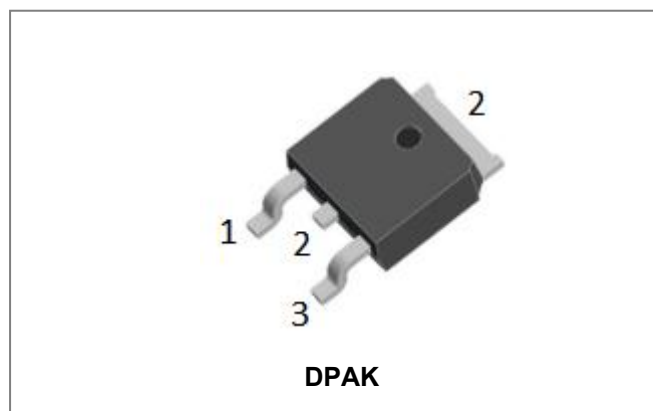




**EN:** This Datasheet/Document is presented by the manufacturer.

Please visit our website for pricing and availability at [www.hestore.hu](http://www.hestore.hu).

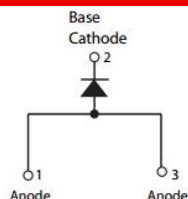
## MBRD560 THRU MBRD5200 SCHOTTKY RECTIFIER



### Features

- 150°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
- “-A” is an AEC-Q101 qualified device
- 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

- Disk drives
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Battery charging

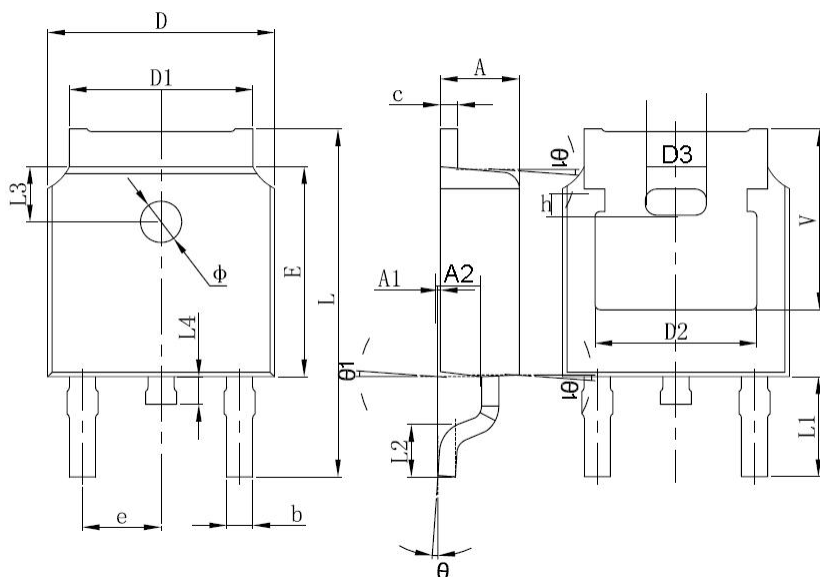
### Maximum Ratings and Electrical characteristics @T<sub>A</sub> = 25°C unless otherwise specified

| Characteristics                                                                        | Symbol                                                 | MBRD<br>560 | MBRD<br>580 | MBRD<br>5100 | MBRD<br>5150 | MBRD<br>5200 | Units |
|----------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|-------------|--------------|--------------|--------------|-------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 60          | 80          | 100          | 150          | 200          | V     |
| Max. Average Forward Current                                                           | I <sub>F(AV)</sub>                                     | 5           |             |              |              |              | A     |
| Max. Peak One Cycle Non-Repetitive Surge Current(8.3ms Single half sine-wave)          | I <sub>FSM</sub>                                       | 120         |             |              |              |              | A     |
| Max. Forward Voltage Drop @5A, 25°C                                                    | V <sub>F</sub>                                         | 0.65        | 0.75        | 0.85         | 0.90         | 0.92         | V     |
| Max. Reverse Current @VRWM, 25°C                                                       | I <sub>R</sub>                                         | 1           |             |              |              |              | mA    |
| Max. Junction Capacitance(Note1)                                                       | C <sub>T</sub>                                         | 300         |             |              | 150          |              | pF    |
| Max. Junction Temperature                                                              | T <sub>J</sub>                                         | -55 to +150 |             |              |              |              | °C    |
| Max. Storage Temperature                                                               | T <sub>stg</sub>                                       | -55 to +150 |             |              |              |              | °C    |
| Typical Thermal Resistance Junction to Case (DC operation)                             | R <sub>θJC</sub>                                       | 6.0         |             |              |              |              | °C/W  |
| Approximate Weight                                                                     | wt                                                     | 0.39        |             |              |              |              | g     |
| Case Style                                                                             | DPAK                                                   |             |             |              |              |              |       |

