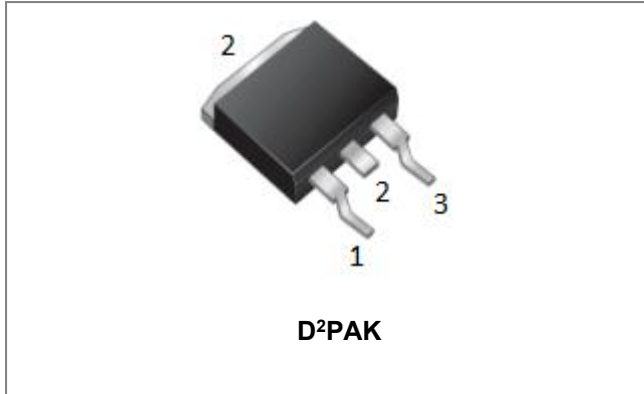


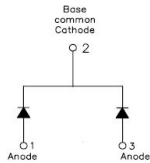
MBRB1545CT SCHOTTKY RECTIFIER



Features

- 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

Circuit Diagram



Applications

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

Maximum Ratings@T_c=25°C unless otherwise specified

| Characteristics | Symbol | Condition | Max. | Units |
|--|--|------------------------------|--------------------------------|-------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | - | 45 | V |
| Average Rectified Forward Current | I _{F(AV)} | T _c =131°C, In DC | 7.5(Per Leg) 15(Per Device) | A |
| 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 | 0.60 | 0.84 | V |
| | V _{F2} | @ 15A, Pulse, T _J = 125 °C | 0.57 | 0.72 | V |
| Reverse Current (Per Leg) * | I _{R1} | @V _R = rated V _R , T _J = 25 °C | 0.03 | 1.0 | mA |
| | I _{R2} | @V _R = rated V _R , T _J = 125 °C | 15 | 25 | mA |
| Junction Capacitance(Per Leg) | C _T | @V _R = 5V, T _c = 25 °C, f _{sig} = 1MHz | 300 | 400 | pF |
| 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%

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|--|--------------------|--|---|---------------|
| Max. Junction Temperature at reduced reverse voltage at reduced reverse voltage in DC forward mode | T_J | $V_R \leq 80\%V_{RRM}$ $V_R \leq 50\%V_{RRM}$ | -55 to +150 -55 to +180 -55 to +200 | $^{\circ}C$ |
| Storage Temperature | T_{stg} | - | -55 to +150 | $^{\circ}C$ |
| Typical Thermal Resistance Junction to Case(Per Leg) | $R_{\theta JC}$ | DC operation | 1.5 | $^{\circ}C/W$ |
| Approximate Weight | wt | - | 1.85 | g |
| Case Style | D ² PAK | | | |

