

Schottky Barrier Rectifiers

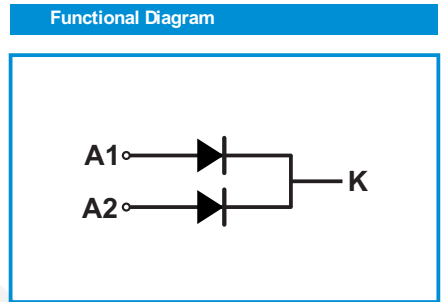
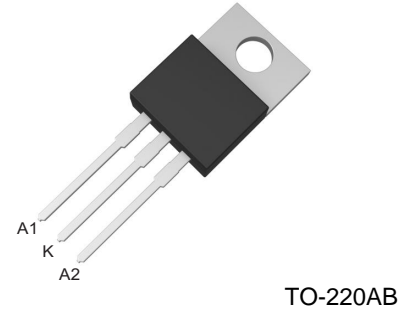
Reverse Voltage – 40 to 200 Volts
 Forward Current – 20 Amperes

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-220AB
- Approx. Weight: 1.9g (0.067oz)
- Terminals: Lead solderable per MIL-STD-202, Method 208



Maximum Ratings & Electrical characteristics

(Ta=25 unless otherwise noted)

| CHARACTERISTICS | TO-220AB | LTM2040CT | LTM2045CT | LTM2060CT | LTM20100CT | LTM20150CT | LTM20200CT | Units |
|---|--------------------|------------|-----------|-----------|------------|------------|------------|-------|
| Marking information | | MBR2040CT | MBR2045CT | MBR2060CT | MBR20100CT | MBR20150CT | MBR20200CT | |
| 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 10 A(per diode) | V _F | 0.70 | | 0.75 | 0.85 | 0.90 | 0.92 | V |
| Maximum DC Reverse Current at Rated DC Reverse Voltage | I _R | 0.1 20 | | | 0.05 20 | | | mA |
| Typical Junction Capacitance ⁽¹⁾ | C _j | 600 | | 400 | | | | pF |
| Typical Thermal Resistance ⁽²⁾ | R _{θJA} | 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.

Characteristic Curves

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

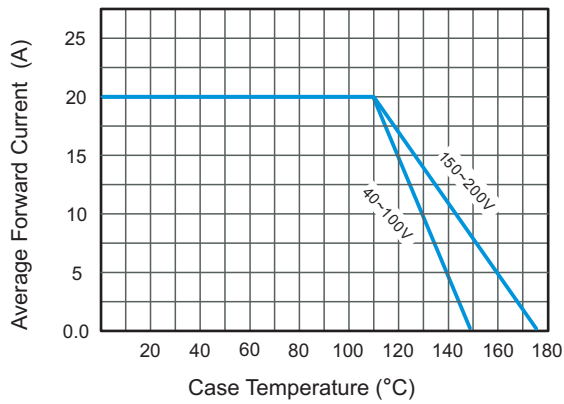


Fig.2 Typical Reverse Characteristics

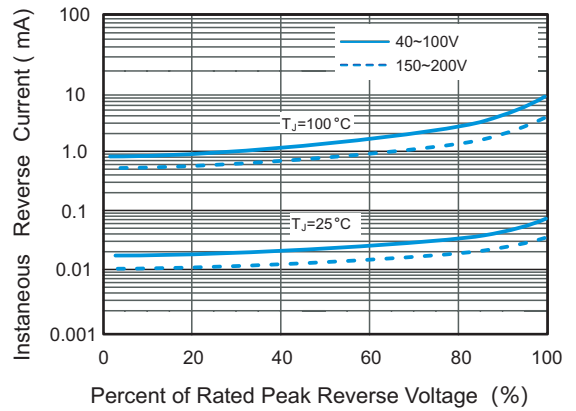


Fig.3 Typical Forward Characteristic(per leg)