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

Note1: Measured at 1.0 MHz and applied reverse voltage of 5.0V D.C.

## Mechanical Dimensions DPAK



| SYMBOL | Millimeters |       | Inches     |       |
|--------|-------------|-------|------------|-------|
|        | Min.        | Max.  | Min.       | Max.  |
| A      | 2.20        | 2.40  | 0.087      | 0.094 |
| A1     | 0.00        | 0.127 | 0.000      | 0.005 |
| b      | 0.66        | 0.86  | 0.026      | 0.034 |
| c      | 0.46        | 0.60  | 0.018      | 0.024 |
| D      | 6.50        | 6.70  | 0.256      | 0.264 |
| D1     | 5.13        | 5.46  | 0.202      | 0.215 |
| D2     | 4.83 REF.   |       | 0.190 REF. |       |
| E      | 6.00        | 6.20  | 0.236      | 0.244 |
| e      | 2.186       | 2.386 | 0.086      | 0.094 |
| L      | 9.70        | 10.40 | 0.381      | 0.409 |
| L1     | 2.90 REF.   |       | 0.144 REF. |       |
| L2     | 1.40        | 1.70  | 0.055      | 0.067 |
| L3     | 1.60 REF.   |       | 0.063 REF. |       |
| L4     | 0.60        | 1.00  | 0.024      | 0.039 |
| Φ      | 1.10        | 1.30  | 0.043      | 0.051 |
| θ      | 0°          | 8°    | 0°         | 8°    |
| h      | 0.00        | 0.30  | 0.000      | 0.012 |
| V      | 5.35 REF.   |       | 0.211 REF. |       |

## Ordering Information

| Device                          | Package           | Shipping       |
|---------------------------------|-------------------|----------------|
| MBRD560<br>THRU<br>MBRD5200     | DPAK<br>(Pb-Free) | 2500pcs / reel |
| MBRD560TR<br>THRU<br>MBRD5200TR | DPAK<br>(Pb-Free) | 2500pcs / reel |

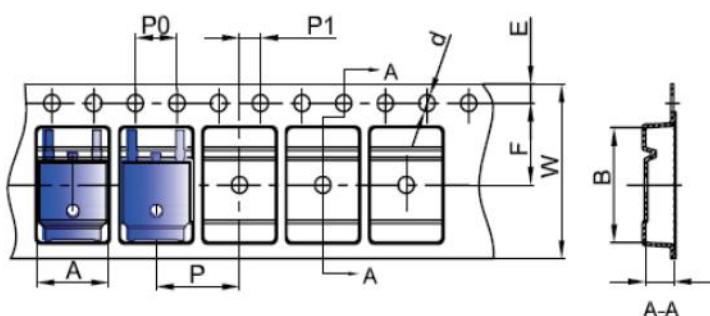
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram



First row: Part Number (MBRD560, MBRD580, MBRD5100, MBRD5150, MBRD5200)  
Second row: SSG YYWWL  
YY is the manufacture year,  
WW is the manufacture week code,

## Carrier Tape Specification DPAK



| SYMBOL | Millimeters |       |
|--------|-------------|-------|
|        | Min.        | Max.  |
| A      | 6.80        | 7.00  |
| B      | 10.40       | 10.60 |
| C      | 2.60        | 2.80  |
| d      | Φ1.45       | Φ1.65 |
| E      | 1.65        | 1.85  |
| F      | 7.40        | 7.60  |
| P0     | 3.90        | 4.10  |
| P      | 7.90        | 8.10  |
| P1     | 1.90        | 2.10  |
| W      | 15.90       | 16.30 |

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