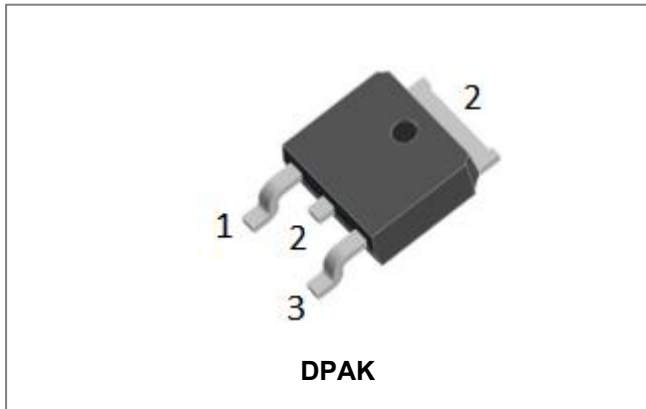




# THE DATASHEET OF MBRD5150



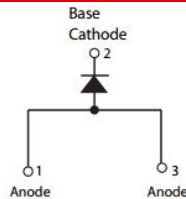
## MBRD560 THRU MBRD5200 SCHOTTKY RECTIFIER



### 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

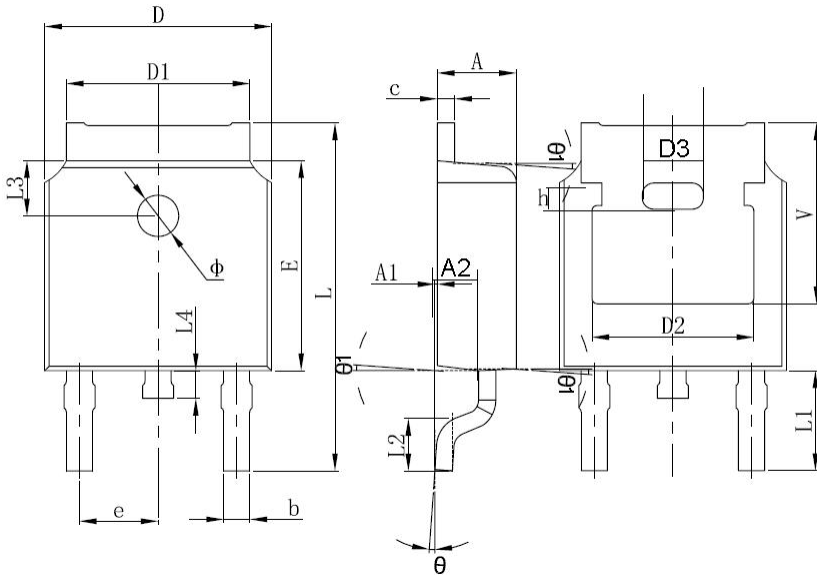
Characteristics	Symbol	MBRD 560	MBRD 580	MBRD 5100	MBRD 5150	MBRD 5200	Units
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>						V
Working Peak Reverse Voltage	V <sub>RWM</sub>	60	80	100	150	200	
DC Blocking Voltage	V <sub>R</sub>						
Max. Average Forward Current	I <sub>F(AV)</sub>	5					A
Max. Peak 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 @V <sub>RWM</sub> , 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.

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

**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 THRU MBRD5200	DPAK (Pb-Free)	2500pcs / reel
MBRD560TR THRU MBRD5200TR	DPAK (Pb-Free)	2500pcs / reel

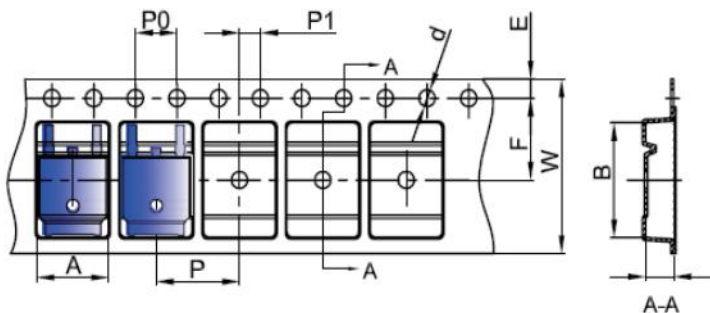
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**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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