Ratings and Characteristics Curves

Figure1 Typical Forward Characteristics

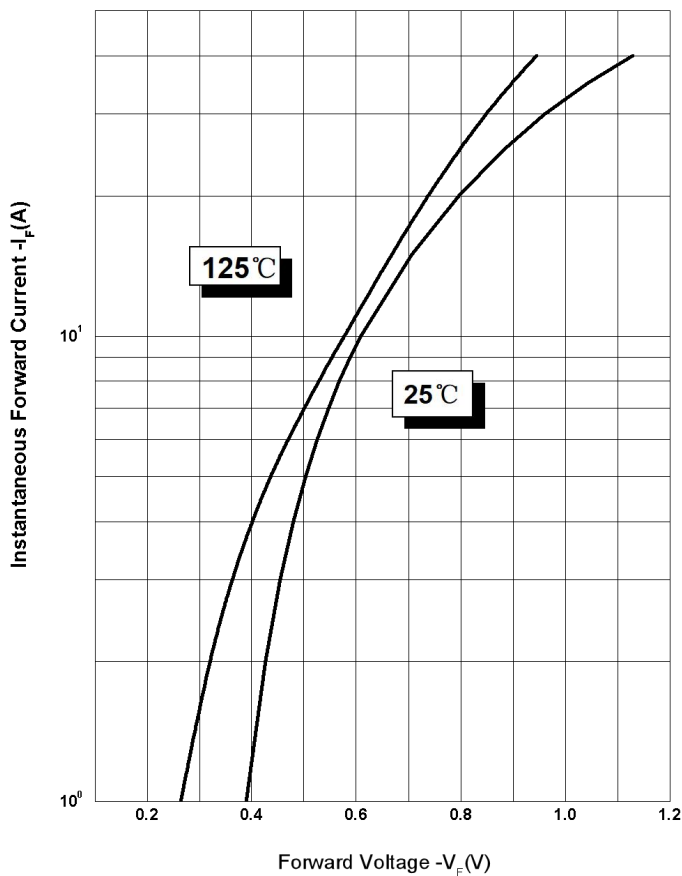


Figure 2 Typical Reverse Characteristics

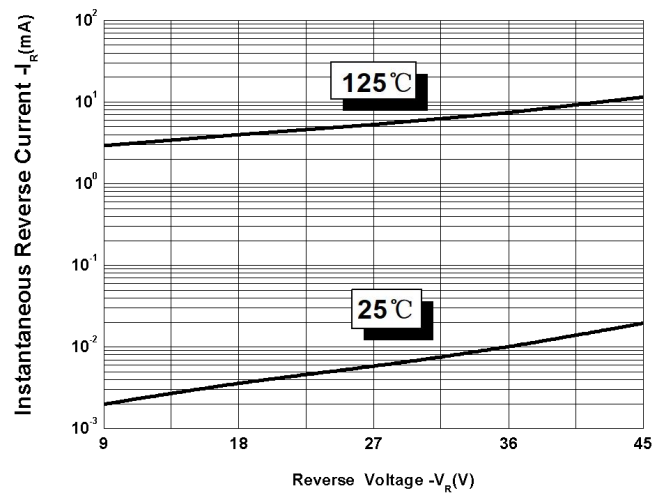
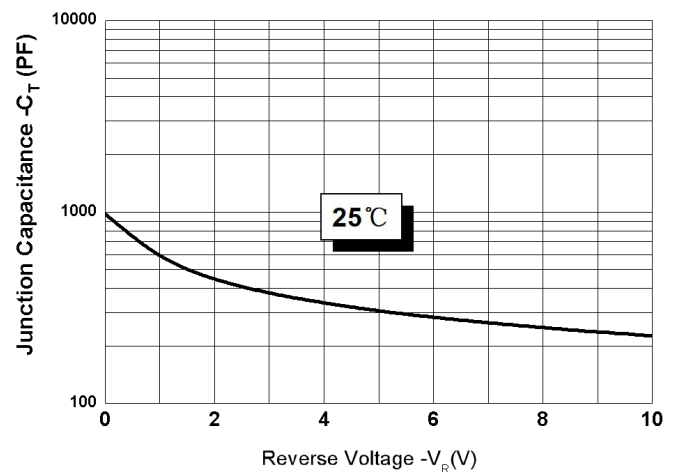
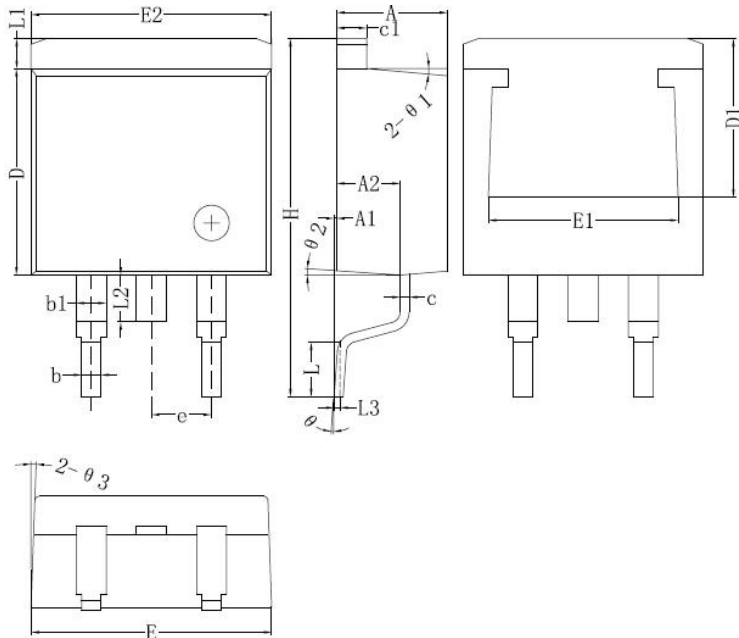


Figure 3 Typical Junction Capacitance



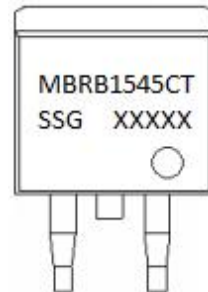
Mechanical Dimensions D²PAK


| Symbol | Dimensions in millimeters | |
|--------|---------------------------|-------|
| | Min. | Max. |
| A | 4.06 | 4.83 |
| A1 | 0 | 0.26 |
| b | 0.51 | 0.99 |
| b1 | 1.14 | 1.78 |
| c | 0.31 | 0.74 |
| c1 | 1.14 | 1.65 |
| D | 8.38 | 9.65 |
| D1 | 6.4 | |
| E1 | 6.22 | |
| E2 | 9.65 | 10.67 |
| e | 2.54BSC | |
| H | 14.6 | 15.88 |
| L | 1.78 | 2.8 |
| L1 | - | 1.68 |
| L2 | - | 2.2 |
| L3 | 0.255BSC | |
| Θ | 0 | 8° |

Ordering Information

| Device | Package | Shipping |
|--------------|--------------------|---------------|
| MBRB1545CT | D ² PAK | 800pcs / reel |
| MBRB1545CTTR | D ² PAK | 800pcs / reel |

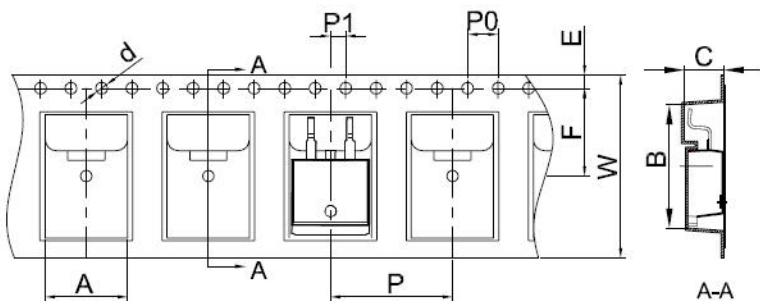
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram


Where XXXXX is YYWWL

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

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

Carrier Tape Specification D²PAK


| SYMBOL | Millimeters | |
|--------|-------------|-------|
| | Min. | Max. |
| A | 10.70 | 10.90 |
| B | 16.03 | 16.23 |
| C | 5.11 | 5.31 |
| d | 1.45 | 1.65 |
| E | 1.65 | 1.85 |
| F | 11.40 | 11.60 |
| P0 | 3.90 | 4.10 |
| P | 15.90 | 16.10 |
| P1 | 1.90 | 2.10 |
| W | 23.90 | 24.30 |

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