



# MBR1040F SERIES

## 10 AMPERES SCHOTTKY BARRIER RECTIFIERS

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

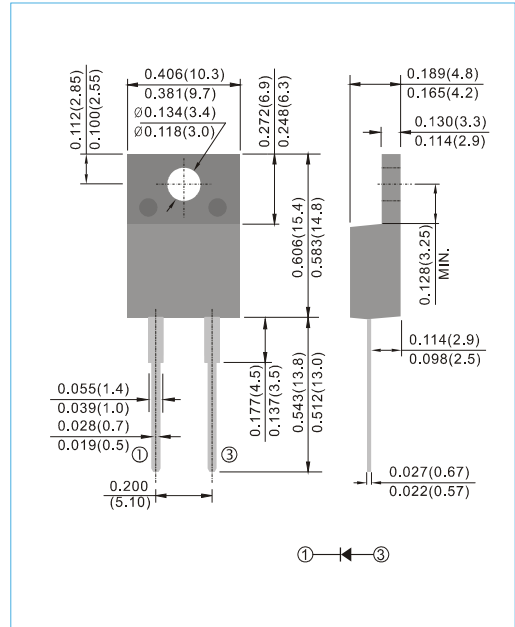
### FEATURES

- 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 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: ITO-220AC molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Weight: 0.055 ounces, 1.56 grams.

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



## 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	MBR1040F	MBR1045F	MBR1050F	MBR1060F	MBR1080F	MBR1090F	MBR10100F	MBR10150F	MBR10200F	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	$I_{FSM}$	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 (Note 2)	$I_R$	0.05				20			0.05	10	mA
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	3									°C / W
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-55 to + 150				-65 to + 175				°C	

Notes:1.Both Bonding and Chip structure are available.

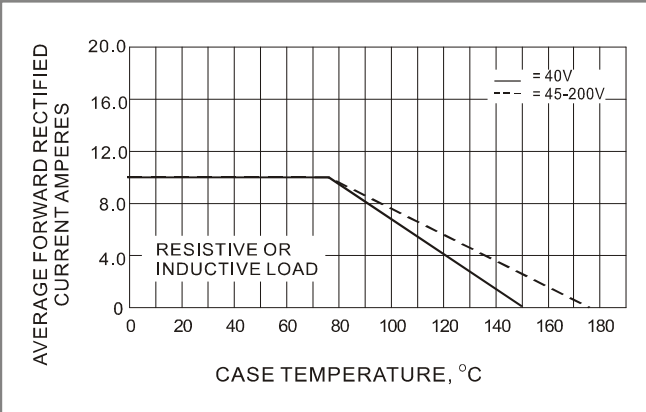
2.Short duration pulse test used to minimize self-heating effect.

3.Mounted on infinite heatsink

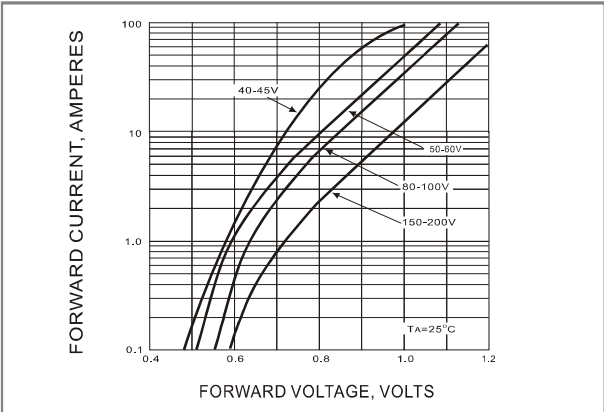


# MBR1040F SERIES

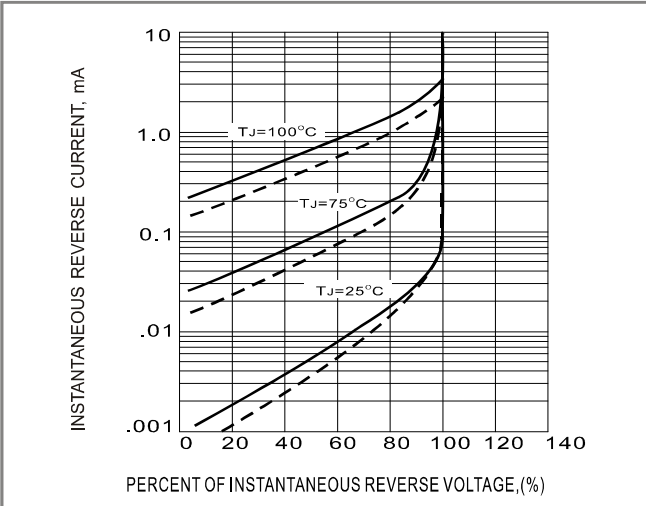
## RATING AND CHARACTERISTIC CURVES



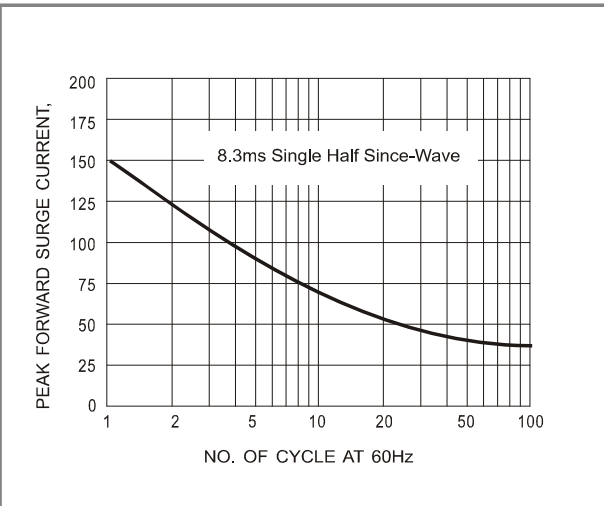
**Fig.1- FORWARD CURRENT DERATING CURVE**



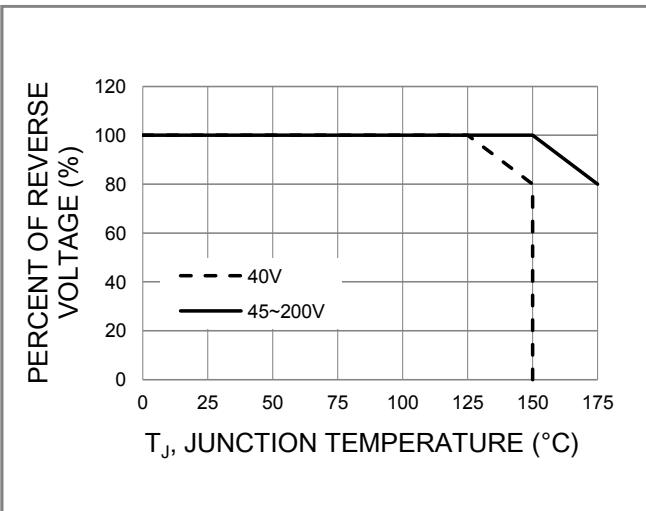
**Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**



**Fig.3- TYPICAL REVERSE CHARACTERISTICS**



**Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**Fig.5- OPERATING TEMPERATURE DERATING CURVE**