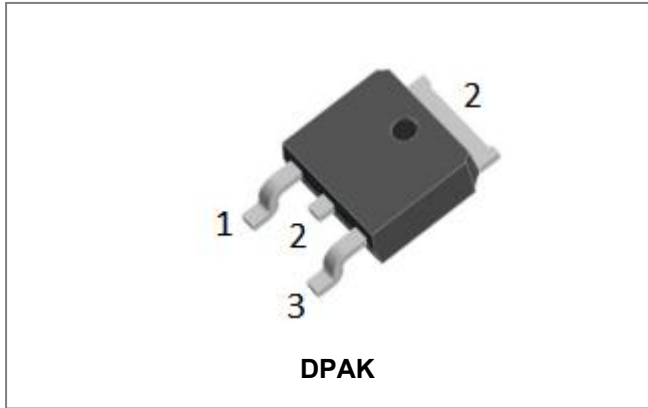


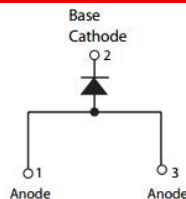
MBRD560 THRU MBRD5200 SCHOTTKY RECTIFIER



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

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

Maximum Ratings and Electrical characteristics @T_A = 25°C unless otherwise specified

Characteristics	Symbol	MBRD 560	MBRD 580	MBRD 5100	MBRD 5150	MBRD 5200	Units
Peak Repetitive Reverse Voltage	V _{RRM}						
Working Peak Reverse Voltage	V _{RWM}	60	80	100	150	200	V
DC Blocking Voltage	V _R						
Max. Average Forward Current	I _{F(AV)}	5					A
Max. Peak One Cycle Non-Repetitive Surge Current(8.3ms Single half sine-wave)	I _{FSM}	100					A
Max. Forward Voltage Drop @5A, 25°C	V _F	0.65	0.75	0.85	0.90	0.92	V
Max. Reverse Current @V _{RWM} , 25°C	I _R	1					mA
Max. Junction Capacitance(Note1)	C _T	300			150		pF
Max. Junction Temperature	T _J	-55 to +150					°C
Max. Storage Temperature	T _{stg}	-55 to +150					°C
Typical Thermal Resistance Junction to Case (DC operation)	R _{θJC}	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.

