

**SCHOTTKY BARRIER RECTIFIER**  
VOLTAGE RANGE 45 to 200 Volts CURRENT 10.0 Ampere

**FEATURES**

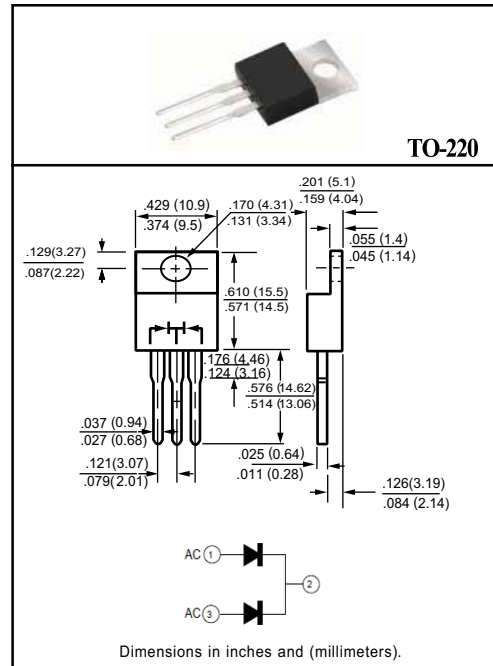
- \* Low switching noise
- \* Low forward voltage drop
- \* Low thermal resistance
- \* High current capability
- \* High switching capability
- \* High surge capability
- \* High reliability

**MECHANICAL DATA**

- \* Case: T o-220 m olded plastic
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

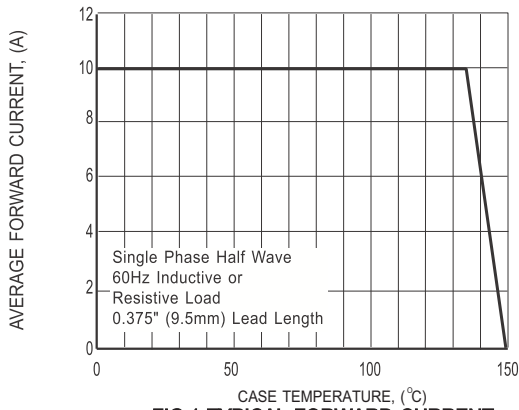
RATINGS	SYMBOL	MBR1045C	MBR1060C	MBR10100C	MBR10150C	MBR10200C	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	45	60	100	150	200	Volts
Maximum RMS Voltage	$V_{RMS}$	32	42	70	105	140	Volts
Maximum DC Blocking Voltage	$V_{DC}$	45	60	100	150	200	Volts
Maximum Average Forward Rectified Current at Derating Case Temperature	$I_O$	10					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100					Amps
Typical Current Squared Time	$I^2t$	41					A <sup>2</sup> S
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	2.0					°C/W
	$R_{\theta JA}$	40					
Operating Temperature Range	$T_J$	-55 to + 150					°C
Storage Temperature Range	$T_{STG}$	-55 to + 150					°C

**ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)**

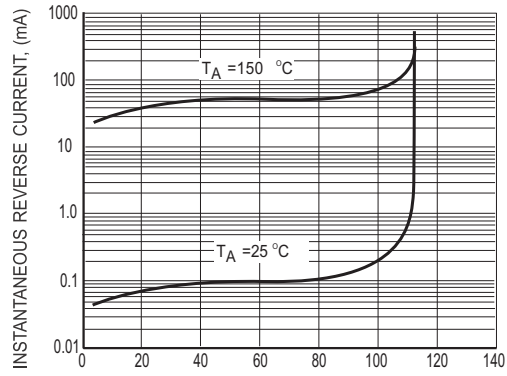
CHARACTERISTICS	SYMBOL	MBR1045C	MBR1060C	MBR10100C	MBR10150C	MBR10200C	UNITS
Maximum Instantaneous Forward Voltage at 5.0A DC	$V_F$	.65	.75	.85	.90	.95	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	$I_R$	@ $T_A = 25^\circ C$	0.2		0.1		mA
		@ $T_A = 150^\circ C$	80				mA

- NOTES : 1. Thermal Resistance : Heat-sink mounted.  
2. Suffix "A" = Common Anode.  
3. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
4. "ROHS compliant".

