



Micro Commercial Components

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# MBR2020 THRU MBR20200

## 20 Amp Schottky Barrier Rectifier 20 to 200 Volts

### Features

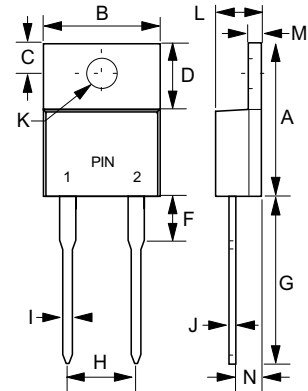
- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss high efficiency
- High surge capacity, High current capability
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

### Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR2020	MBR2020	20V	14V	20V
MBR2030	MBR2030	30V	21V	30V
MBR2040	MBR2040	40V	28V	40V
MBR2050	MBR2050	50V	35V	50V
MBR2060	MBR2060	60V	42V	60V
MBR2080	MBR2080	80V	56V	80V
MBR20100	MBR20100	100V	70V	100V
MBR20150	MBR20150	150V	105V	150V
MBR20200	MBR20200	200V	140V	200V

### TO-220AC



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

Average Forward Current	$I_{F(AV)}$	20A	$T_C = 135^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	200A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element MBR2020-2040 MBR2050-2060 MBR2080-20100 MBR20150 MBR20200	$V_F$	0.60V 0.75V 0.85V 0.90V 0.95V	$I_{FM} = 20\text{A per element};$ $T_A = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	0.5mA	$T_J = 25^\circ\text{C}$

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 1%  
 Notes: 1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.560	.625	14.22	15.88	
B	.380	.420	9.65	10.67	
C	.100	.135	2.54	3.43	
D	.230	.270	5.84	6.86	
F	-----	.250	-----	6.35	
G	.500	.580	12.70	14.73	
H	.190	.210	4.83	5.33	
I	.020	.045	0.51	1.14	
J	.012	.025	0.30	0.64	
K	.139	.161	3.53	4.09	$\varnothing$
L	.140	.190	3.56	4.83	
M	.045	.055	1.14	1.40	
N	.080	.115	2.03	2.92	

FIG.1-FORWARD CURRENT DERATING CURVE

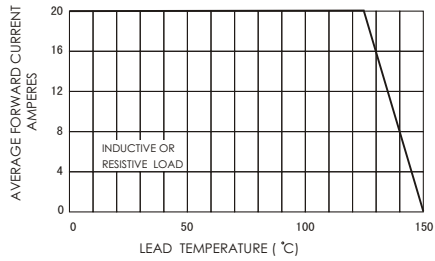


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

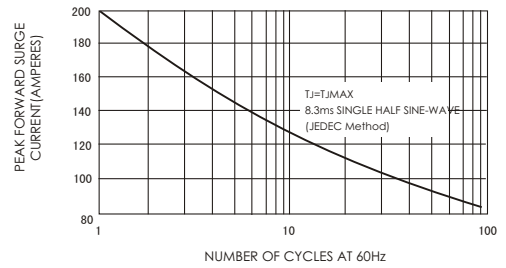


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

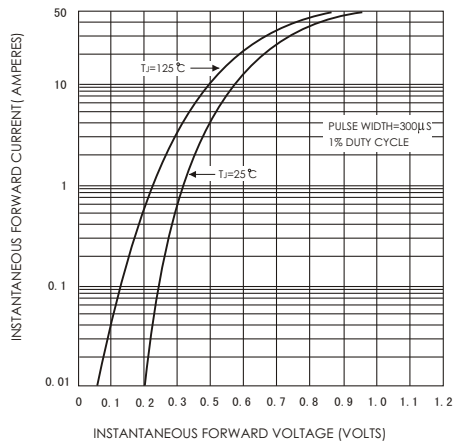


FIG.4-TYPICAL REVERSE CHARACTERISTICS

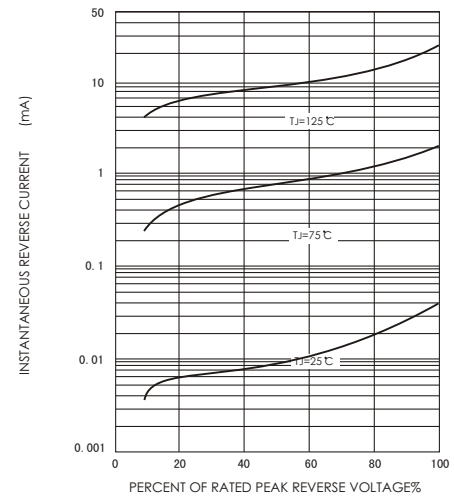


FIG.5-TYPICAL JUNCTION CAPACITANCE

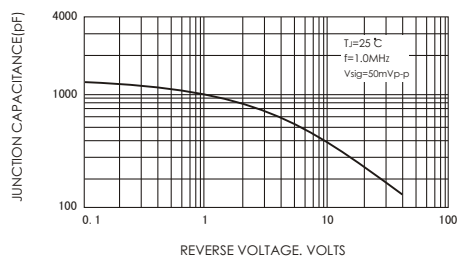
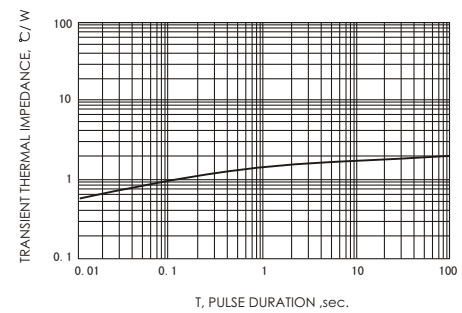


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE





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## Ordering Information

Device	Packing
(Part Number)-BP	Bulk;1Kpcs/Box

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