# MBR(F)2060CT

Schottky Barrier Rectifier

Reverse Voltage 60 Volts Forward Current 20 Amperes

## Features

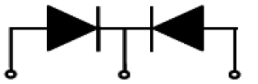
**Low VF=0.53V at IF=5A (25°C)**

**Low VF=0.63V at IF=10A (25°C)**

- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Low forward voltage, high efficiency
- Guarding for over voltage protection

Package: ITO-220-AB

Package: TO-220-AB



1. Anode 2.Cathode 3. Anode

## Mechanical Data

- Case: Epoxy, Molded
- Weight: 1.9grams（approximately）
- 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 | TEST CONDITIONS | | SYMBOL | MBR(F)2060CT | UNIT |
|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | | | $V_{RRM}$ | 60 | V |
| Working peak reverse voltage | | | $V_{RWM}$ | 60 | V |
| Maximum DC blocking voltage | | | $V_{DC}$ | 60 | V |
| Maximum average forward rectified current at<br>$T_C$=105°C total device per diode | | | $I_{F(AV)}$ | 20<br>10 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode | | | $I_{FSM}$ | 150 | A |
| Peak repetitive reverse current per leg at $t_p$=2.0us ,1KHz | | | $I_{RRM}$ | 1.0 | A |
| Voltage rate of change（rated $V_R$） | | | $D_{V/dt}$ | 10000 | V/us |
| Operating junction temperature range | | | $T_J$ | —55 to+150 | °C |
| Storage temperature range | | | $T_{STG}$ | —55 to+150 | °C |
| Isolation voltage (ITO-220-AB only) from terminal to heatsink t = 1 sec | | | $V_{AC}$ | 1500 | V |
| Maximum instantaneous forward voltage per leg | $I_F$=10A<br>$I_F$=10A | $T_C$=25℃<br>$T_C$=125℃ | $V_F$ | 0.68<br>0.63 | V |
| Maximum reverse current per leg at working peak<br>Reverse voltage | | $T_J$=25℃<br>$T_J$=100°C | $I_R$ | 100<br>10 | uA<br>mA |

**Thermal Characteristics $T_A$=25℃ unless otherwise noted**

| Symbol | Parameter | TYP（TO-220-AB） | TYP（ITO-220-AB） | Unit |
|---|---|---|---|---|
| RθJC | Thermal Resistance, Junction to Case per Leg | 2.0 | 4.0 | °C /W |
| RθJA | Thermal Resistance, Junction to Ambient per Leg | 62.5 | 62.5 | °C /W |

**Note**：Pulse test:300us pulse width, duty cycle=2%

## Ratings and Characteristics Curves

($T_A$ = 25℃ unless otherwise noted)

