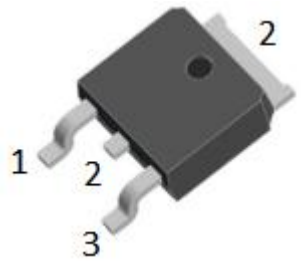
Technical Data
Data Sheet N0798, Rev.B

RoHS

MBRD380 THRU MBRD3200
SCHOTTKY RECTIFIER

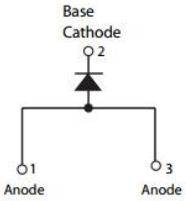


DPAK

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
- This is a Pb − Free Device
- Terminals finish: Tin Lead-free plated
- "-A" is an AEC-Q101 qualified 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 380	MBRD 3100	MBRD 3200	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	80	100	200	V
Average Forward Current	$I_{F(AV)}$	3			A
Max. Peak One Cycle Non-Repetitive Surge Current(8.3ms Single half sine-wave)	I_{FSM}	80			A
Max. Forward Voltage Drop* @3A, 25°C	V_F	0.85		0.92	V
Max. Reverse Current* @V_{RWM}, 25°C	I_R	1			mA
Max. Junction Capacitance(Note1)	C_T	250		100	pF
Junction Temperature	T_J	-55 to +150			°C
Storage Temperature	T_{stg}	-55 to +150			°C
Typical Thermal Resistance Junction to Case (DC operation)	$R_{\theta JC}$	1.6			°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