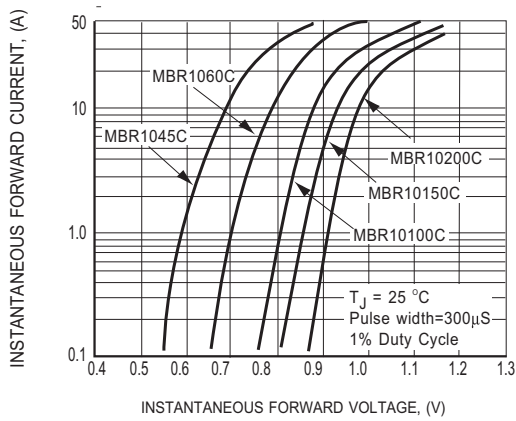
# RATING AND CHARACTERISTICS CURVES (MBR1045C THRU MBR10200C)



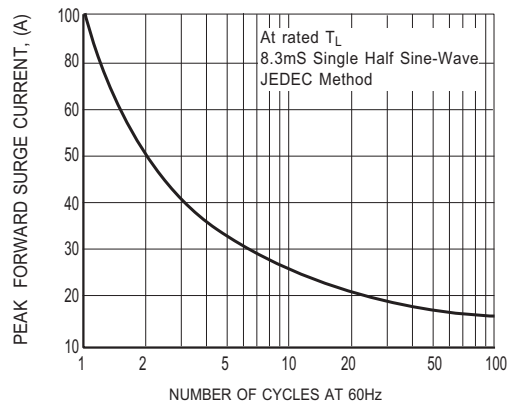
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



**FIG.2 MAXIMUM REVERSE CHARACTERISTICS**



**FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**



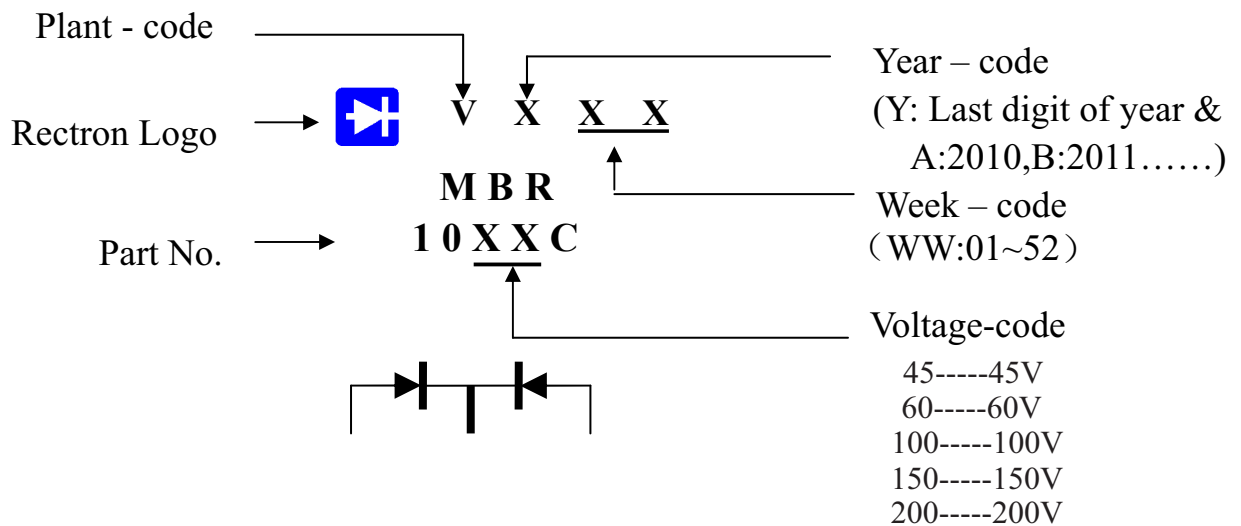
**FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



## 1. Internal Circuit



## 2. Marking on the body



## 3. Items marked on the inner box and carton

### 3.1 On the box (for -C)

CUSTOMER  
TYPE  
LOT NO.  
QUANTITY  
Q.A.  
DATE

### 3.2 On the carton

CUSTOMER  
TYPE  
QUANTITY  
LOT NO.  
REMARK

# PACKAGING OF DIODE AND BRIDGE RECTIFIERS

## TUBE PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	WEIGHT(Kg)
TO-220	-C	2,000	550*140*92	572*308*120	4,000	11.80

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