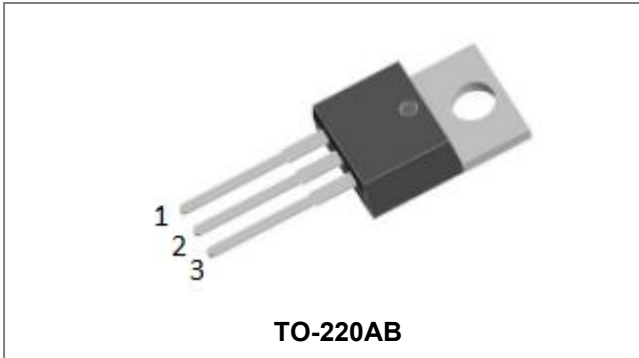


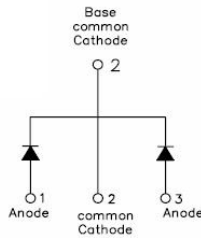
## MBR60150CT SCHOTTKY RECTIFIER



### Features

- 175 °C T<sub>J</sub> operation
- Center tap configuration
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced
- mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

### Maximum Ratings:

| Characteristics                                      | Symbol             | Condition  | Max.                          | Units |
|--|--------------------|--|-------------------------------|-------|
| Peak Repetitive Reverse Voltage                      | V <sub>RRM</sub>   | -  | 150                           | V     |
| Working Peak Reverse Voltage                         | V <sub>RWM</sub>   |  |                               |       |
| DC Blocking Voltage                                  | V <sub>R</sub>     |  |                               |       |
| Average Rectified Forward Current                    | I <sub>F(AV)</sub> | 50% duty cycle @T <sub>c</sub> =150°C, rectangular wave form | 30(Per Leg)<br>60(Per Device) | A     |
| Peak One Cycle Non-Repetitive Surge Current(Per Leg) | I <sub>FSM</sub>   | 8.3ms, Half Sine pulse                                       | 270                           | A     |

### Electrical Characteristics:

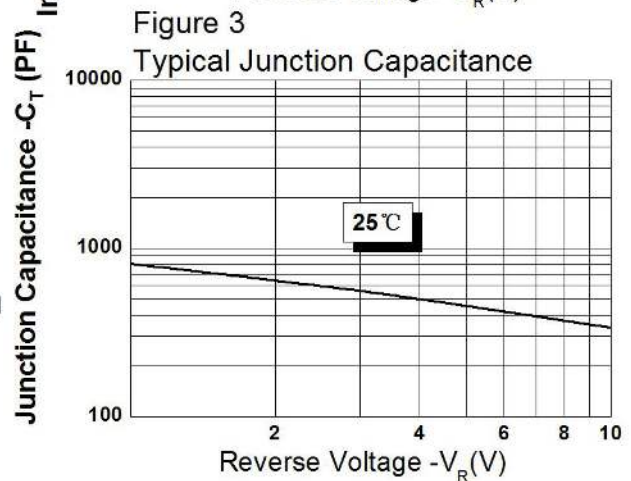
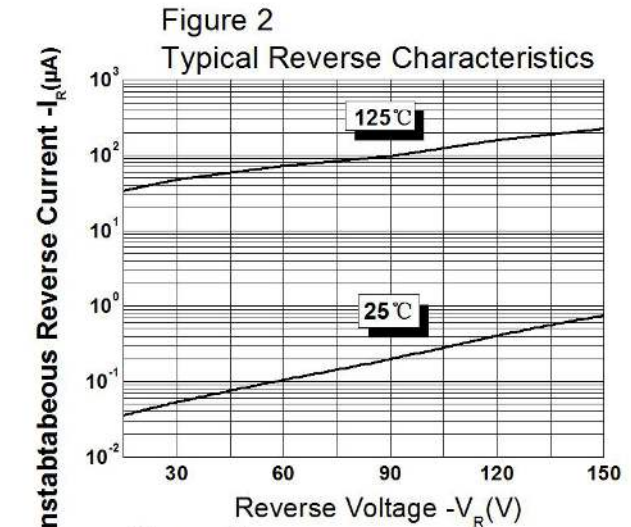
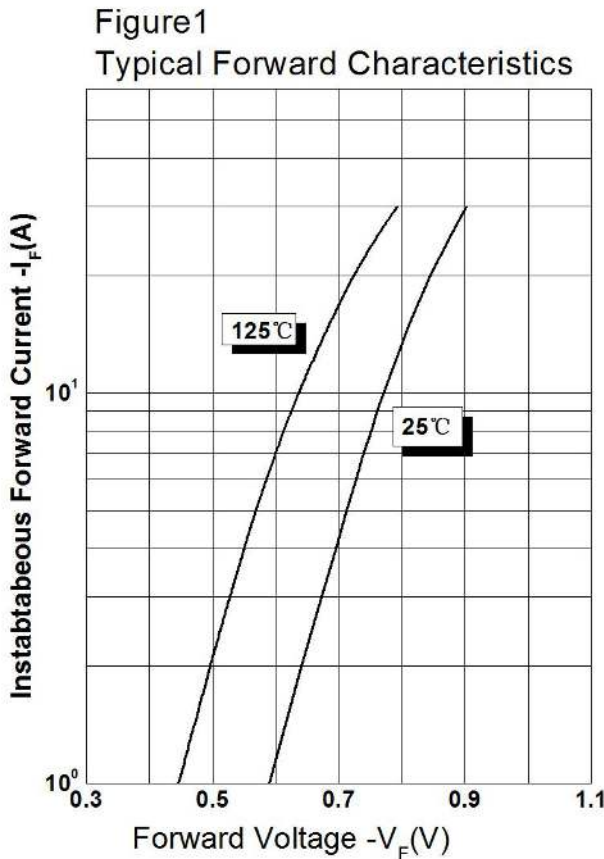
| Characteristics                | Symbol          | Condition  | Typ.   | Max. | Units |
|--------------------------------|-----------------|--|--------|------|-------|
| Forward Voltage Drop(Per Leg)* | V <sub>F1</sub> | @ 30A, Pulse, T <sub>J</sub> = 25°C                                  | 0.90   | 0.94 | V     |
|                                | V <sub>F2</sub> | @ 30A, Pulse, T <sub>J</sub> = 125°C                                 | 0.79   | 0.84 | V     |
| Reverse Current(Per Leg)*      | I <sub>R1</sub> | @V <sub>R</sub> = rated V <sub>R</sub><br>T <sub>J</sub> = 25°C      | 0.0008 | 1.0  | mA    |
|                                | I <sub>R2</sub> | @V <sub>R</sub> = rated V <sub>R</sub><br>T <sub>J</sub> = 125°C     | 0.3    | 10   | mA    |
| Junction Capacitance(Per Leg)  | C <sub>T</sub>  | @V <sub>R</sub> = 5V, T <sub>c</sub> = 25°C, f <sub>sig</sub> = 1MHz | 450    | 760  | pF    |

