

MBRD1020/S – MBRD10100/S

10A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

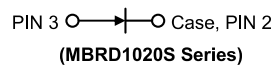
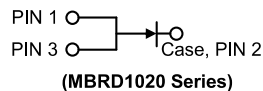
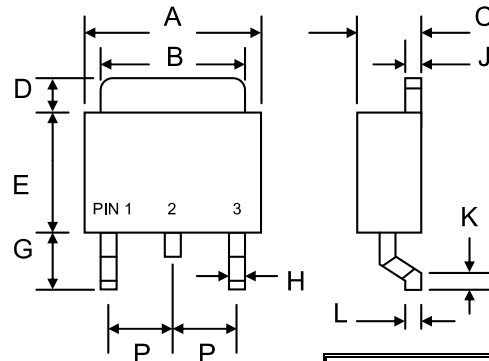


Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Surge Current Capability
- Low Power Loss, High Efficiency
- Ideally Suited for Automatic Assembly
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications

Mechanical Data

- Case: DPAK/TO-252, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.3 grams (approx.)
- Mounting Position: Any
- Marking: Device Code, See Page 3
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



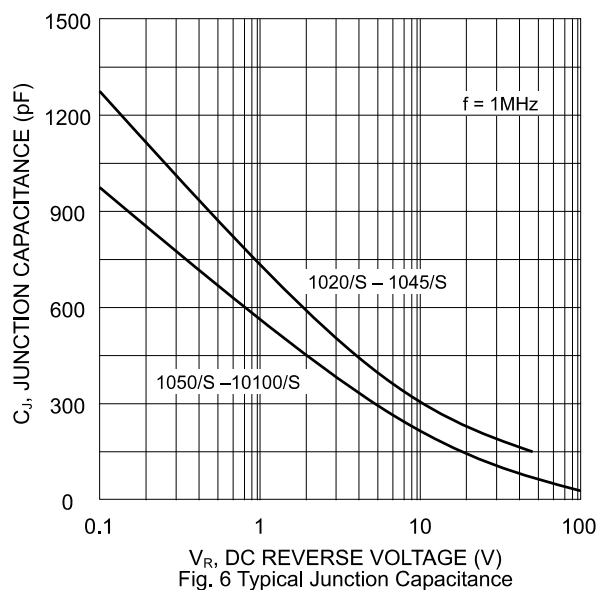
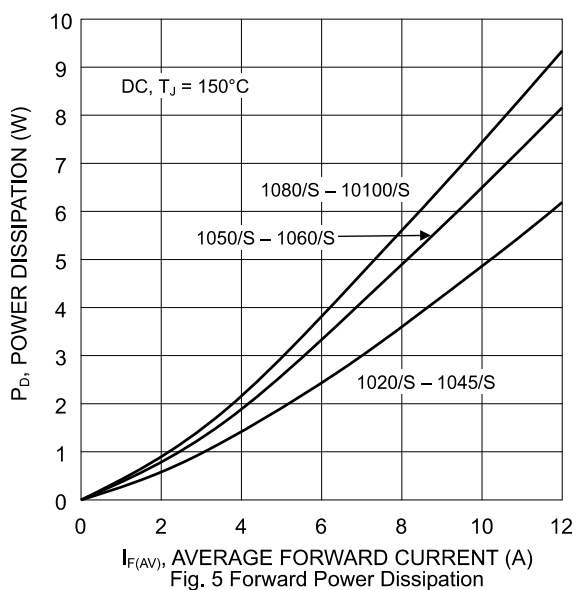
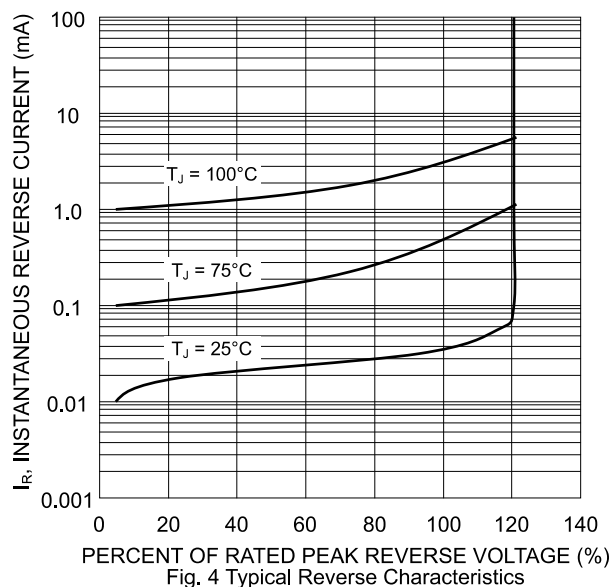
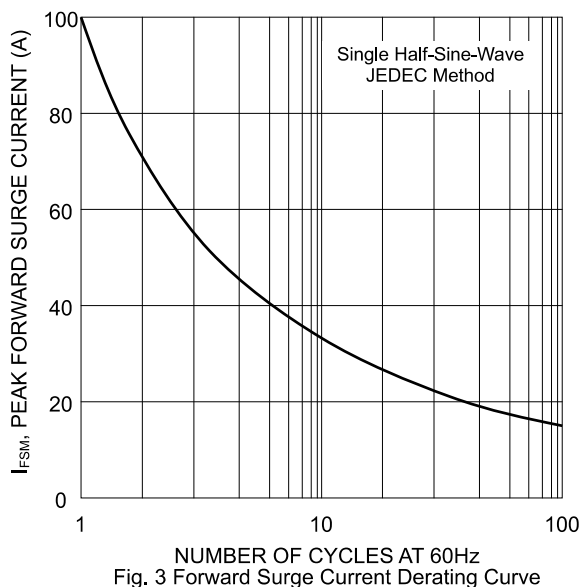
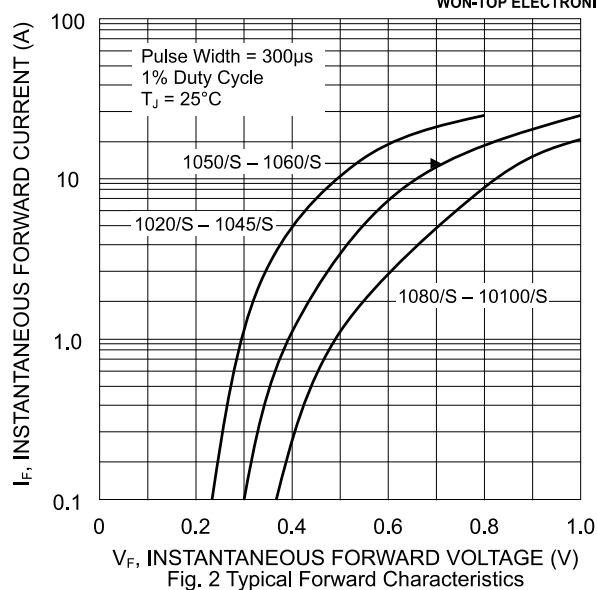
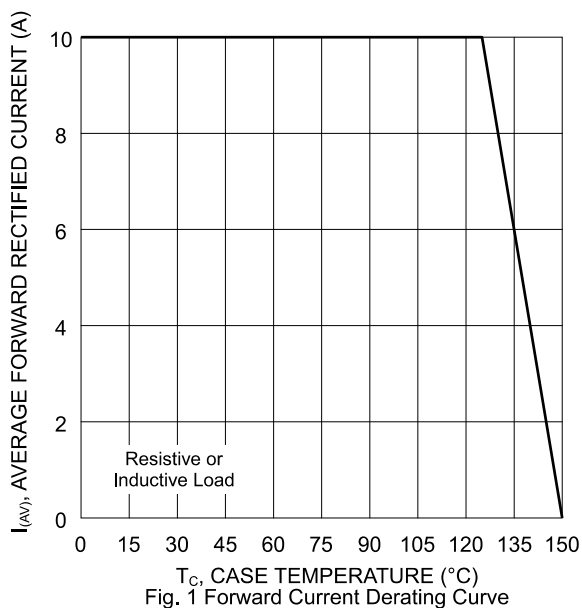
DPAK/TO-252		
Dim	Min	Max
A	6.05	6.65
B	5.05	5.55
C	2.25	2.40
D	1.05	1.25
E	5.48	6.08
G	2.55	3.00
H	0.55	0.90
J	0.49	0.55
K	0.95	1.25
L	0.49	0.55
P	2.30 Typical	
All Dimensions in mm		

