



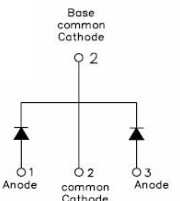
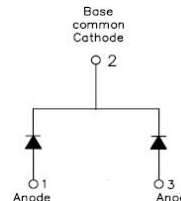
MBR1545CT/MBR1545CT-1 SCHOTTKY RECTIFIER

Features

- 150 °C T_J 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
- Terminals finish: Tin Lead-free plated
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Applications

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

| MBR1545CT | MBR1545CT-1 |
|---|---|
|  |  |
|  |  |
| TO-220AB | TO-262 |

Maximum Ratings@T_c=25°C unless otherwise specified

| Characteristics | Symbol | Condition | Max. | Units |
|--|--------------------|--|----------------|-------|
| Peak Repetitive Reverse Voltage | V _{RRM} | - | 45 | V |
| Working Peak Reverse Voltage | V _{RWM} | | | |
| DC Blocking Voltage | V _R | | | |
| Average Rectified Forward Current | I _{F(AV)} | T _c =130°C, I _n DC | 7.5(Per Leg) | A |
| | | | 15(Per Device) | |
| Peak One Cycle Non-Repetitive Surge Current(Per Leg) | I _{FSM} | 8.3ms, Half Sine pulse | 150 | A |

Electrical Characteristics:

| Characteristics | Symbol | Condition | Typ. | Max. | Units |
|--|-----------------|---|------|--------|-------|
| Forward Voltage Drop (Per Leg)* | V _{F1} | @ 15A, Pulse, T _J = 25 °C | 0.70 | 0.84 | V |
| | V _{F2} | @ 15A, Pulse, T _J = 125 °C | 0.67 | 0.72 | V |
| Reverse Current (Per Leg)* | I _{R1} | @V _R = rated V _R T _J = 25 °C | 0.02 | 1.0 | mA |
| | I _{R2} | @V _R = rated V _R T _J = 125 °C | 12 | 15 | mA |
| Junction Capacitance(Per Leg) | C _T | @V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz | 305 | 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/μs |

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

Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|---|------------------|--------------|---------------|-------|
| Junction Temperature | T _J | - | -55 to +150 | °C |
| Storage Temperature | T _{stg} | - | -55 to +150 | °C |
| Typical Thermal Resistance Junction to Case(Per Leg) | R _{θJC} | DC operation | 1.5 | °C/W |
| Case Style | TO-220AB TO-262 | | | |

