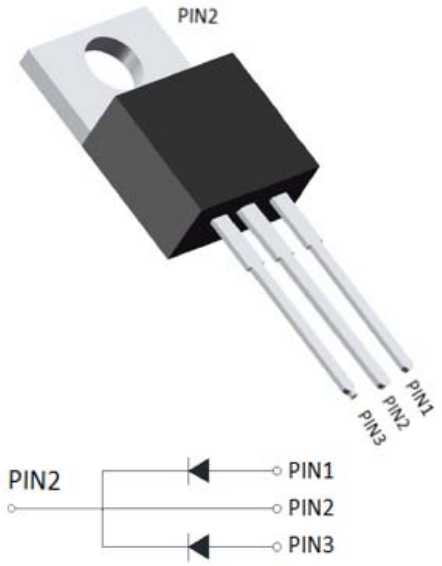
# Schottky Diodes




## 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 ($T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | MBRL30200CT |
|---|---|---|---|
| Device marking code | | | MBRL30200CT |
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | V | 200 |
| Average Rectified Output Current @60Hz sine wave, R-load, Tc（FIG 1） | $I_O$ | A | 30 |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_a$=25℃ | $I_{FSM}$ | A | 220 |
| Current Squared Time @1ms≤t≤8.3ms Tj=25℃ | $I^2t$ | $A^2s$ | 200 |
| Storage Temperature | Tstg | ℃ | -55 ~ +175 |
| Junction Temperature | Tj | ℃ | -55 ~ +175 |

## ■Electrical Characteristics（$T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | MBRL30200CT |
|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per diode | $V_{FM}$ | V | $I_{FM}$=15.0A | 0.88 |
| Maximum DC reverse current at rated DC blocking voltage per diode | $I_{RRM1}$ | mA | $V_{RM}$=$V_{RRM}$ $T_a$=25℃ | 0.1 |
| | $I_{RRM2}$ | | $V_{RM}$=$V_{RRM}$ $T_a$=100℃ | 20 |

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

Note2:Pulse test:pulse widh 40mS

## ■Thermal Characteristics （$T_a$=25℃ Unless otherwise specified）

| PARAMETER | | SYMBOL | UNIT | MBRL30200CT |
|---|---|---|---|---|
| Thermal Resistance | Between junction and case | $R_{\theta J-C}$ | ℃/W | 2.0 |

