



Micro Commercial Components



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# MBRB1020 THRU MBRB10200

## 10 Amp Schottky Barrier Rectifier 20 to 200 Volts

### Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Meatl of Silicon Rectifier, Majority Conductor
- Guard ring for transient protection
- Low Forward Voltage Drop and Low Power Loss
- High Current Capability, High Efficiency

### Maximum Ratings

- Operating Temperature: -65°C to +125°C
- Storage Temperature: -65°C to +150°C
- Typical Thermal Resistance: 2.5°C/W junction to case

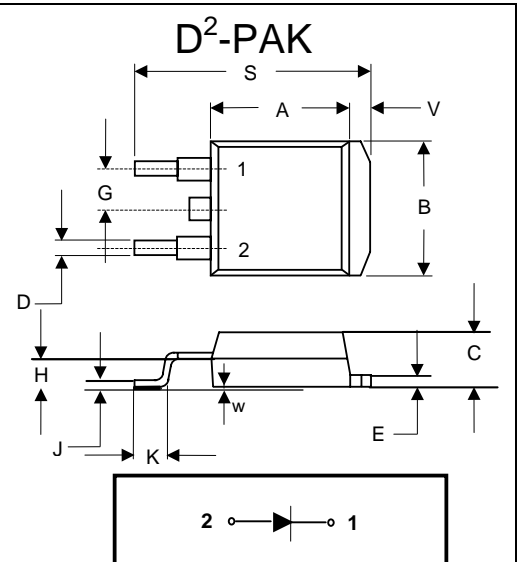
MCC Catalog Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRB1020	20V	14V	20V
MBRB1030	30V	21V	30V
MBRB1035	35V	24.5V	35V
MBRB1040	40V	28V	40V
MBRB1050	50V	35V	50V
MBRB1060	60V	42V	60V
MBRB1080	80V	56V	80V
MBRB10100	100V	70V	100V
MBRB10150	150V	105V	150V
MBRB10200	200V	140V	200V

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	10 A	$T_L = 125^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage MBRB1020~MBRB1040 MBRB1050~MBRB1060 MBRB1080~MBRB10100 MBRB10150 MBRB10200	$V_F$	.60V .75V .85V .90V .95V	$I_{FM} = 10A;$ $T_J = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	0.5mA 50mA	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$

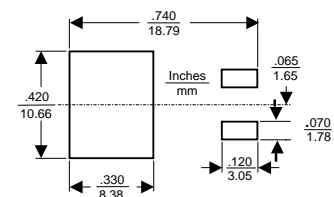
\*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7.



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.320	.359	8.13	9.14	
B	.380	.411	9.65	10.45	
C	.160	.190	4.06	4.83	
D	.020	.035	0.51	0.89	
E	.045	.055	1.14	1.40	
G	.083	.105	2.10	2.67	
H	.096	.134	2.43	3.40	
J	.014	.021	0.35	0.53	
K	.090	.131	2.29	3.32	
S	.575	.625	14.22	16.22	
V	.045	.055	1.14	1.40	
W	0	.006	0	0.15	

### SUGGESTED SOLDER PAD LAYOUT



**RATING AND CHARACTERISTIC CURVES  
MBRB1020 thru MBRB10200**

FIG.1 - FORWARD CURRENT DERATING CURVE

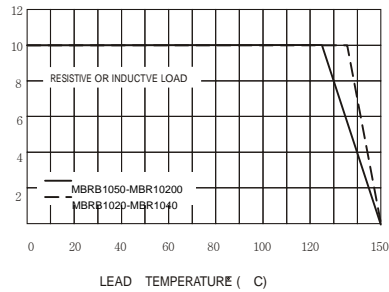


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

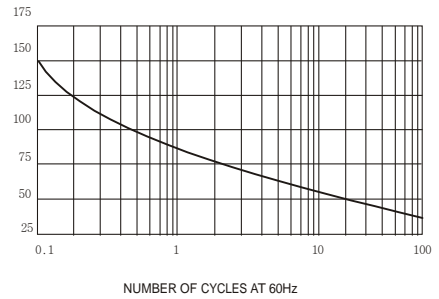


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

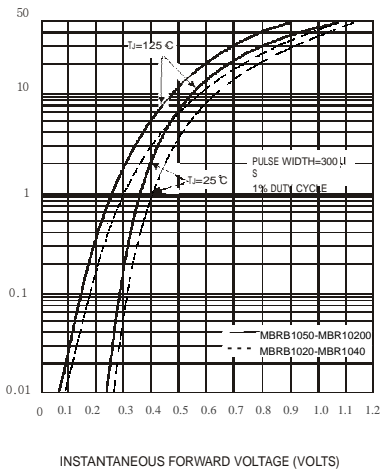


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

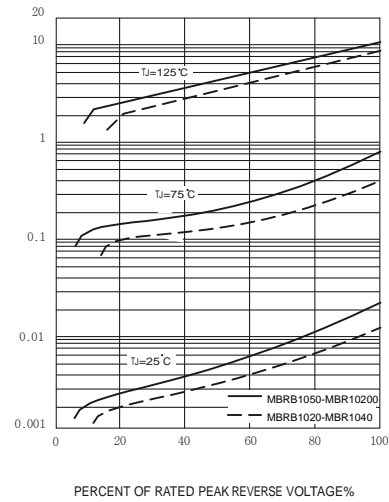


FIG.5 - TYPICAL JUNCTION CAPACITANCE

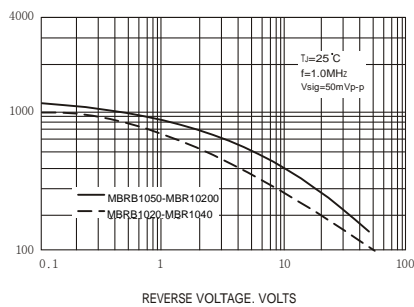
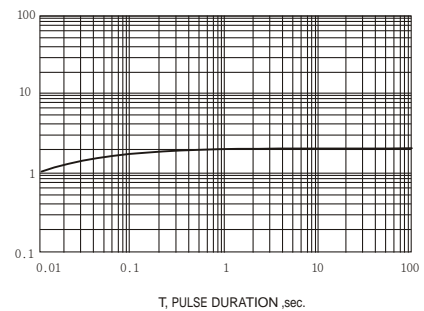


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE





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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 800pcs/Reel
Part Number-BP	Tube: 5Kpcs/Ctn

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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