



## MBR3020 THRU MBR30100

### 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

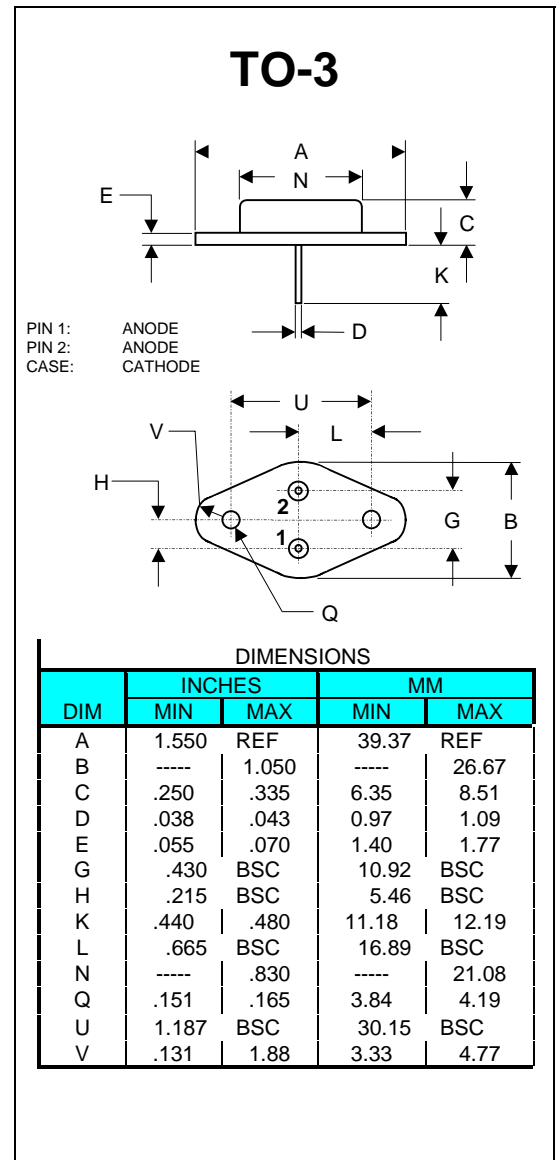
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR3020	20V	14V	20V
MBR3030	30V	21V	30V
MBR3035	35V	24.5V	35V
MBR3040	40V	28V	40V
MBR3045	45V	31.5V	45V
MBR3060	60V	42V	60V
MBR3080	80V	56V	80V
MBR30100	100V	70V	100V

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

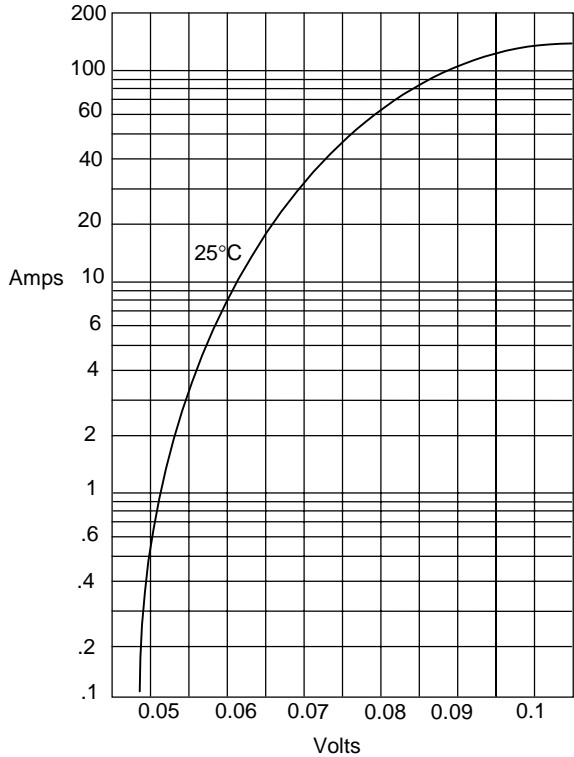
Average Forward Current	$I_{F(AV)}$	30 A	$T_L = 105^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	400A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$		$I_{FM} = 30.0\text{A};$ $T_A = 25^\circ\text{C}$
MBR3020-3045 MBR3060 MBR3080-30100		.63 V .75 V .84 V	
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	1.0mA	$T_A = 25^\circ\text{C}$
Typical Junction Capacitance	$C_J$	200pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

