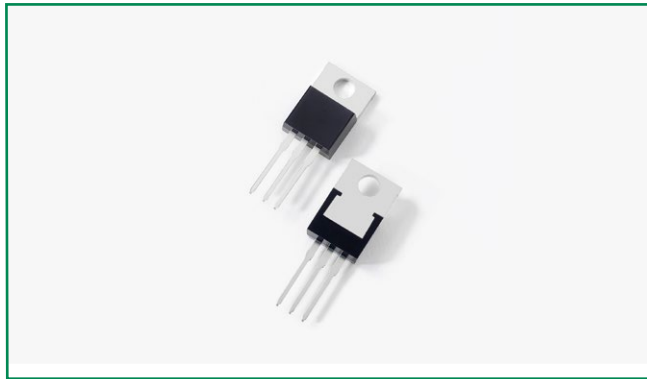
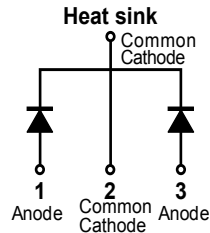


**MBR2060CT**



**Pin out**



**Description**

The Littelfuse MBR2060CT Schottky Barrier Rectifier is designed to comply with the general requirements of commercial applications for high temperature environments with low leakage and low VF parameters.

It is suitable for high frequency switching mode power supply applications with high inductive loads. This Schottky Barrier diode pair can be used as free-wheeling or flyback diodes to suppress abrupt changes across an inductive load.

**Features**

- High junction temperature capability
- Low forward voltage drop
- High frequency operation
- Common cathode configuration in TO-220AB package

**Applications**

- Switching mode power supply
- Free-wheeling diodes (also known as snubber diodes)
- DC/DC converters
- Polarity protection diodes

**Maximum Ratings**

| Parameters   | Symbol      | Test Conditions  | Max                               | Unit |
|--|-------------|--|-----------------------------------|------|
| Peak Inverse Voltage                                       | $V_{RWM}$   | -  | 60                                | V    |
| Average Forward Current                                    | $I_{F(AV)}$ | 50% duty cycle @ $T_C = 100^\circ\text{C}$ , rectangular wave form | 10 (per leg)<br>20 (total device) | A    |
| Max. Peak One Cycle Non-Repetitive Surge Current (per leg) | $I_{FSM}$   | 8.3 ms, half Sine pulse  | 180                               | A    |

**Electrical Characteristics**

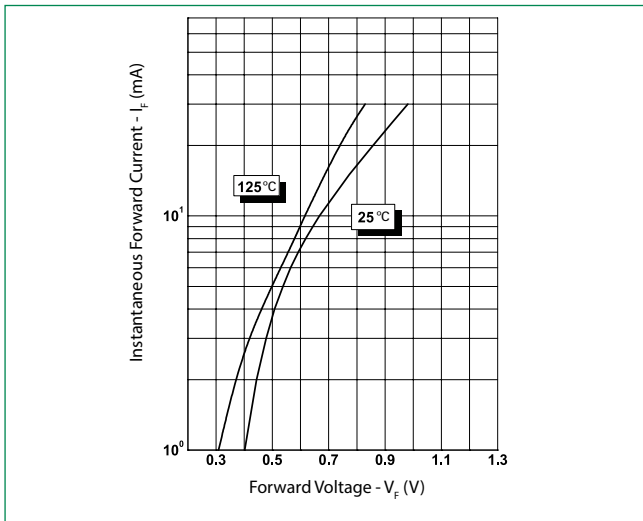
| Parameters                          | Symbol   | Test Conditions   | Max    | Unit             |
|-------------------------------------|----------|---|--------|------------------|
| Forward Voltage Drop                | $V_{F1}$ | @10A, Pulse, $T_J = 25^\circ\text{C}$                             | 0.80   | V                |
|                                     |          | @20A, Pulse, $T_J = 25^\circ\text{C}$                             | 0.95   |                  |
|                                     | $V_{F2}$ | @10A, Pulse, $T_J = 125^\circ\text{C}$                            | 0.70   |                  |
|                                     |          | @20A, Pulse, $T_J = 125^\circ\text{C}$                            | 0.85   |                  |
| Reverse Current (per leg)*          | $I_{R1}$ | @ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$               | 1.0    | mA               |
|                                     | $I_{R2}$ | @ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$              | 150    |                  |
| Junction Capacitance (per leg)      | $C_T$    | @ $V_R = 5\text{V}, T_C = 25^\circ\text{C}, f_{SI} = 1\text{MHz}$ | 400    | pF               |
| Typical Series Inductance (per leg) | $L_S$    | Measured lead to lead 5 mm from package body                      | 8.0    | nH               |
| Voltage Rate of Change              | $dv/dt$  | -   | 10,000 | V/ $\mu\text{s}$ |

