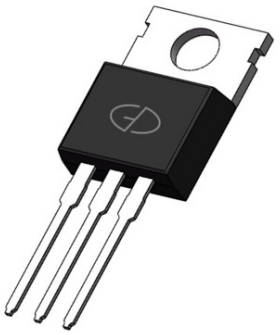
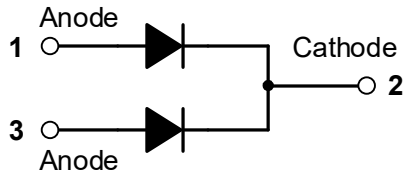
# 30A,60V Schottky Barrier Rectifier

## Features

- Low forward voltage, low power loss
- Low leakage current
- High surge current
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



**TO-220AB**




## Applications

- SMPS
- Adapter
- Server Power

## Mechanical Data

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 50 units per plastic tube

**Maximum Ratings & Electrical Characteristics** ($T_A$=25℃ unless otherwise noted)

| Parameter | Symbol | MBR3060CT | Unit |
|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 60 | V |
| Maximum RMS voltage | $V_{RMS}$ | 42 | V |
| Maximum DC blocking voltage | $V_{DC}$ | 60 | V |
| Maximum average forward | $I_{F(AV)}$ | 30 | A |
| Peak forward surge current,8.3ms single half sine-wave superimposed on rated load per diodes | $I_{FSM}$ | 200 | A |
| Operating junction temperature range | $T_J$ | -55 to +150 | °C |
| Storage temperature range | $T_{STG}$ | -55 to +150 | °C |

| **Electrical Specifications** ($T_A$=25℃ unless otherwise noted) | | | | | |
|---|---|---|---|---|---|
| **Parameter** | **Symbol** | **Test Conditions** | **Typ** | **Max** | **Unit** |
| Forward drop voltage (Note1) | $V_F$ | $I_F$=15A, $T_J$ =25℃ | 0.73 | 0.78 | V |
| | | $I_F$=15A, $T_J$ =125℃ | - | 0.68 | |
| | | $I_F$=30A, $T_J$ =25℃ | - | - | |
| | | $I_F$=30A, $T_J$ =125℃ | - | - | |
| Reverse leakage current @VR (Note2) | $I_R$ | $T_J$ =25℃ | - | 100 | uA |
| | | $T_J$ =100℃ | - | 10 | mA |

| **Thermal-Mechanical Specifications** ($T_A$=25℃ unless otherwise noted) | | | |
|---|---|---|---|
| **Parameter** | **Symbol** | **Typ** | **Unit** |
| Thermal Resistance, Junction to Case | $R_{\theta JC}$ | 2.0 | °C /W |
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 62.5 | °C /W |

Note：

1. Pulse test with PW=0.3ms, duty cycle=2%
2. Pulse test with PW=30ms

## Ratings and Characteristics Curves

($T_A$ = 25℃ unless otherwise noted)