Ratings and Characteristics Curves

Figure1 Typical Forward Characteristics

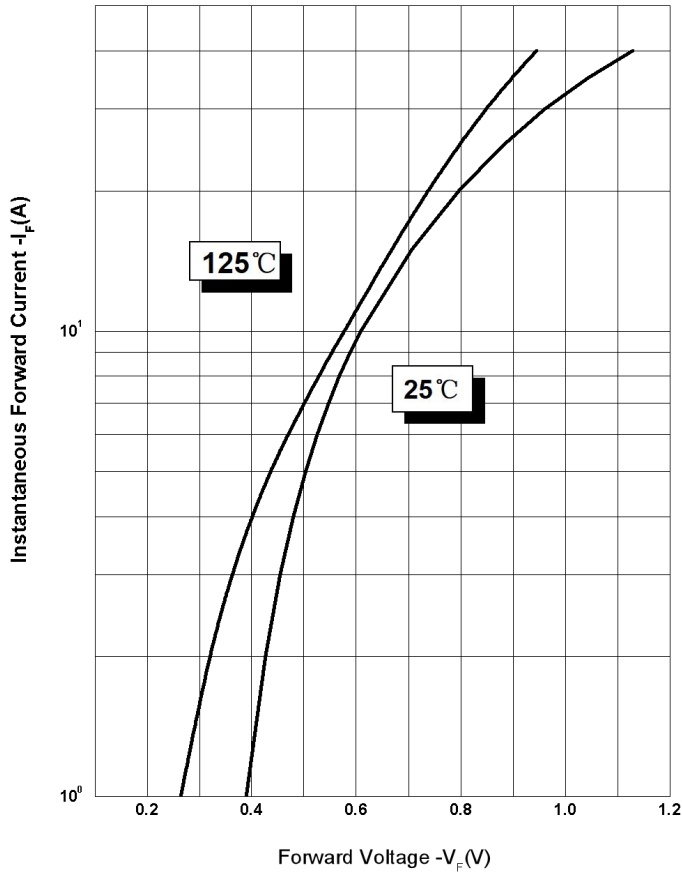


Figure 2 Typical Reverse Characteristics

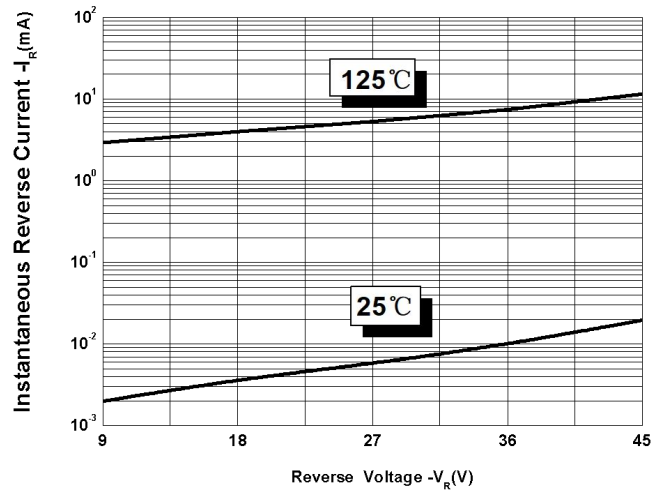
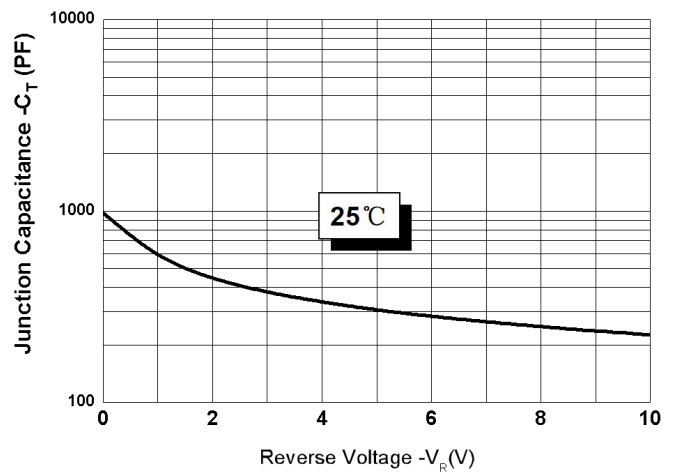


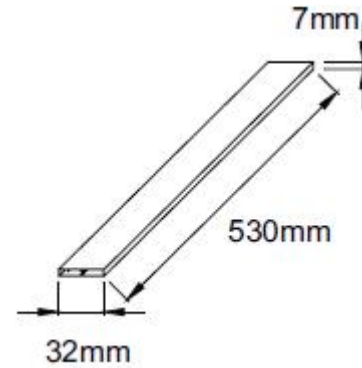
Figure 3 Typical Junction Capacitance



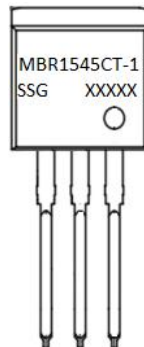
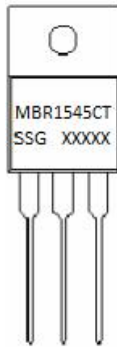
Tube Specification

| Device | Package | Weight | Shipping |
|-------------|----------|--------|--------------|
| MBR1545CT | TO-220AB | 1.8g | 50pcs / tube |
| MBR1545CT-1 | TO-262 | 1.85g | 50pcs / tube |

Tube Specification(TO-220AB/TO-262)



