



# MBR1040~MBR10200

## 10 AMPERES SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 40 to 200 Volt **CURRENT** 10 Ampere

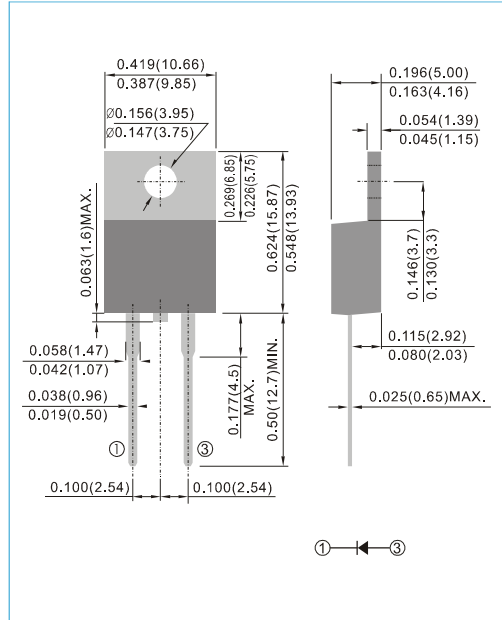
**TO-220AC** Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- High current capability
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.
- Lead free in compliance with EU RoHS 2011/65/EU directive

### MECHANICAL DATA

- Case: TO-220AC molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Weight: 0.067 ounces, 1.89 grams.



### 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%

PARAMETER	SYMBOL	MBR1040	MBR1045	MBR1050	MBR1060	MBR1080	MBR1090	MBR10100	MBR10150	MBR10200	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	40	45	50	60	80	90	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	28	31.5	35	42	56	63	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	40	45	50	60	80	90	100	150	200	V
Maximum Average Forward Current (See fig.1)	$I_{F(AV)}$	10									A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150									A
Maximum Forward Voltage at 10A, per leg	$V_F$	0.7		0.75		0.8			0.9		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}C$ $T_J=125^{\circ}C$	$I_R$					0.05			20		mA
Typical Thermal Resistance	$R_{\theta JC}$					3					$^{\circ}C / W$
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-55 to + 150				-65 to + 175					$^{\circ}C$

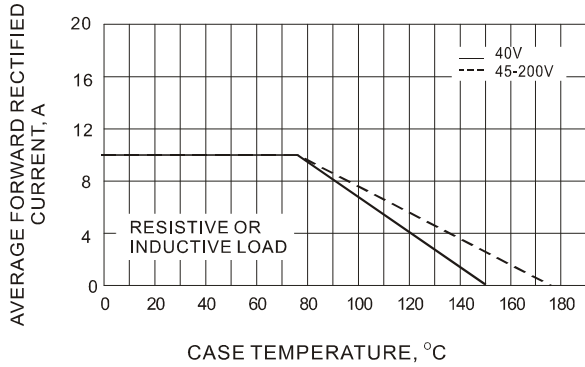
Notes :

Both Bonding and Chip structure are available.

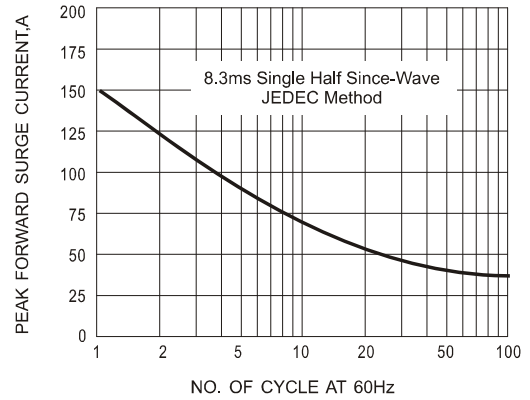


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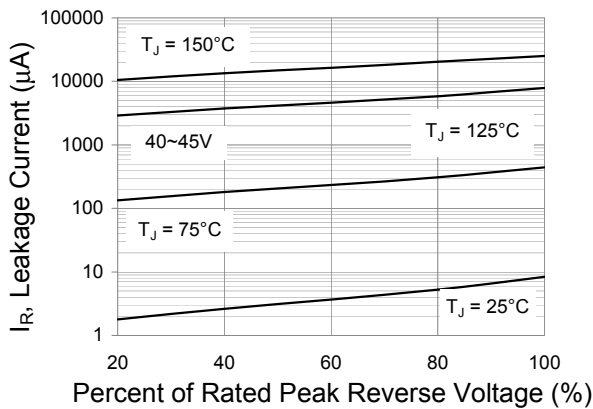
## RATING AND CHARACTERISTIC CURVES