FIG.1- FORWARD CURRENT DERATING CURVE

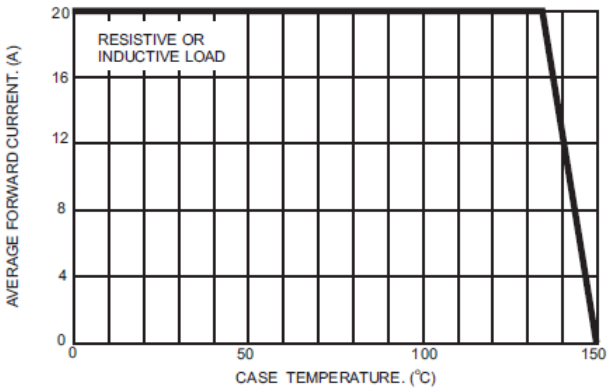



FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

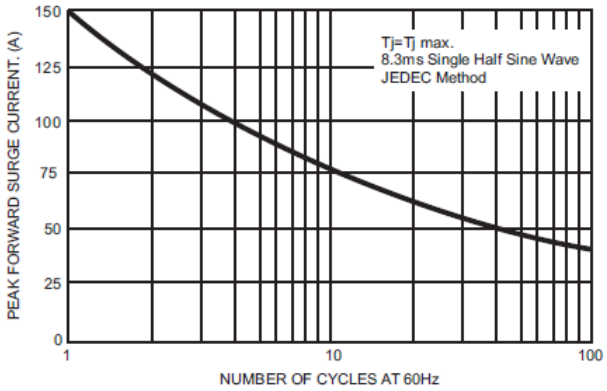



FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

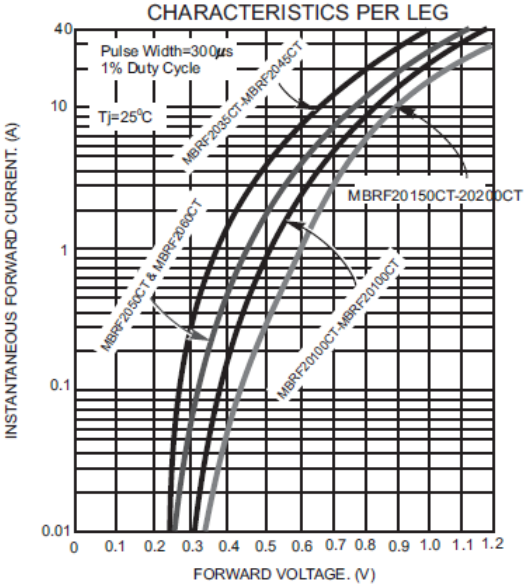



FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

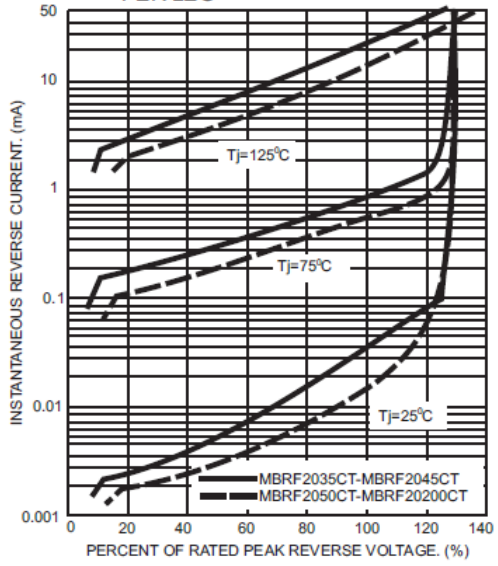



FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

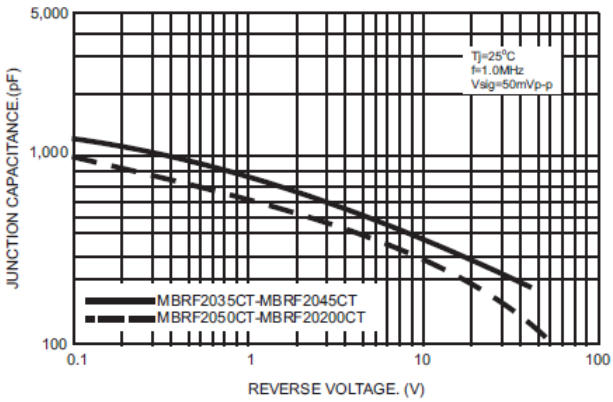
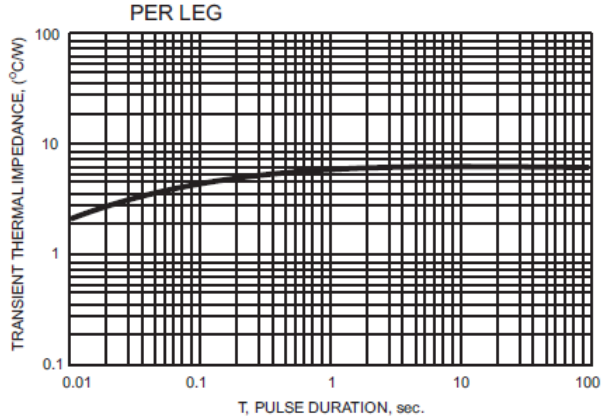


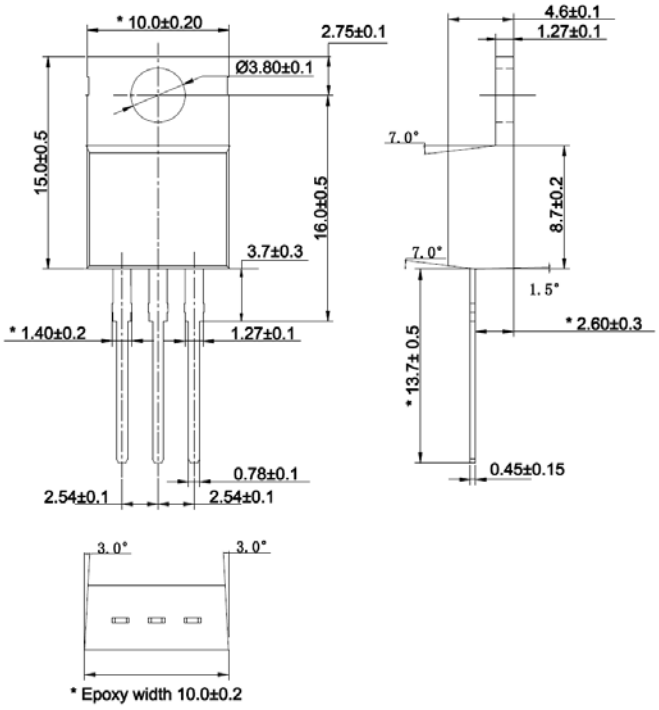

FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



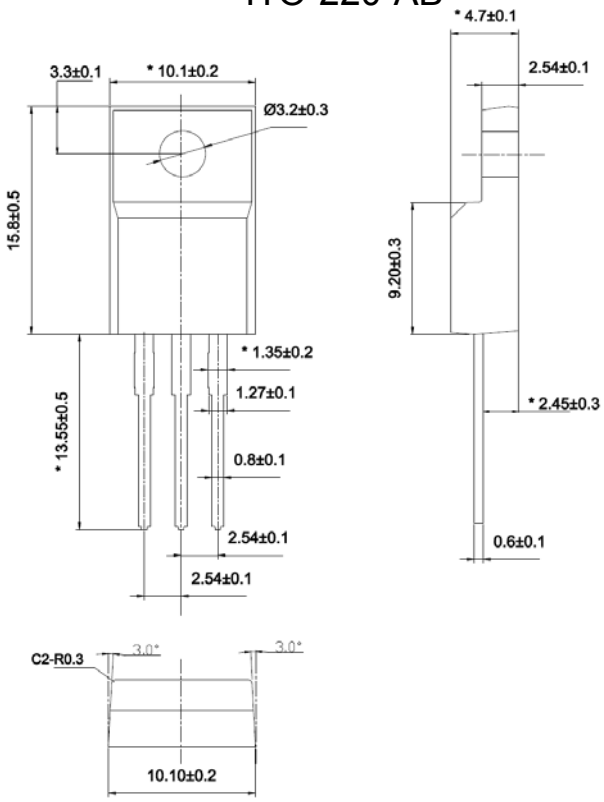
## Package Outline Dimensions

Unit: millimeters

TO-220-AB




ITO-220-AB



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