Marking Diagram

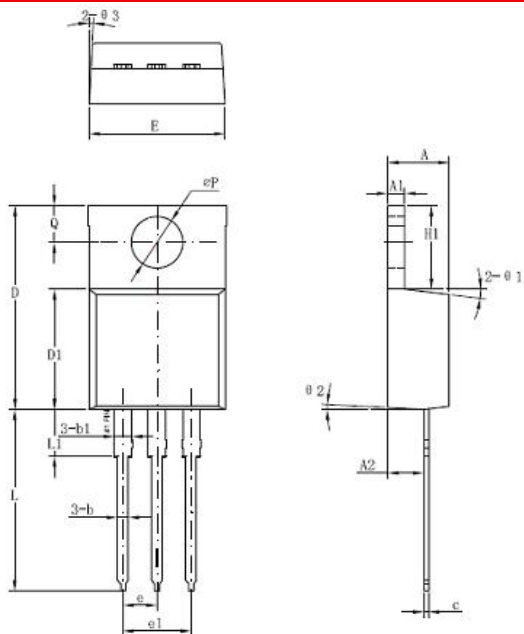


Where XXXXX is YYWWL

MBR = Device Type
15 = Forward Current (15A)
45 = Reverse Voltage (45V)
CT -1 = Configuration
SSG = SSG
YY = Year
WW = Week
L = Lot Number

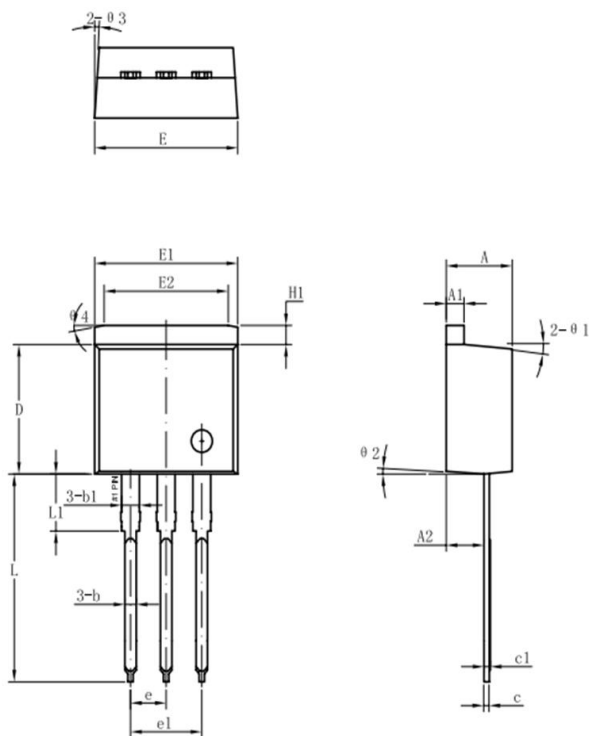
Cautions: Molding resin
Epoxy resin UL:94V-0

Mechanical Dimensions TO-220AB



| Symbol | Dimensions in millimeters | | |
|--------|---------------------------|---------|-------|
| | Min | Typical | Max |
| A | 3.56 | - | 4.83 |
| A1 | 0.51 | - | 1.4 |
| 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 | - | 9.42 |
| E | 9.65 | - | 10.67 |
| e | - | 2.54 | - |
| e1 | - | 5.08 | - |
| H1 | 5.84 | - | 6.86 |
| L | 12.7 | - | 14.73 |
| L1 | - | - | 6.35 |
| ΦP | - | 3.56 | - |
| Q | 2.54 | - | 3.43 |

Mechanical Dimensions TO-262



| Symbol | Millimeters | | |
|--------|-------------|---------|-------|
| | Min. | Typical | Max. |
| A | 4.55 | 4.70 | 4.85 |
| A1 | 1.17 | 1.27 | 1.37 |
| A2 | 2.59 | 2.69 | 2.89 |
| b | 0.71 | 0.81 | 0.96 |
| b1 | | 1.27 | |
| c | 0.36 | 0.38 | 0.61 |
| D | 8.55 | 8.70 | 8.85 |
| E | 10.01 | 10.16 | 10.31 |
| E1 | 9.88 | 10.08 | 10.28 |
| e | | 2.54 | |
| e1 | | 5.08 | |
| H1 | 1.17 | 1.27 | 1.37 |
| L | 13.00 | 13.86 | 14.08 |
| L1 | | 3.8 | |
| | 0 | - | 8° |
| Θ1 | | 5° | |
| Θ2 | | 4° | |
| Θ3 | | 4° | |
| Θ4 | | 10° | |

Technical Data
Data Sheet N0736, Rev. B



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