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



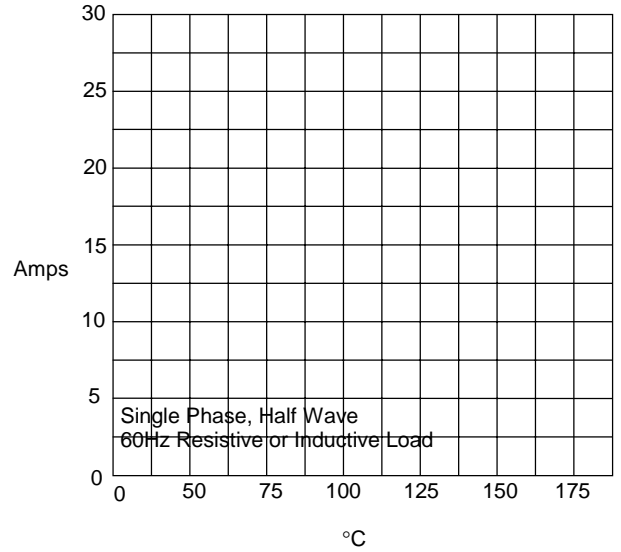
# MBR3020 thru MBR30100

Figure 1  
Typical Forward Characteristics



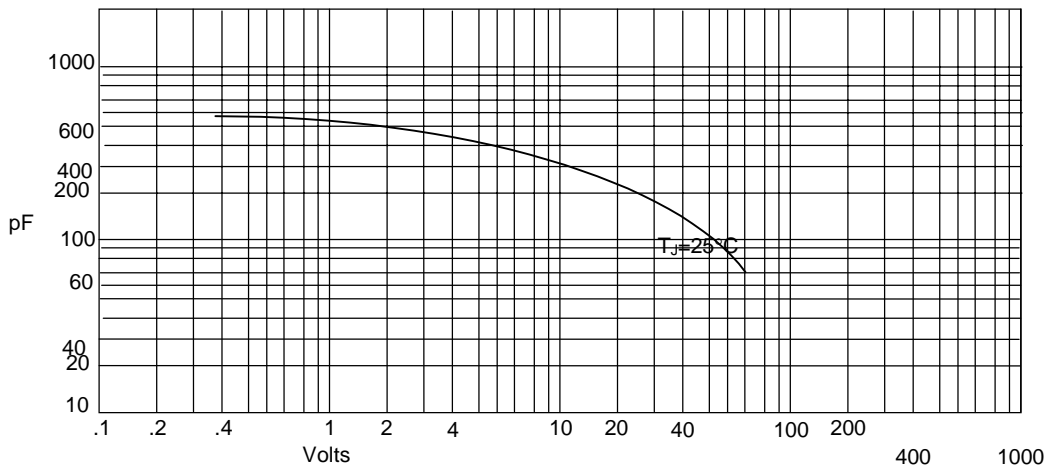
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



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

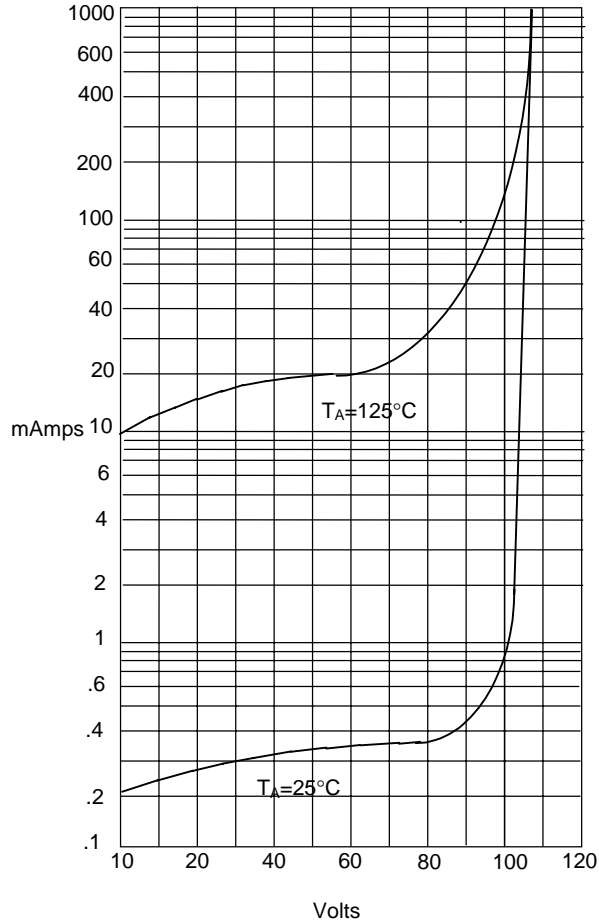
Figure 3  
Junction Capacitance



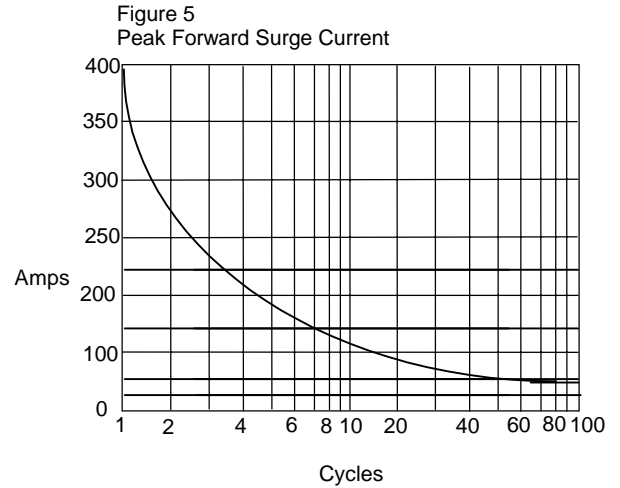
Junction Capacitance - pF versus  
Reverse Voltage - Volts

# MBR3020 thru MBR30100

Figure 4  
Typical Reverse Characteristics



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



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