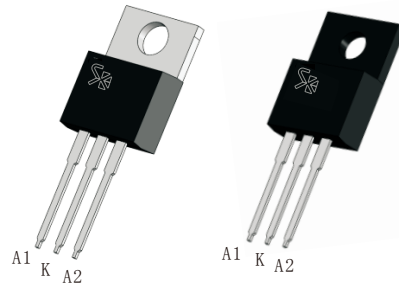


SCHOTTKY BARRIER RECTIFIERS
Reverse Voltage - 40 to 200 V
Forward Current - 20 A
FEATURES

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any

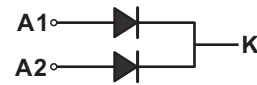
Mechanical data

- Case: TO-220
- Approx. Weight: 1.9g (0.067oz)
- Case: TO-220F
- Approx. Weight: 2.1g (0.07oz)
- Terminals: Lead solderable per MIL-STD-202, Method 208



TO-220

TO-220F


MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

| CHARACTERISTICS | TO-220 | MBR2040CT | MBR2045CT | MBR2060CT | MBR20100CT | MBR20150CT | MBR20200CT | Units |
|---|-----------------|------------|------------|------------|-------------|-------------|-------------|-------|
| | TO-220F | MBR2040CTF | MBR2045CTF | MBR2060CTF | MBR20100CTF | MBR20150CTF | MBR20200CTF | |
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 40 | 45 | 60 | 100 | 150 | 200 | V |
| Maximum RMS voltage | V_{RMS} | 28 | 31.5 | 42 | 70 | 105 | 140 | V |
| Maximum DC Blocking Voltage | V_{DC} | 40 | 45 | 60 | 100 | 150 | 200 | V |
| Maximum Average Forward Rectified Current per diode per device | $I_{F(AV)}$ | 10 20 | | | | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) per diode | I_{FSM} | 150 | | | | | | A |
| Max Instantaneous Forward Voltage at 10A(per diode) | V_F | 0.70 | | 0.75 | 0.85 | 0.90 | 0.92 | V |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 125^\circ\text{C}$ | I_R | 0.1 20 | | | 0.05 20 | | | mA |
| Typical Junction Capacitance ⁽¹⁾ | C_j | 600 | | 400 | | | | pF |
| Typical Thermal Resistance ⁽²⁾ | $R_{\theta JA}$ | 45 | | | | | | °C/W |
| Operating Junction Temperature Range | T_j | -55 ~ +150 | | | | -55 ~ +175 | | °C |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | | | | -55 ~ +175 | | °C |

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 10cmX10cmX1mm copper pad areas.

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

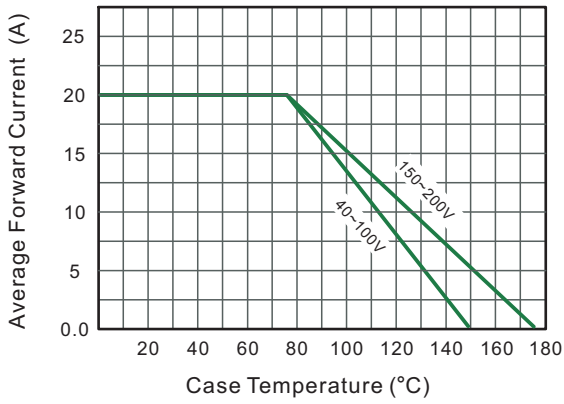


Fig.2 Typical Reverse Characteristics

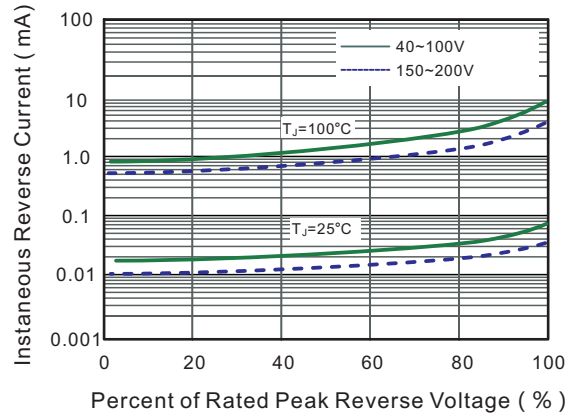


Fig.3 Typical Forward Characteristic(per leg)

