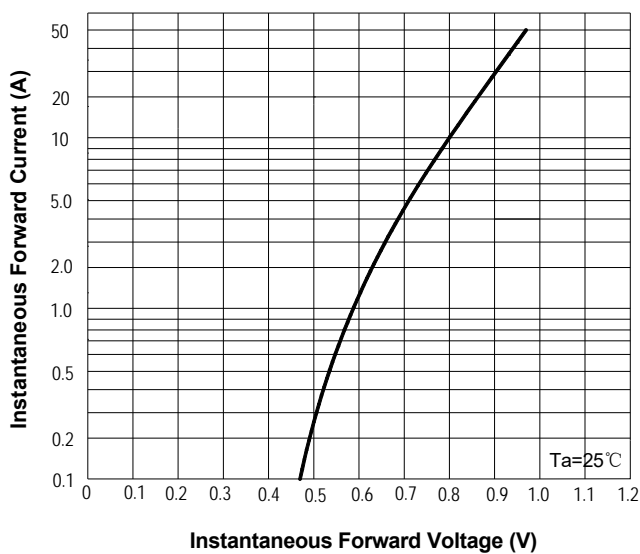
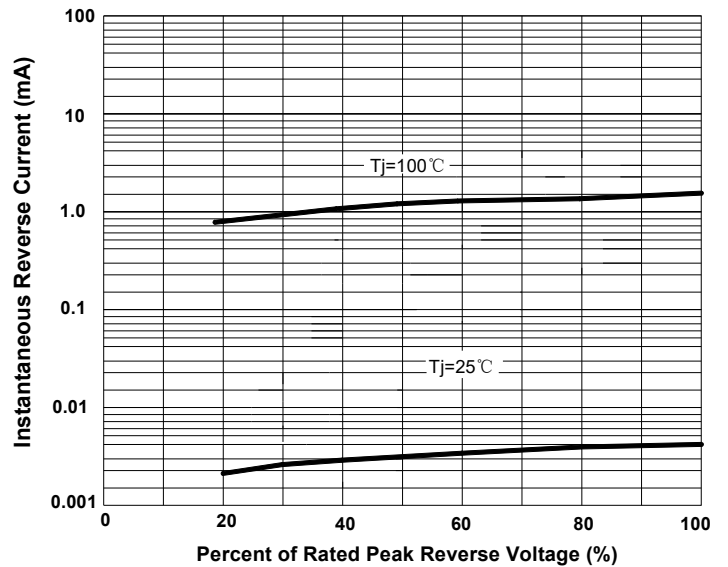


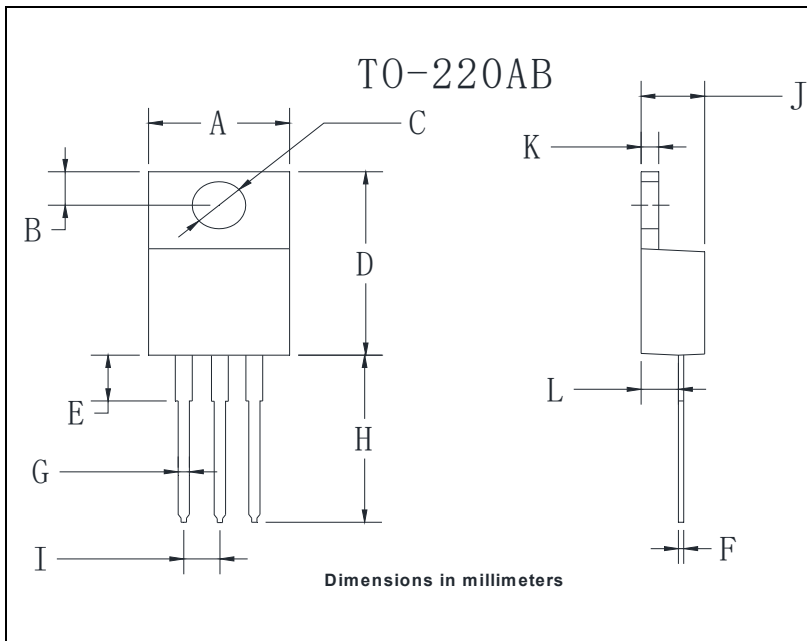
FIG4: Instantaneous Reverse Characteristics





# MBRL30200CT

## ■Outline Dimensions



| TO-220AB |       |       |
|----------|-------|-------|
| Dim      | Min   | Max   |
| A        | 9.95  | 10.35 |
| B        | 2.55  | 2.95  |
| C        | 3.8   | 4.0   |
| D        | 14.95 | 15.25 |
| E        | 3.75  | 4.25  |
| F        | 0.26  | 0.5   |
| G        | 0.68  | 0.94  |
| H        | 13.4  | 13.9  |
| I        | 2.35  | 2.65  |
| J        | 4.38  | 4.78  |
| K        | 1.14  | 1.4   |
| L        | 2.37  | 2.79  |



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