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# MBR1020 THRU MBR10100

## Features

- Metal of siliconrectifier, majonty carrier conducton
- Guard ring for transient protection
- Low power loss high efficiency
- High surge capacity, High current capability

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +175°C

Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR1020	MBR1020	20V	14V	20V
MBR1030	MBR1030	30V	21V	30V
MBR1035	MBR1035	35V	24.5V	35V
MBR1040	MBR1040	40V	28V	40V
MBR1045	MBR1045	45V	31.5V	45V
MBR1060	MBR1060	60V	42V	60V
MBR1080	MBR1080	80V	56V	80V
MBR10100	MBR10100	100V	70V	100V

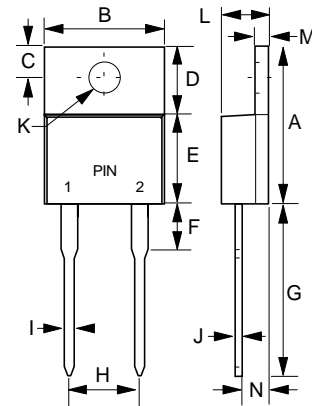
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	10A	$T_C = 125^\circ C$
Peak Forward Surge Current	$I_{FSM}$	150A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element MBR1020-1045 MBR1045-1060 MBR1080-10100	$V_F$	.84V .95V .84V	$I_{FM} = 20$ A mper $T_A = 25^\circ C$ $I_{FM} = 10$ A mper
Maximum DC Reverse Current At Rated DC Blocking Voltage MBR1020-1045 MBR1060-10100	IR	0.1mA 0.15mA	$T_J = 25^\circ C$
Typical Junction Capacitance	$C_J$	400pF	Measured at 1.0MHz, $V_R=4.0V$

\*Pulse test: Pulse width 300  $\mu$ sec, Duty cycle 1%

## 10 Amp Schottky Barrier Rectifier 20 to 100 Volts

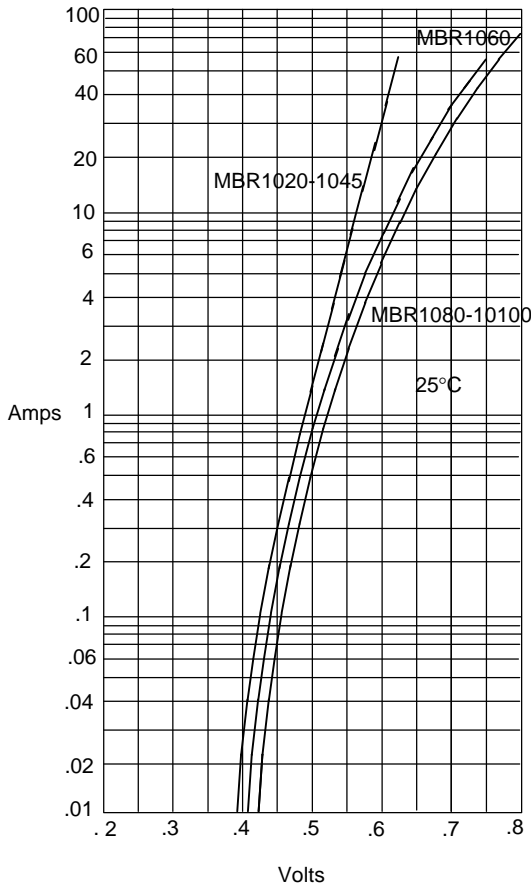
## TO-220AC



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	
E	.380	.420	9.65	10.67	
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	∅
L	.140	.190	3.56	4.83	
M	.045	.055	1.14	1.40	
N	.080	.115	2.03	2.92	

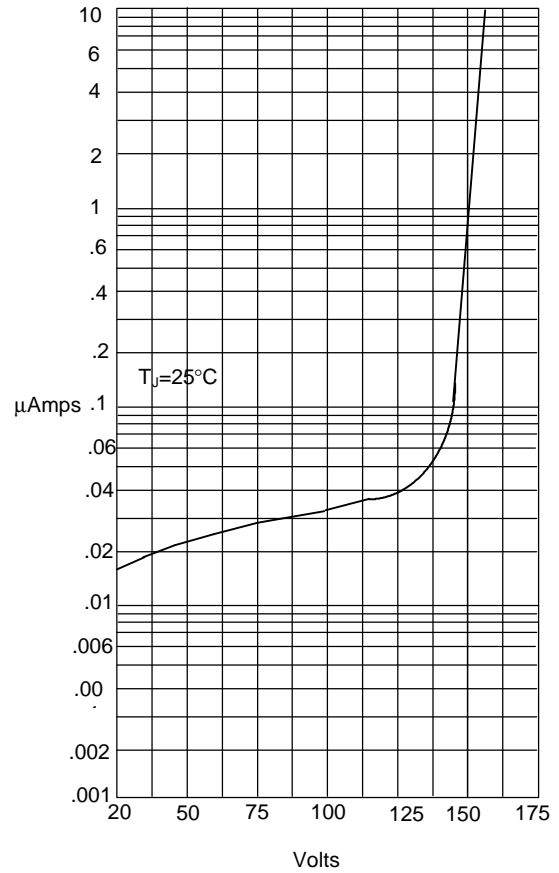
# MBR1020 thru MBR10100

Figure 1  
Typical Forward Characteristics



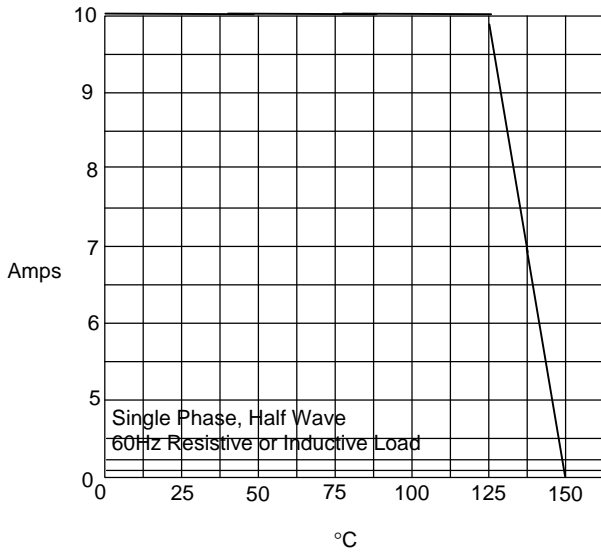
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



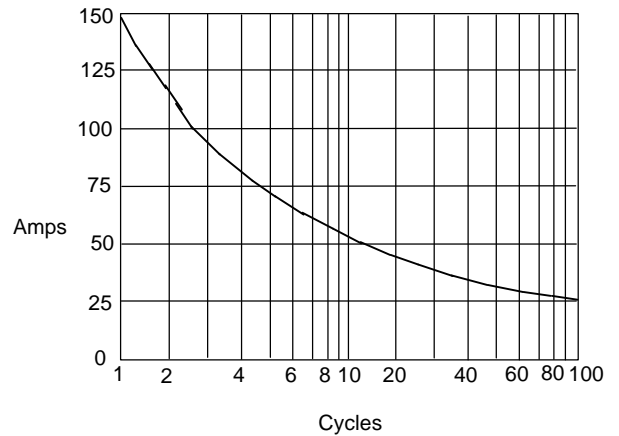
Instantaneous Reverse Leakage Current - MicroAmperes *versus*  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3  
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*  
Ambient Temperature - °C

Figure 4  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*  
Number Of Cycles At 60Hz - Cycles