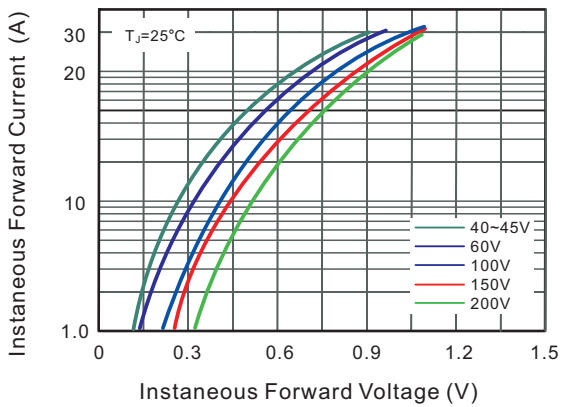


Fig.4 Typical Junction Capacitance

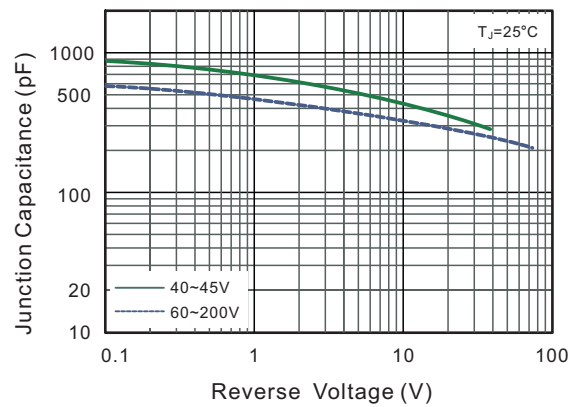


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

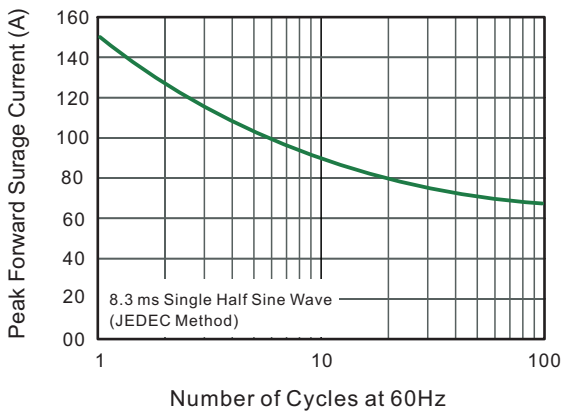
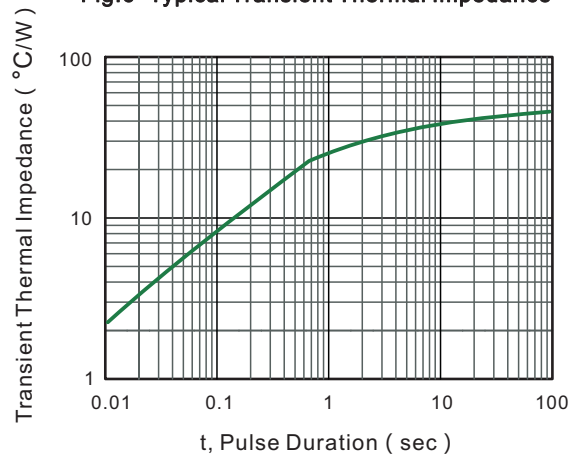


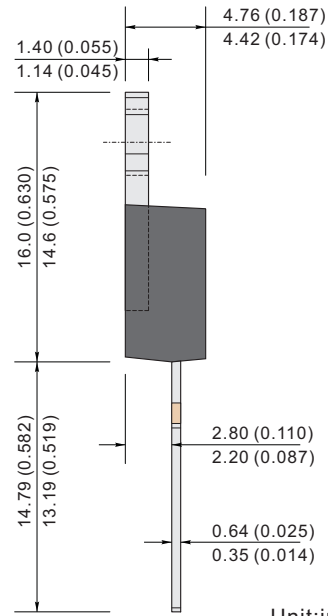
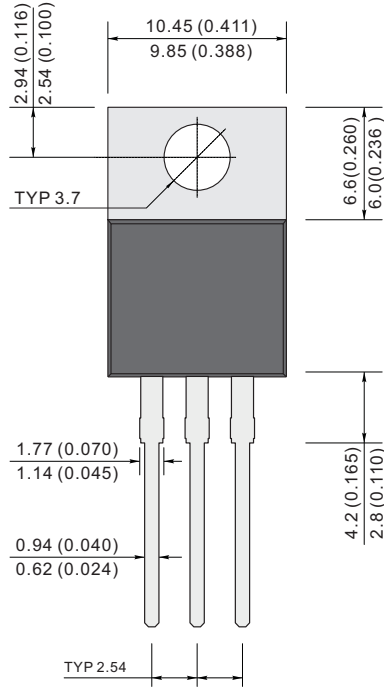
Fig.6- Typical Transient Thermal Impedance



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

TO-220

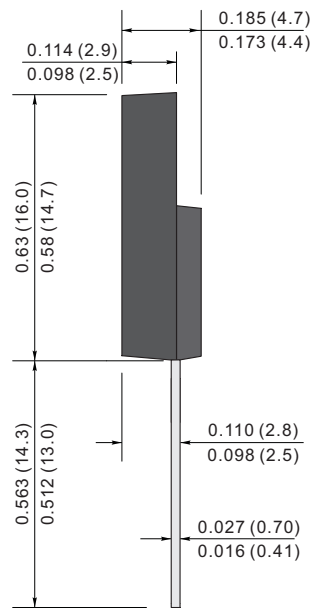
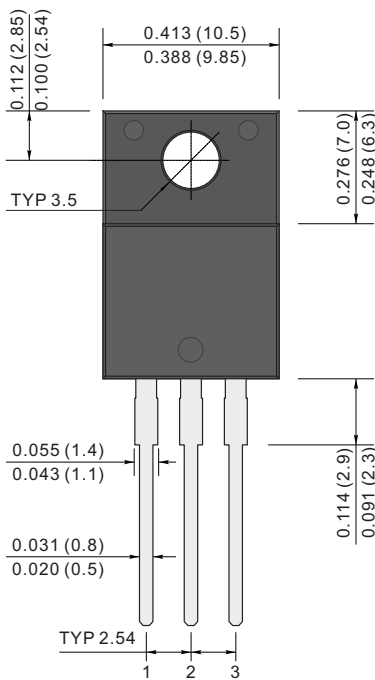


Unit:inch (mm)

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

TO-220F



Unit:inch (mm)