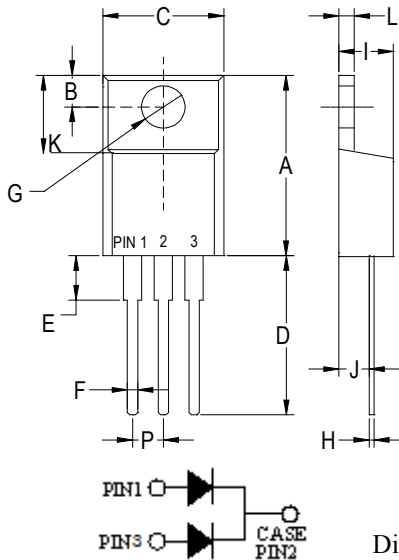


# MBR1020FCT THRU MBR10200FCT

## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts Forward Current - 10.0 Amperes

### TO-220AB



Dim	Min	Max
A	.570 (14.5)	.610 (15.5)
B	.109 (2.78)	.126 (3.21)
C	---	.406 (10.1)
D	.512 (13.0)	.555 (14.1)
E	---	.162 (4.1)
F	.020 (0.5)	.031 (0.78)
G	.114 (2.9)	.138 (3.5)
H	.020 (0.5)	.028 (0.7)
I	.162 (4.1)	.185 (4.7)
J	.110 (2.8)	.126 (3.2)
K	.268 (6.8)	.291 (7.4)
L	.097 (2.46)	.113 (2.86)
P	.89 (2.25)	.113 (2.85)

Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C, 0.25" (6.35mm) from case for 10 seconds

### MECHANICAL DATA

**Case:** TO-220AB molded plastic body  
**Terminals:** Leads solderable per MIL-STD-750, Method 2026  
**Polarity:** As marked  
**Mounting Position:** Any  
**Weight:** 0.08 ounce, 2.24 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

	SYM BOL	MBR 1020	MBR 1040	MBR 1050	MBR 1060	MBR 1080	MBR 10100	MBR 10150	MBR 10200	units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	40	50	60	80	100	150	200	VOLTS
Maximum RMS Voltage	$V_{RMS}$	14	28	35	42	56	70	105	140	VOLTS
Maximum DC blocking Voltage	$V_{DC}$	20	40	50	60	80	100	150	200	VOLTS
Maximum Average Forward Rectified Current at $T_C = 100^\circ\text{C}$	total device	10.0								Amps
	per diode	5.0								
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	120.0								Amps
Maximum Forward Voltage at 10.0A DC	$V_F$	0.45	0.55	0.70	0.85	0.90	0.95			Volts
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 100^\circ\text{C}$	$I_R$	0.5				0.1				mA
		40.0				20.0				
Typical Junction Capacitance (Note 1)	$C_J$	500				200				pF
Typical Thermal Resistance (Note 2)	$R_{(JC)}$	3.75								$^\circ\text{C/W}$
Storage Temperature	$T_{STG}$	-55 to +150								$^\circ\text{C}$
Operation Junction Temperature	$T_J$	-55 to +150								$^\circ\text{C}$

### Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Thermal Resistance from Junction to Case Mounted on Heatsink