## ■Ordering Information (Example)

| PREFERED 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

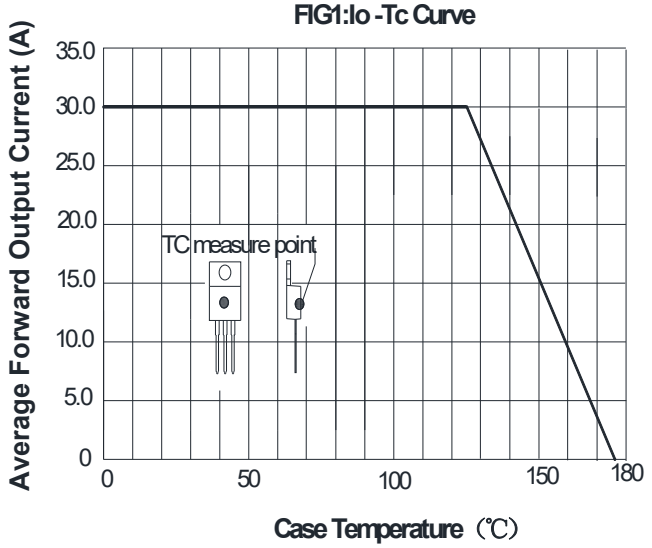



FIG2:Surge Forward Current Capability

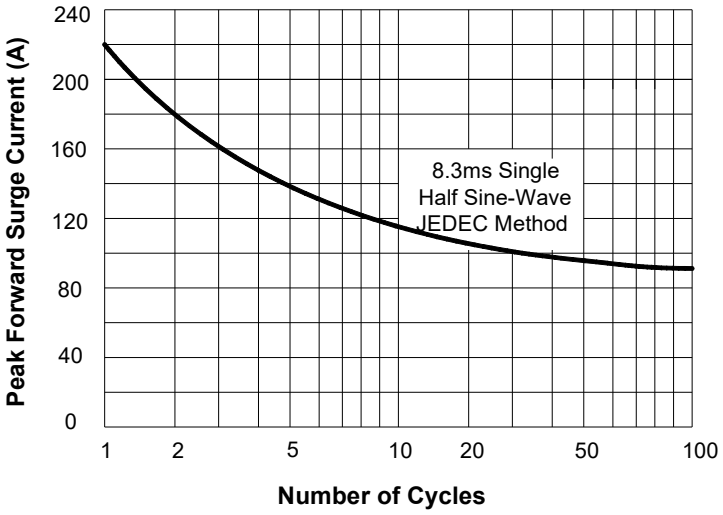



FIG3: Forward Voltage

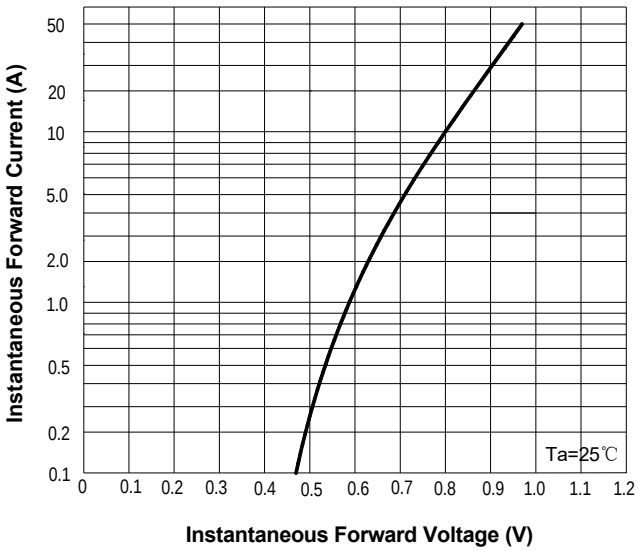
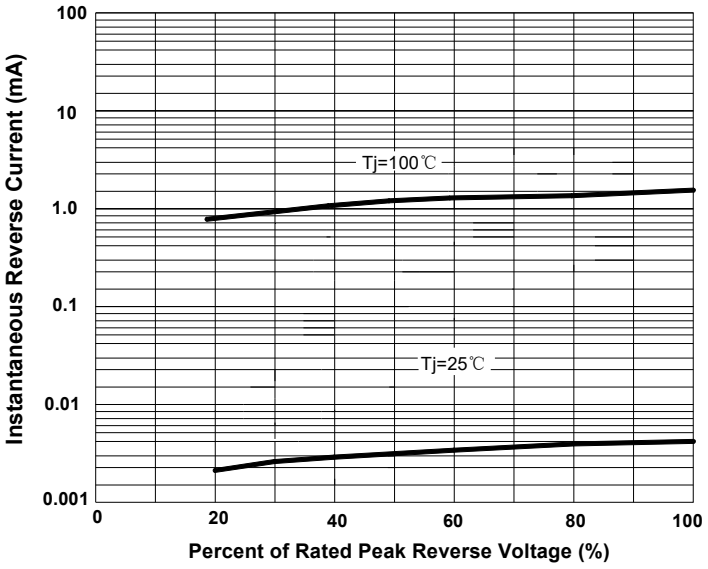
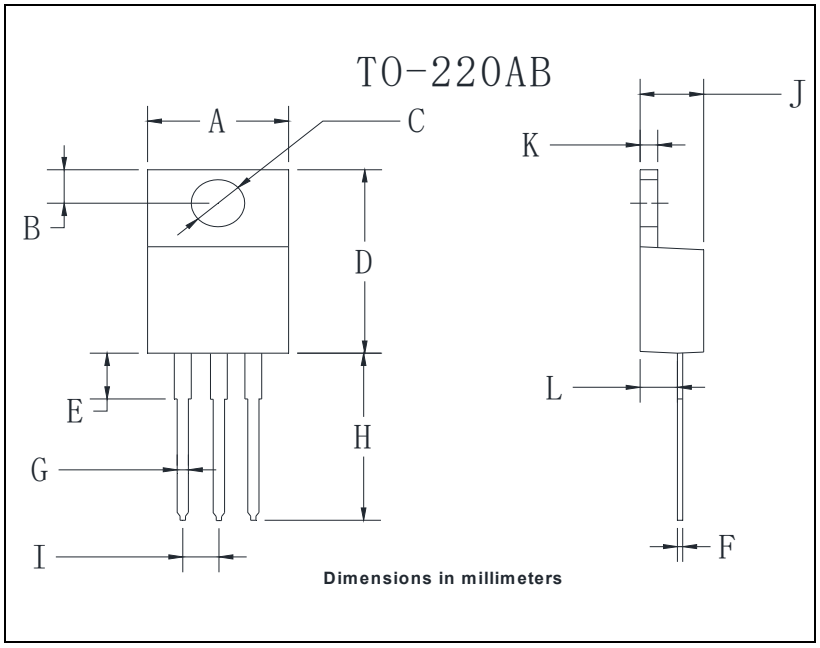



FIG.4: Instantaneous Reverse Characteristics



## ■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 |

## Notice

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in STARSEA's terms and conditions of sale for such products, STARSEA assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of STARSEA products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.