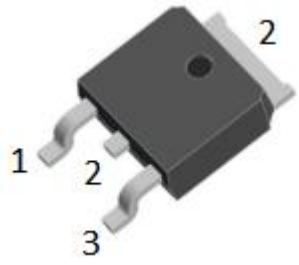
Technical Data
Data Sheet N0801, Rev. C

RoHS

MBRD560 THRU MBRD5200
SCHOTTKY RECTIFIER

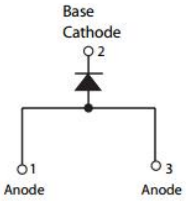


DPAK

Features

- 150℃ 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 Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	60	80	100	150	200	V
Max. Average Forward Current In DC @Tc=143°C	$I_{F(AV)}$	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 @VRWM, 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)	$R_{\theta JC}$	1.5					°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.

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Ratings and Characteristics Curves

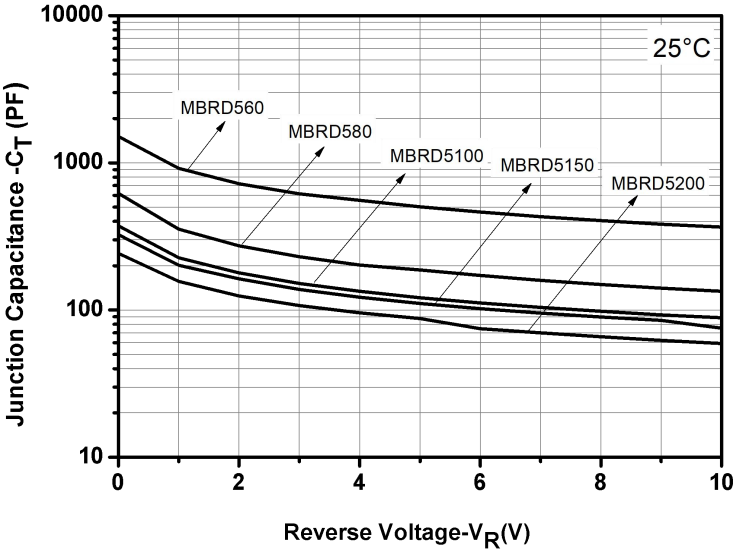

Fig.1 Typical Junction Capacitance

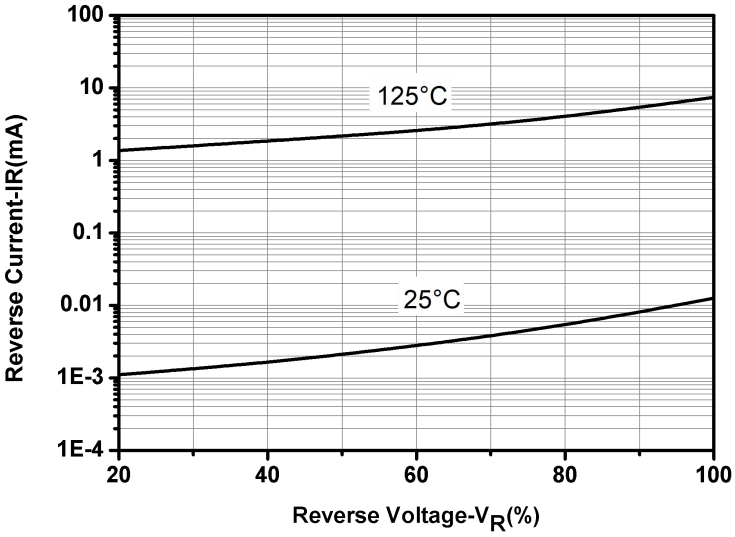

Fig.2 Typical Reverse Characteristics

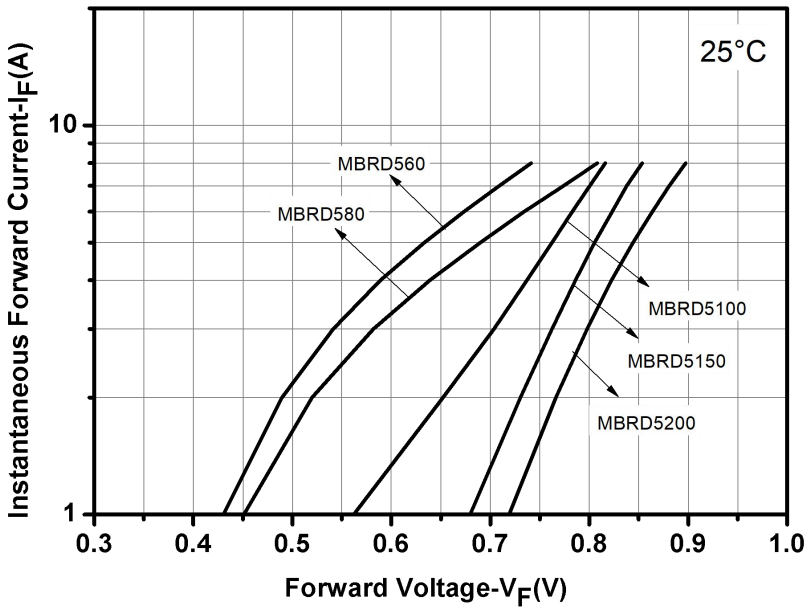

Fig.3 Typical Forward Characteristics

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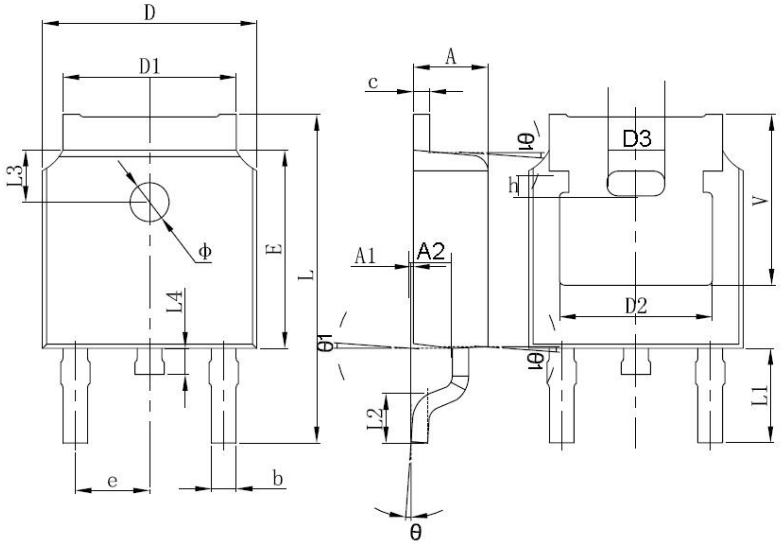
Mechanical Dimensions DPAK



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

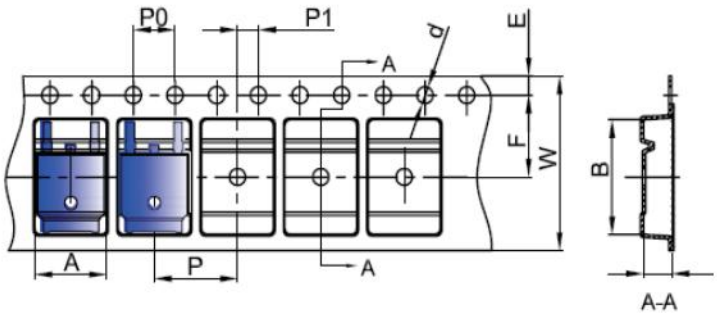
Device	Package	Shipping
MBRD560 THRU MBRD5200	DPAK (Pb-Free)	2500pcs / reel
MBRD560TR THRU MBRD5200TR	DPAK (Pb-Free)	2500pcs / reel

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

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