## RATING AND CHARACTERISTIC CURVES MBR2020FCT THRU MBR20200FCT

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

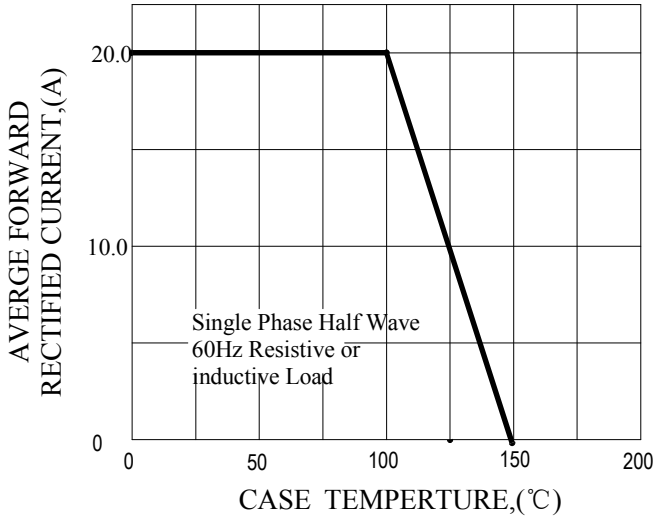


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

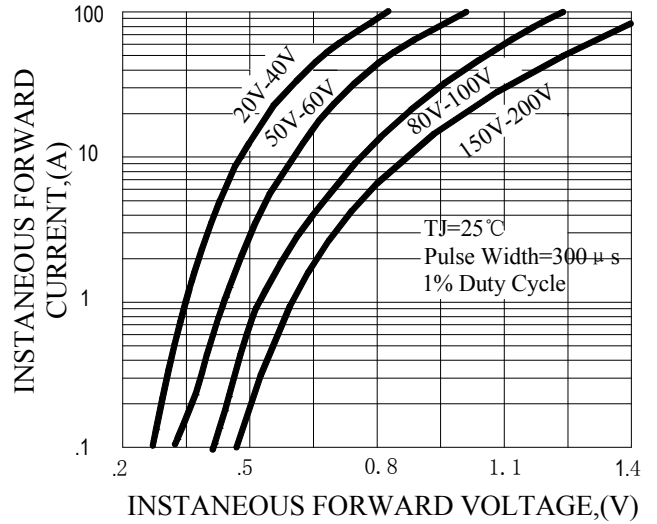


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

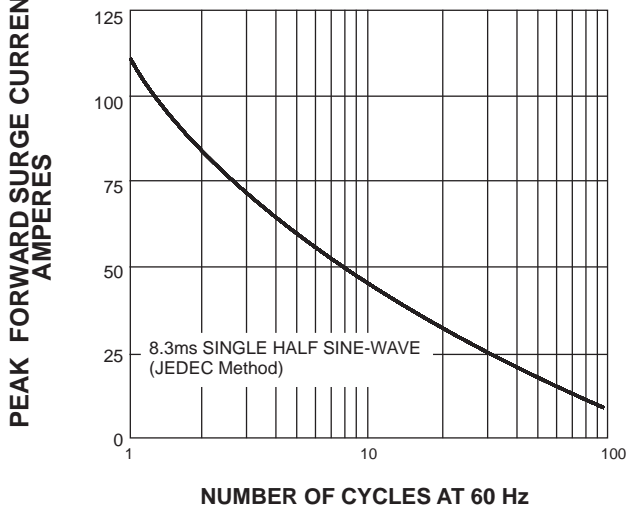
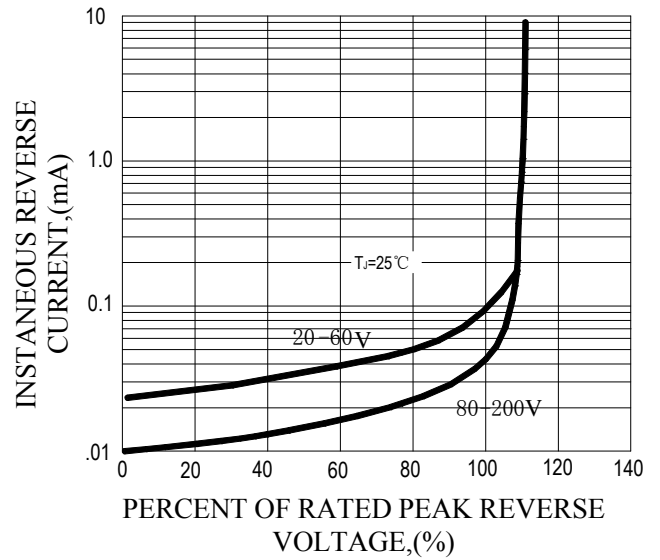


FIG.4-TYPICAL REVERSE CHARACTERISTICS



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