Ratings and Characteristics Curves

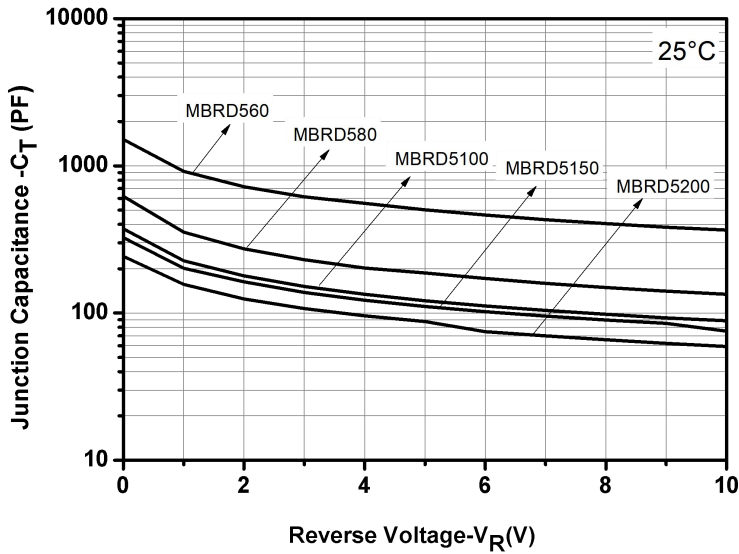


Fig.1 Typical Junction Capacitance

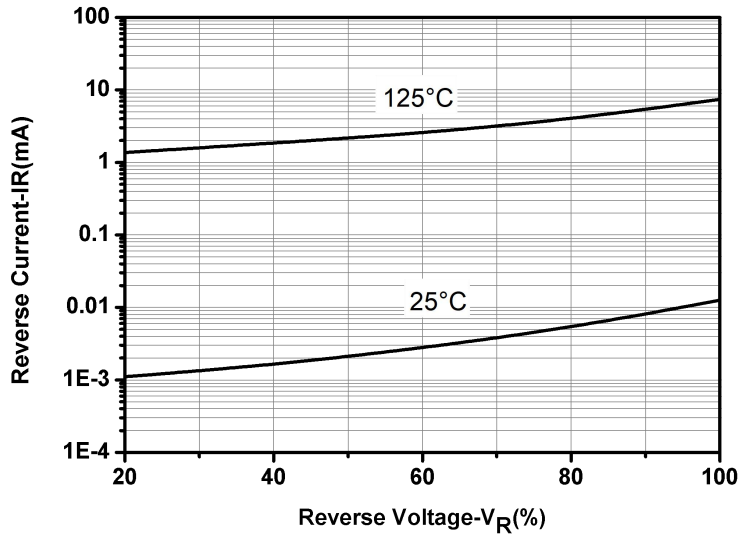


Fig.2 Typical Reverse Characteristics

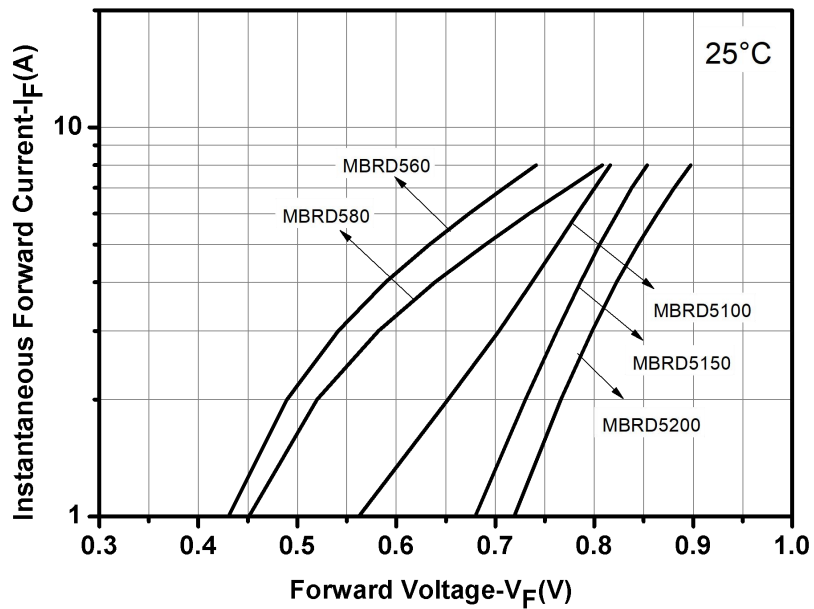
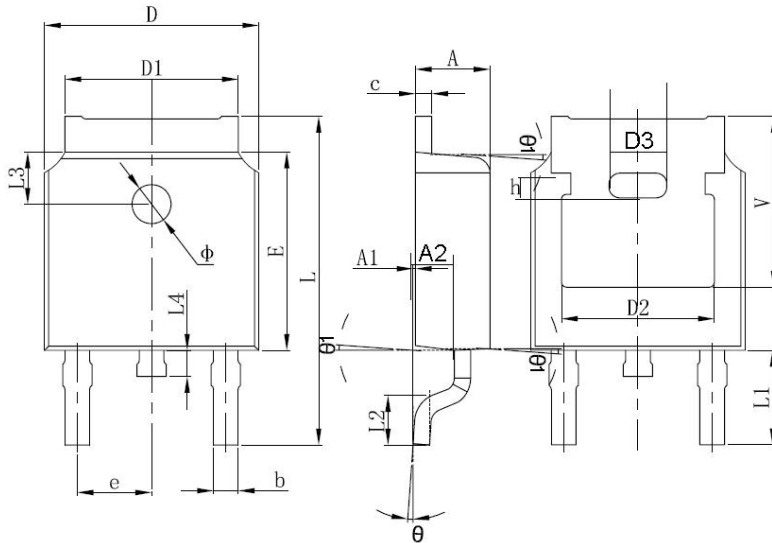


Fig.3 Typical Forward Characteristics

Mechanical Dimensions DPAK



The outline from different package houses may have slight differences. So the outline above is just schematic. The dimensions are controlled per specifications.

Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	2.18	-	2.39
A1	-	-	0.13
b	0.64	-	0.89
c	0.46	-	0.89
D	6.35	-	6.73
D1	4.95	-	5.46
D2	4.32	-	-
E	5.97	6.1	6.22
e	2.29BSC		
L	9.4	-	10.41
L1	2.90 REF.		
L2	1.4	1.52	1.78
L3	1.60 REF.		
L4	-	-	1.02
Φ	1.1	-	1.3
Θ	0°	-	10°
V	5.21	-	-

Ordering Information

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

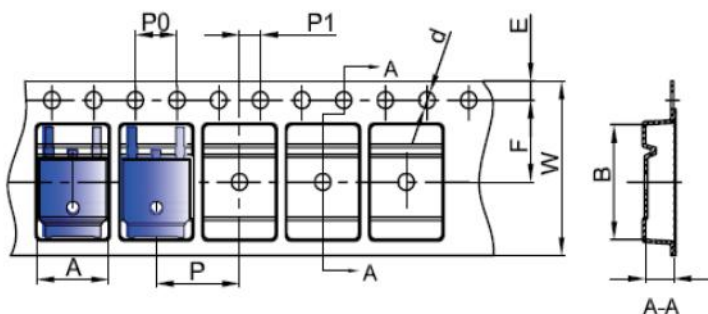
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

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

DISCLAIMER:

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC Diode Solutions sales department for the latest version of the datasheet(s).

2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.

3- In no event shall SMC Diode Solutions be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC Diode Solution assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.

4- In no event shall SMC Diode Solutions be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.

5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC Diode Solutions.

6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.

7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..