Figure1 Typical Forward Characteristics

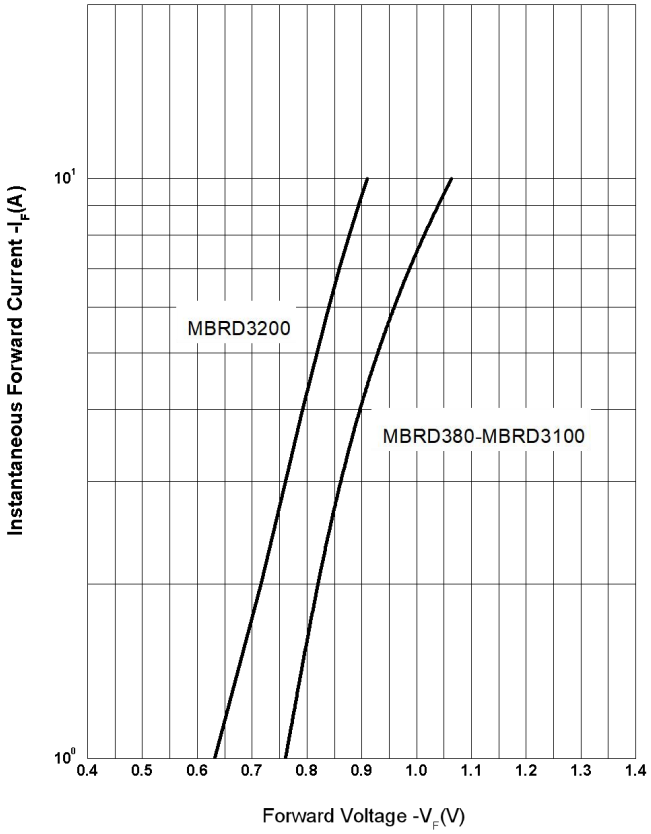


Figure 2 Typical Reverse Characteristics

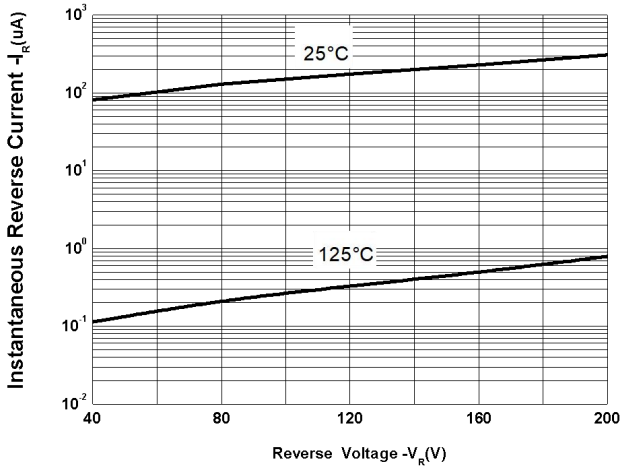
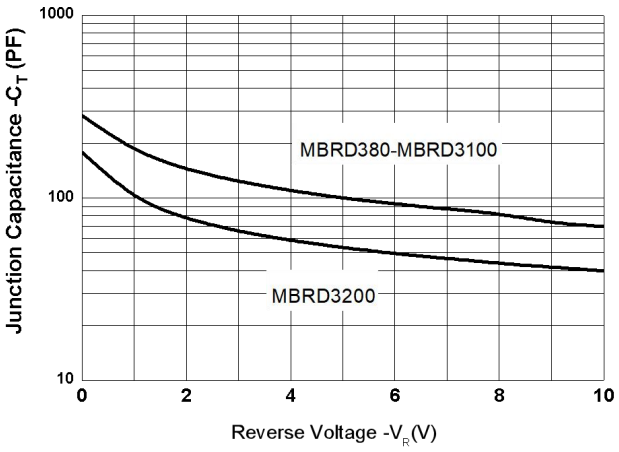


Figure 3 Typical Junction Capacitance



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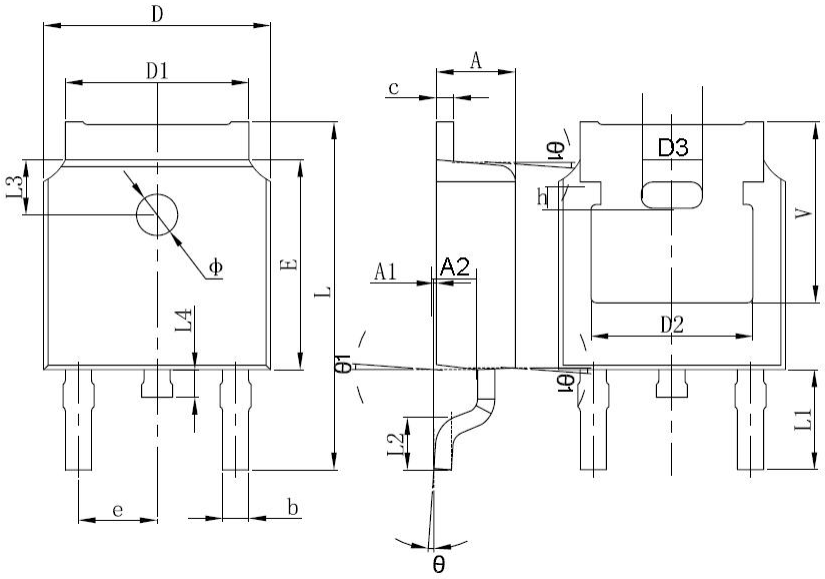
Mechanical Dimensions DPAK



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

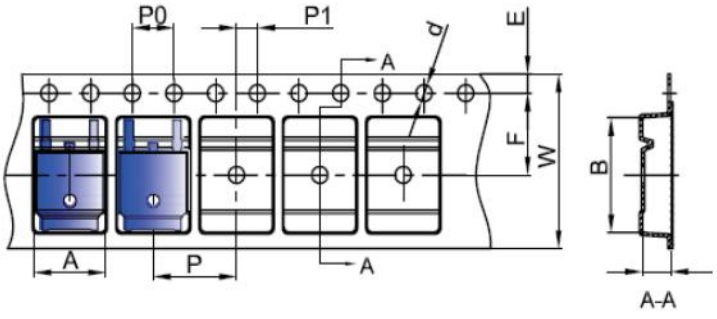
Device	Package	Shipping
MBRD380 THRU MBRD3200	DPAK (Pb-Free)	2500pcs / reel
MBRD380TR THRU MBRD3200TR	DPAK (Pb-Free)	2500pcs / reel

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 (MBRD380, MBRD3100, MBRD3200)
Second row: SSG YYWWL
YY is the manufacture year,
WW is the manufacture week code,
L is the wafer's Lot Number

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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