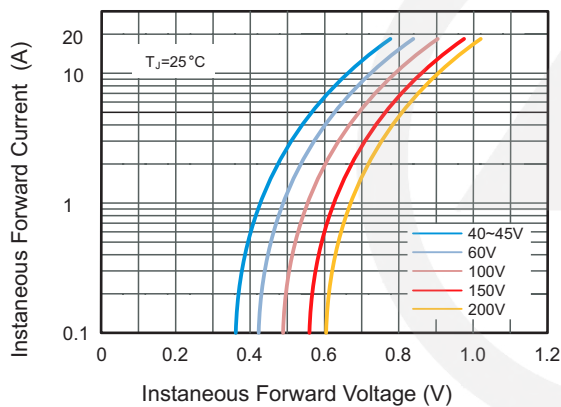


Fig.4 Typical Junction Capacitance

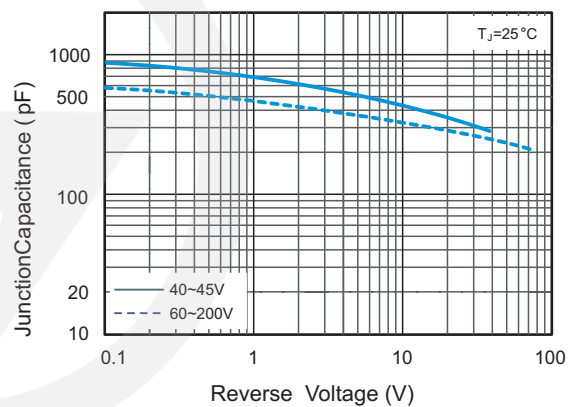


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

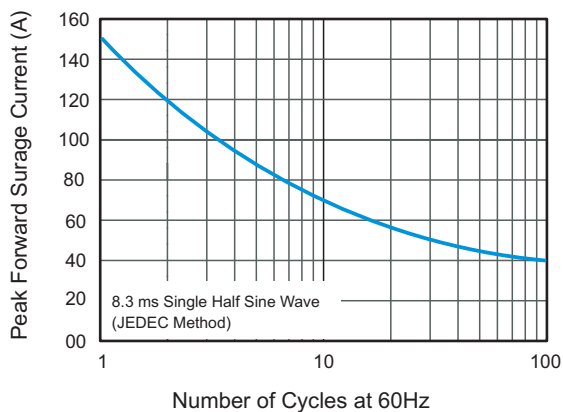
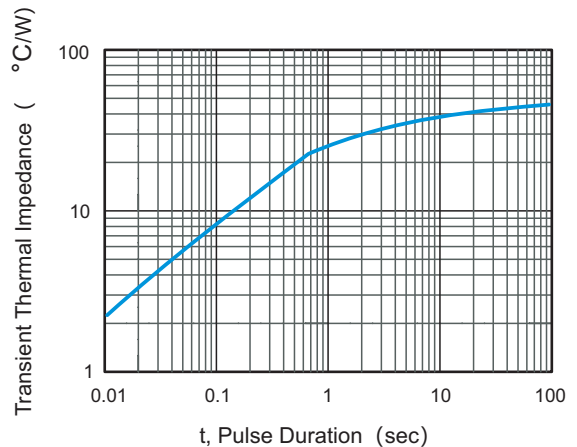
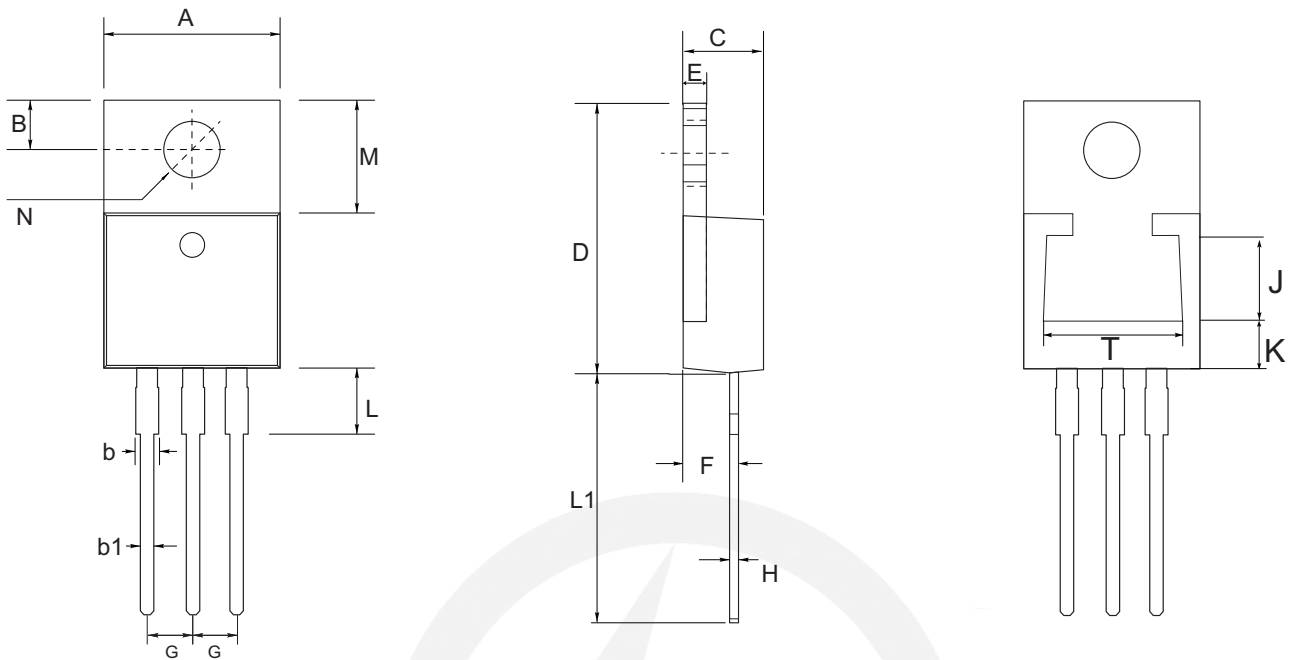


Fig.6- Typical Transient Thermal Impedance



TO-220AB Package Outline


| UNIT | | A | B | b | b1 | C | D | E | F | G | H | L | L1 | M | N | J | T | K |
|------|-----|-------|------|------|------|------|------|------|------|-----------------|------|-----|-------|----------------|----------------|--------------|--------------|--------------|
| mm | max | 10.45 | 2.94 | 1.77 | 0.94 | 4.76 | 16.0 | 1.40 | 2.80 | 2.54 TYPICAL | 0.64 | 4.2 | 14.79 | 6.6 TYPICAL | 3.8 TYPICAL | 4.65 Typ. | 7.70 Typ. | 3.22 Typ. |
| | min | 9.85 | 2.54 | 1.14 | 0.62 | 4.42 | 14.6 | 1.14 | 2.20 | | 0.35 | 2.8 | 13.08 | | | | | |