

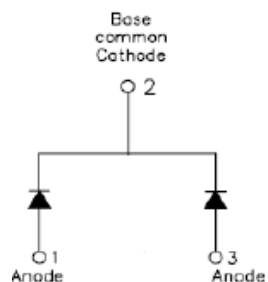
MBRD5200CT SCHOTTKY RECTIFIER

Applications:

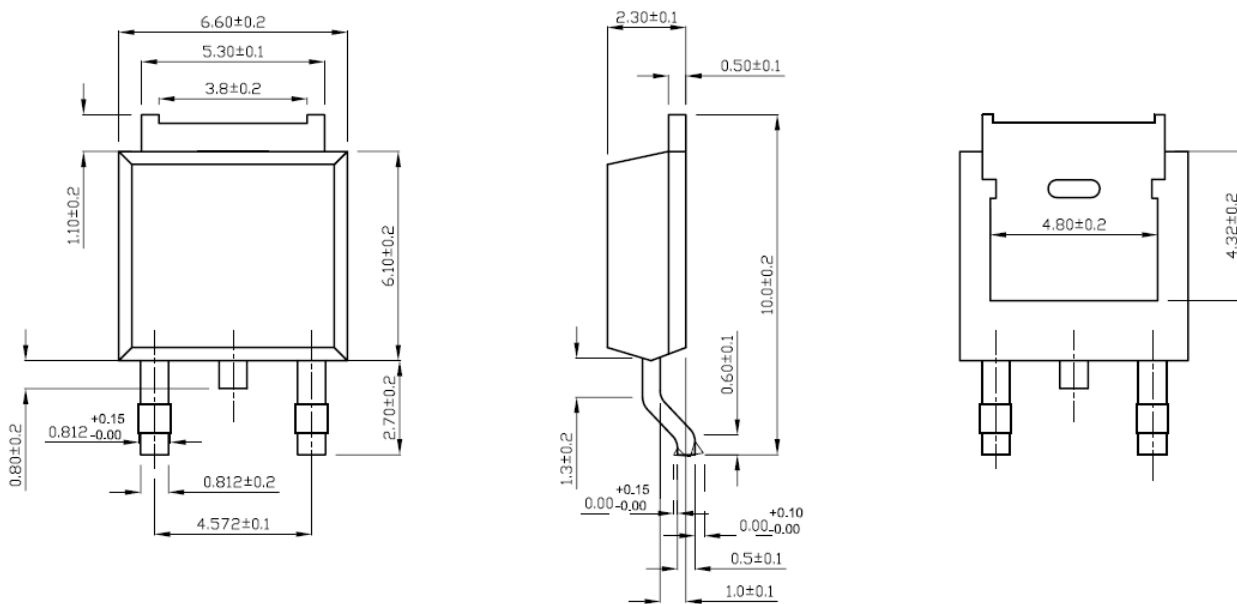
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

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
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



Mechanical Dimensions: In mm:



DPAK

Marking Diagram:



Where XXXXX is YYWWL

MBR = Device Type
D = Package type
5 = Forward Current (5A)
200 = Reverse Voltage (200V)
CT = Configuration
SSG = SSG
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

| Device | Package | Shipping |
|------------|-------------------|----------------|
| MBRD5200CT | DPAK (Pb-Free) | 2500pcs / reel |

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

Maximum Ratings:

| Characteristics | Symbol | Condition | Max. | Units |
|---|-------------|---|------|-------|
| Peak Inverse Voltage | V_{RWM} | - | 200 | V |
| Average Forward Current | $I_{F(AV)}$ | 50% duty cycle @ $T_C=105^\circ\text{C}$, rectangular wave form | 5 | A |
| Peak One Cycle Non-Repetitive Surge Current (per leg) | I_{FSM} | 8.3 ms, half Sine pulse | 60 | A |

Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|--|----------|--|--------------|------------------|
| Forward Voltage Drop(per leg)* | V_{F1} | @ 2.5 A, Pulse, $T_C = 25\text{ }^\circ\text{C}$ @ 5 A, Pulse, $T_C = 25\text{ }^\circ\text{C}$ | 0.85 0.95 | V |
| | V_{F2} | @ 2.5 A, Pulse, $T_C = 125\text{ }^\circ\text{C}$ @ 5 A, Pulse, $T_C = 125\text{ }^\circ\text{C}$ | 0.75 0.85 | V |
| Reverse Current at DC Condition(per leg) | I_{R1} | @ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$ | 1.0 | mA |
| | I_{R2} | @ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$ | 7.0 | mA |
| Junction Capacitance(per leg) | C_T | @ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ | 150 | pF |
| 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 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | - | -55 to +150 | $^\circ\text{C}$ |
| Maximum Thermal Resistance Junction to Case | $R_{\theta JC}$ | DC operation | 6 | $^\circ\text{C/W}$ |
| Approximate Weight | wt | - | 0.39 | g |
| Case Style | DPAK | | | |