\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle < 2%

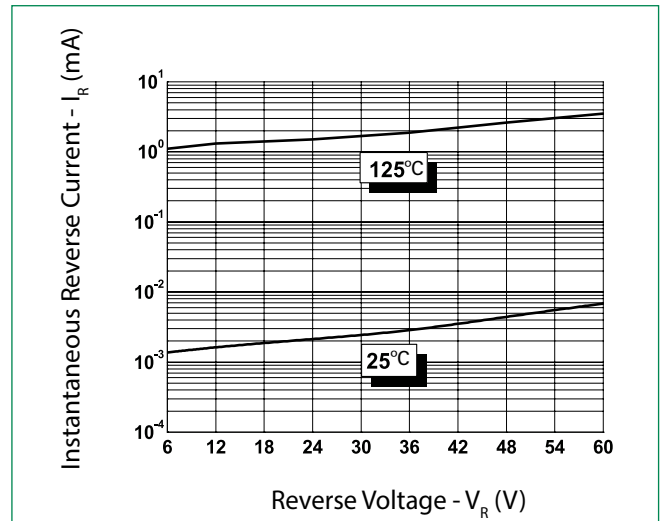
**Thermal-Mechanical Specifications**

| Parameters                                   | Symbol          | Test Conditions                      | Max         | Unit |
|--|-----------------|--------------------------------------|-------------|------|
| Junction Temperature                         | $T_J$           | -                                    | -55 to +150 | °C   |
| Storage Temperature                          | $T_{stg}$       | -                                    | -55 to +150 | °C   |
| Maximum Thermal Resistance Junction to Case  | $R_{\theta JC}$ | DC operation                         | 2.3         | °C/W |
| Typical Thermal Resistance Case to Heat Sink | $R_{\theta CS}$ | Mounting surface, smooth and greased | 0.5         | °C/W |
| Approximate Weight                           | wt              | -                                    | 2           | g    |
| Case Style                                   | TO-220AB        |                                      |             |      |

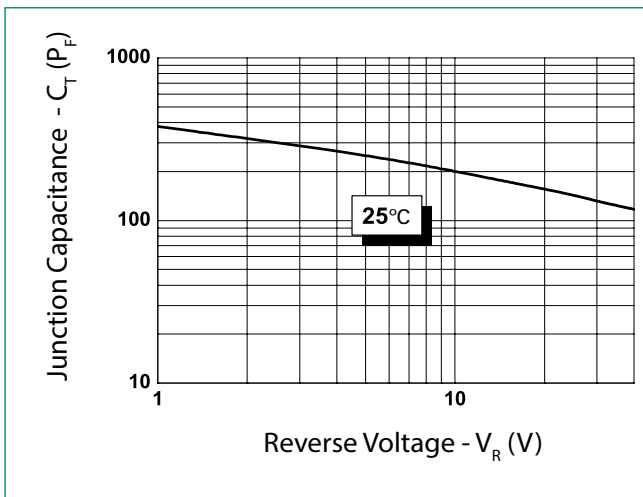
**Figure 1: Typical Forward Characteristics**



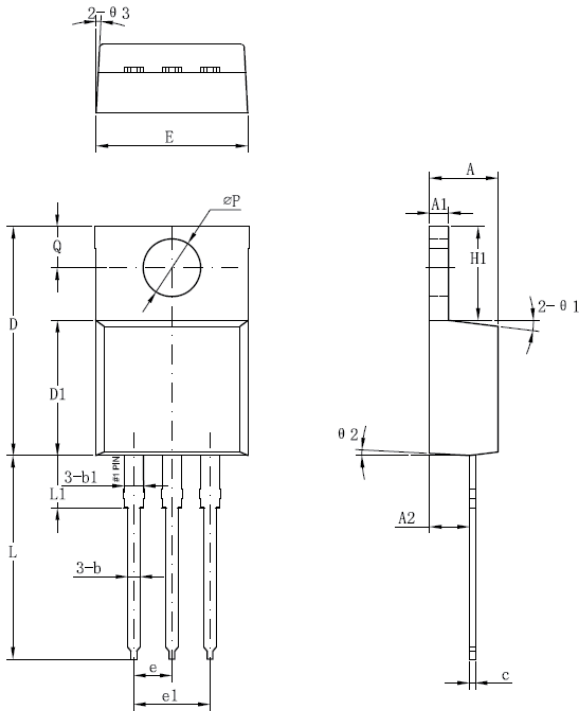
**Figure 2: Typical Reverse Characteristics**



**Figure 3: Typical Junction Capacitance**



**Dimensions- TO-220AB**



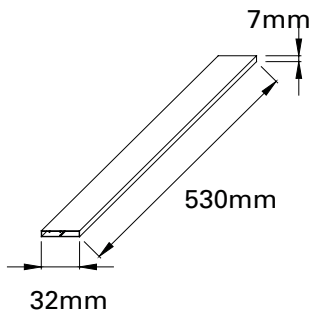
| Symbol | Millimeters |       |
|--------|-------------|-------|
|        | Min         | Max   |
| A      | 3.56        | 4.83  |
| A1     | 0.51        | 1.40  |
| A2     | 2.03        | 2.92  |
| b      | 0.38        | 1.02  |
| b1     | 1.14        | 1.78  |
| c      | 0.31*       | 0.61  |
| D      | 14.22       | 16.51 |
| D1     | 8.38        | 9.15* |
| E      | 9.65        | 10.67 |
| e      | 2.54        | -     |
| e1     | 4.98*       | -     |
| H1     | 5.84        | 6.86  |
| L      | 12.70       | 14.73 |
| L1     | -           | 6.35  |
| øP     | 3.53        | 4.09  |
| Q      | 2.54        | 3.43  |

Footnote \*: The spec. does not comply with JEDEC spec.

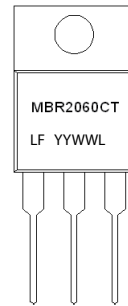
**Packing Options**

| Part Number | Marking   | Packing Mode | M.O.O. |
|-------------|-----------|--------------|--------|
| MBR2060CT   | MBR2060CT | 50pcs /Tube  | 1000   |

**Tube Specification**



**Part Numbering and Marking System**



- MBR =Component Type
- B =Package Type
- 20 =Forward Current (20A)
- 60 =Reverse Voltage (60V)
- CT =Configuration
- LF =Littelfuse
- YY =Year
- WW =Week
- L =Lot Number