\* Pulse width < 300 μs, duty cycle < 2%

**Thermal-Mechanical Specifications:**

| Characteristics                             | Symbol               | Condition    | Specification                   | Units                       |
|---|----------------------|--------------|---------------------------------|-----------------------------|
| Junction Temperature                        | $T_J$                | -            | -55 to +175                     | $^{\circ}\text{C}$          |
| Storage Temperature                         | $T_{\text{stg}}$     | -            | -55 to +175                     | $^{\circ}\text{C}$          |
| Typical Thermal Resistance Junction to Case | $R_{\text{th(j-c)}}$ | DC operation | 1.0(per leg)<br>0.7(per device) | $^{\circ}\text{C}/\text{W}$ |
| Approximate Weight                          | wt                   | -            | 2                               | g                           |
| Case Style                                  |                      | TO-220AB     |                                 |                             |

**Ratings and Characteristics Curves**

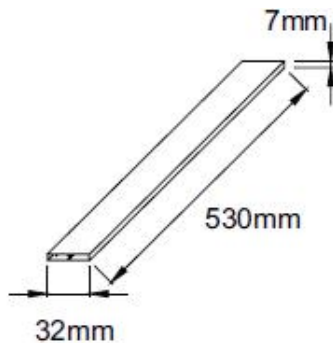


**Mechanical Dimensions TO-220AB**

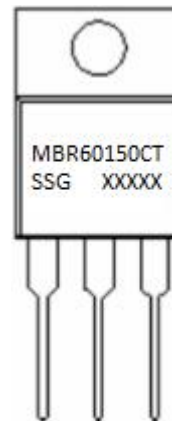


| Symbol | Dimensions in millimeters |         |       |
|--------|---------------------------|---------|-------|
|        | Min                       | Typical | Max   |
| A      | 4.42                      | 4.57    | 4.72  |
| A1     | 1.17                      | 1.27    | 1.37  |
| A2     | 2.52                      | 2.69    | 2.89  |
| b      | 0.71                      | 0.81    | 0.96  |
| b1     | 1.17                      | 1.27    | 1.37  |
| c      | 0.31                      | 0.38    | 0.61  |
| D      | 14.94                     | 15.24   | 15.54 |
| D1     | 8.85                      | 9.00    | 9.15  |
| E      | 10.01                     | 10.16   | 10.31 |
| e      |                           | 2.54    |       |
| e1     | 4.98                      | 5.06    | 5.18  |
| H1     | 6.04                      | 6.24    | 6.44  |
| L      | 12.7                      | 13.56   | 13.80 |
| L1     | 3.56                      | 3.5     | 3.96  |
| ΦP     | 3.74                      | 3.84    | 4.04  |
| Q      | 2.54                      | 2.74    | 2.94  |
| Ø1     |                           | 7°      |       |
| Ø2     |                           | 3°      |       |
| Ø3     |                           | 4°      |       |

**Tube Specification**



**Marking Diagram**



Where XXXXX is YYWWL

MBR = Device Type  
60 = Forward Current (60A)  
150 = Reverse Voltage(150V)  
CT = Configuration  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

**Ordering Information**

| Device     | Package            | Shipping     |
|------------|--------------------|--------------|
| MBR60150CT | TO-220AB (Pb-Free) | 50 pcs/ tube |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging Specification.

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