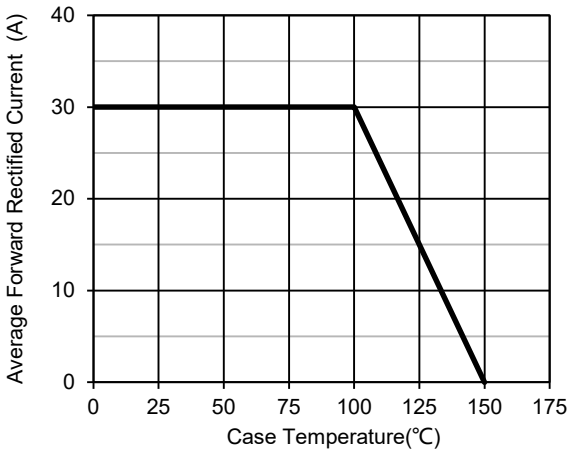



**Fig.1 – Forward Current Derating Curve**

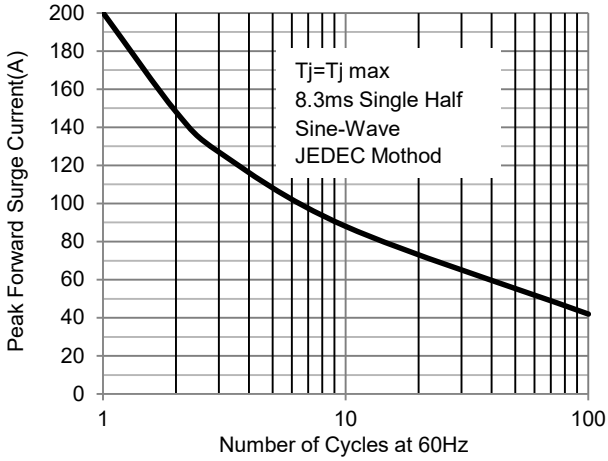



**Fig.2 – Maximum Non-Repetitive Surge Current**

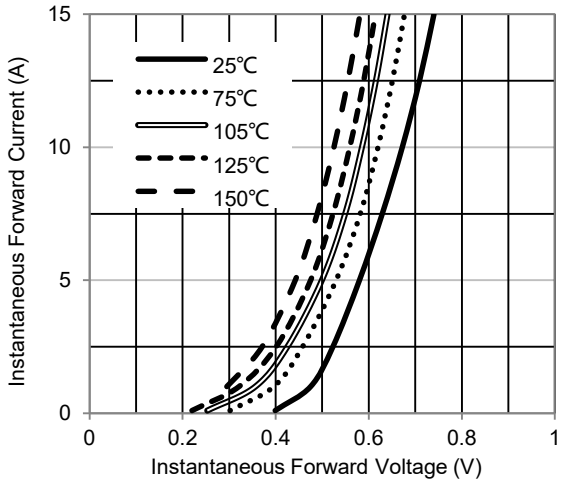



**Fig.3 – Typical Forward Voltage Characteristics**

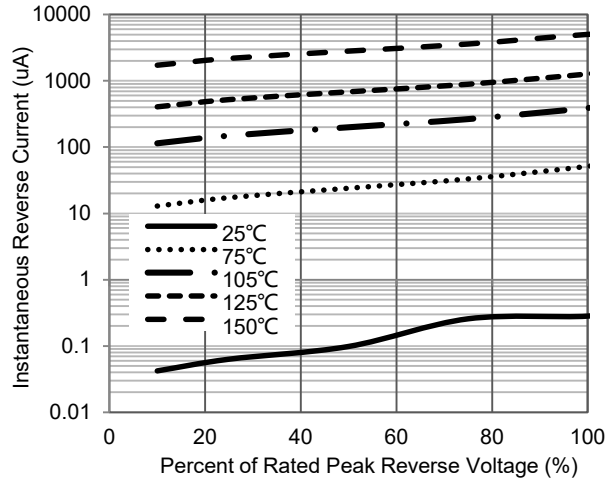



**Fig.4 – Typical Reverse Current Characteristics**

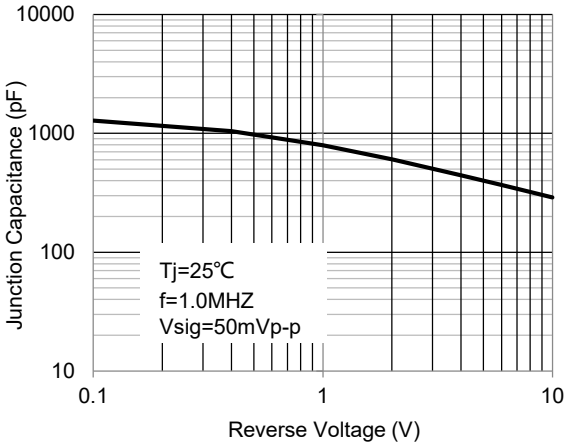
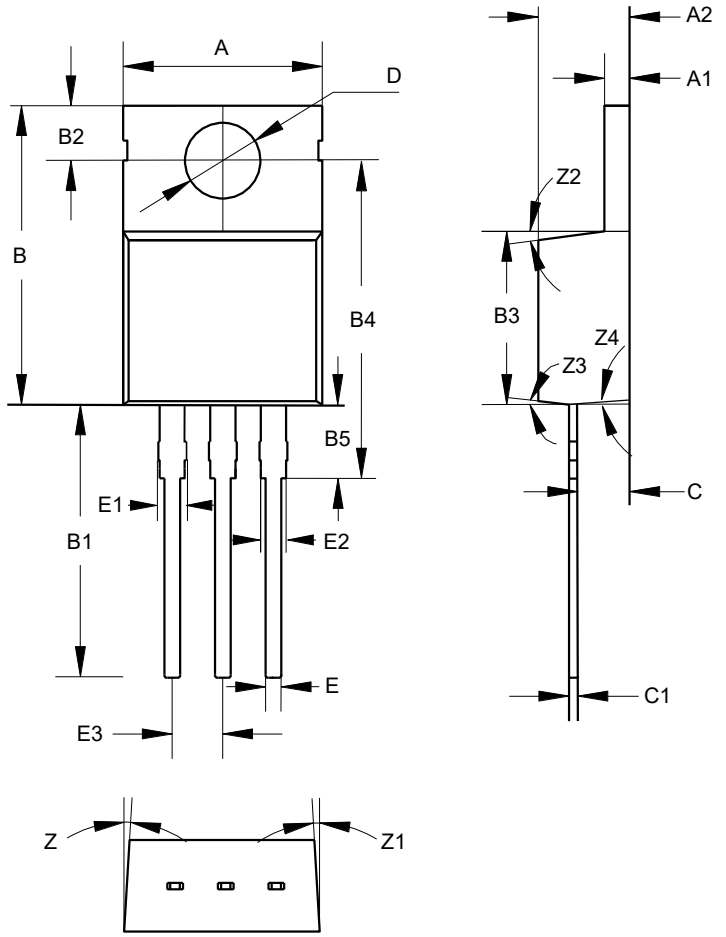



**Fig.5 – Typical Junction Capacitance**

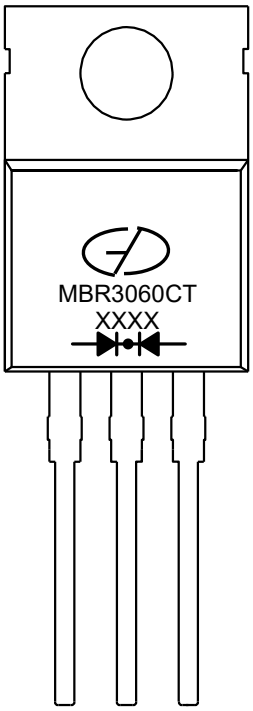
## Package Outline Dimensions (Unit: millimeters)

# TO-220AB




| TO-220AB | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Min. | Nom. | Max. | | Min. | Nom. | Max. |
| A | 9.8 | 10 | 10.2 | D | 3.7 | 3.8 | 3.9 |
| A1 | 1.17 | 1.27 | 1.37 | E | 0.68 | 0.78 | 0.88 |
| A2 | 4.5 | 4.6 | 4.7 | E1 | 1.2 | 1.4 | 1.6 |
| B | 14.5 | 15 | 15.5 | E2 | 1.17 | 1.27 | 1.37 |
| B1 | 13.2 | 13.7 | 14.2 | E3 | 2.44 | 2.54 | 2.64 |
| B2 | 2.65 | 2.75 | 2.85 | Z | | 3° | |
| B3 | 8.5 | 8.7 | 8.9 | Z1 | | 3° | |
| B4 | 15.5 | 16 | 16.5 | Z2 | | 7° | |
| B5 | 3.4 | 3.7 | 4.0 | Z3 | | 7° | |
| C | 2.3 | 2.6 | 2.9 | Z4 | | 1.5° | |
| C1 | 0.28 | 0.38 | 0.48 | | | | |

## Marking Outline




1. Logo Mark:
2. Part Name: MBR3060CT
3. Date Code: XXXX
4. Polarity :

## Revision History

| Document Version | Date of release | Description of changes |
|---|---|---|
| Rev.A | 2013.12.15 | Released Datasheet |
| Rev.B | 2021.01.20 | Modify document format |
| Rev.C | 2022.04.29 | Modify ratings and characteristics curves |

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