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

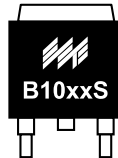
Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	MBRD 1020/S	MBRD 1030/S	MBRD 1040/S	MBRD 1045/S	MBRD 1050/S	MBRD 1060/S	MBRD 1080/S	MBRD 10100/S	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	20	30	40	45	50	60	80	100	V
RMS Reverse Voltage	V _{R(RMS)}	14	21	28	32	35	42	56	70	V
Average Rectified Output Current @T _C = 125°C	I _O	10								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	100								A
Forward Voltage @I _F = 10A	V _{FM}	0.55				0.75		0.85		V
Peak Reverse Current @T _J = 25°C At Rated DC Blocking Voltage @T _J = 100°C	I _{RM}	0.2 15								mA
Typical Junction Capacitance (Note 1)	C _J	450				350				pF
Thermal Resistance, Junction to Ambient (Note 2) Thermal Resistance, Junction to Case (Note 2)	R _{θJA} R _{θJC}	70 2.5								°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150								°C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
2. Mounted on FR-4 PC board with minimum recommended pad layout.

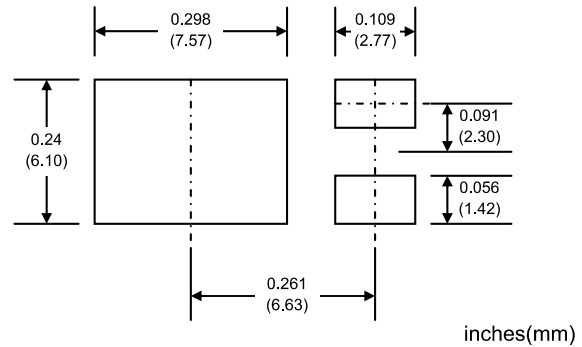


MARKING INFORMATION



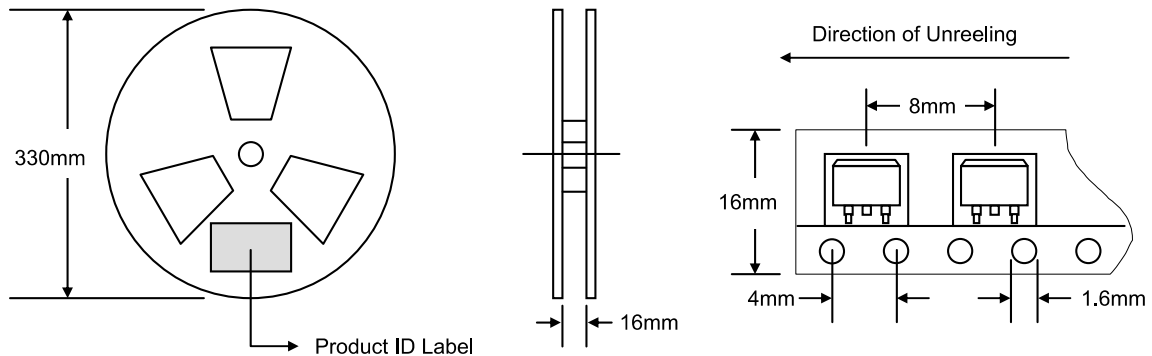
B10xx = Device Number
 xx = 20, 30, 40, 45, 50, 60, 80 or 100
 S = Suffix for MBRD1020S Series (remove when ordering MBRD1020 series)

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
330	2,500	340 x 337 x 45	5,000	370 x 370 x 420	40,000	18.0

Note: 1. Paper reel, white or gray color.
 2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
MBRD1020/S-T3	DPAK	2500/Tape & Reel
MBRD1030/S-T3	DPAK	2500/Tape & Reel
MBRD1040/S-T3	DPAK	2500/Tape & Reel
MBRD1045/S-T3	DPAK	2500/Tape & Reel
MBRD1050/S-T3	DPAK	2500/Tape & Reel
MBRD1060/S-T3	DPAK	2500/Tape & Reel
MBRD1080/S-T3	DPAK	2500/Tape & Reel
MBRD10100/S-T3	DPAK	2500/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add “-LF” suffix to part number above. For example, MBRD1020-T3-LF.**

WON-TOP ELECTRONICS and  are registered trademarks of Won-Top Electronics Co., Ltd (WTE). WTE has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

Won-Top Electronics Co., Ltd.
No. 44 Yu Kang North 3rd Road,
Chine Chen Dist., Kaohsiung 806, Taiwan
Phone: 886-7-822-5408 or 886-7-822-5410
Fax: 886-7-822-5417
Email: sales@wontop.com
Internet: <http://www.wontop.com>

We power your everyday.