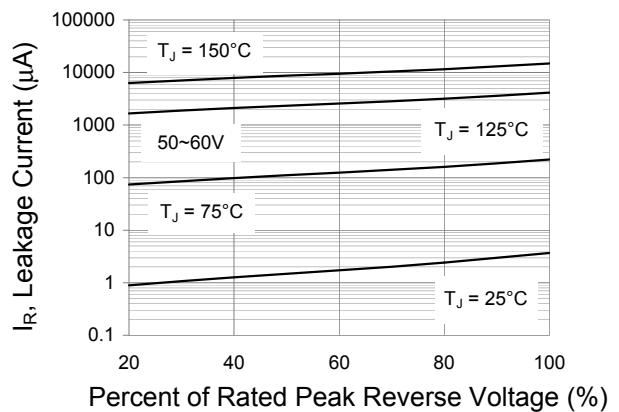
**Fig.1- FORWARD CURRENT DERATING CURVE**



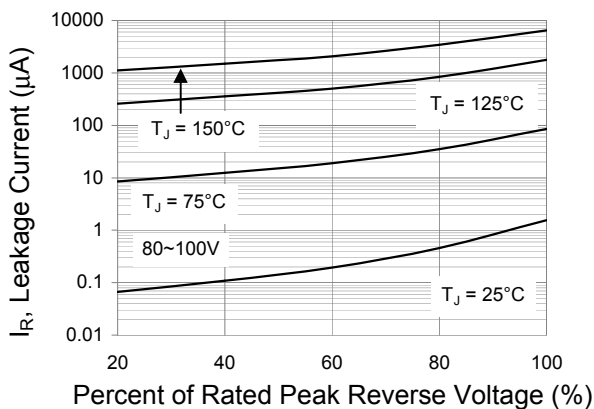
**Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



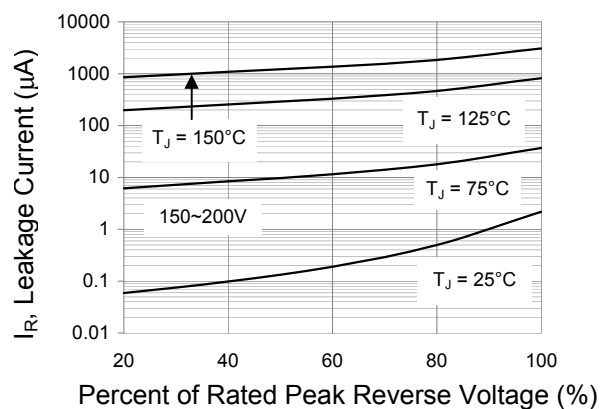
**Fig.3- TYPICAL REVERSE CHARACTERISTICS**



**Fig.4- TYPICAL REVERSE CHARACTERISTICS**



**Fig.5- TYPICAL REVERSE CHARACTERISTICS**



**Fig.6- TYPICAL REVERSE CHARACTERISTICS**



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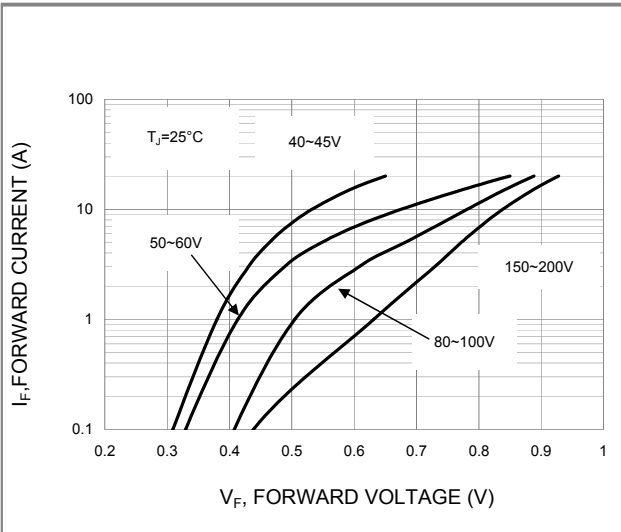


Fig.7- TYPICAL FORWARD CHARACTERISTIC



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## Part No\_packing code\_Version

MBR1040\_TO\_00001

MBR1040\_TO\_10001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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