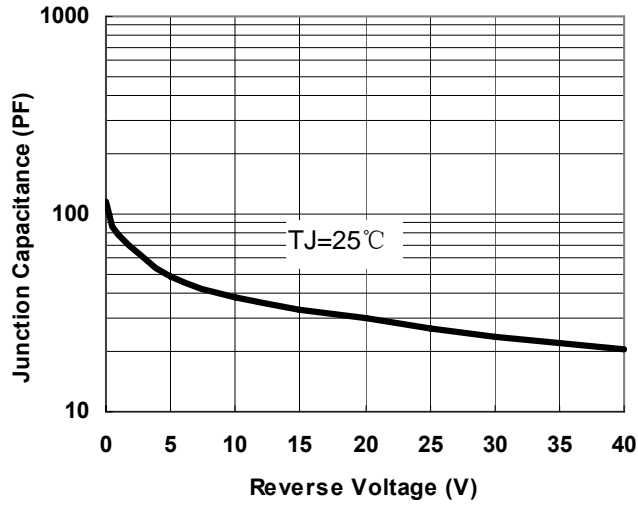


Fig.1-Typical Junction Capacitance

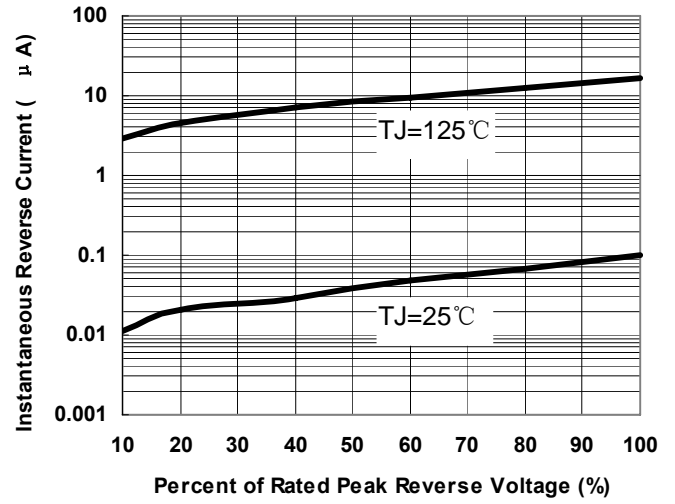


Fig.2-Typical Reverse Characteristics

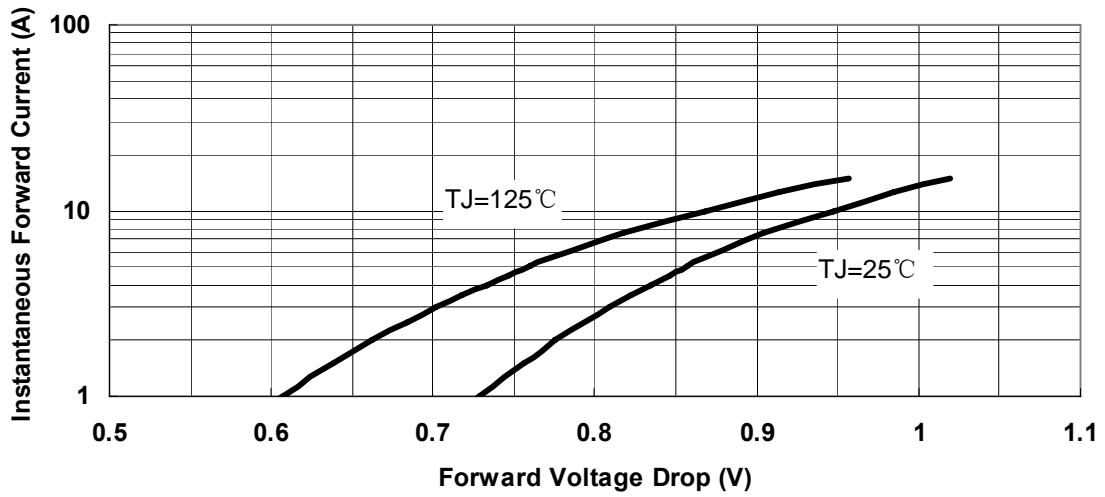


Fig.3-Typical Instantaneous Forward Voltage Characteristics

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