

RoHS Compliant Product  
A suffix of "-C" specifies halogen free

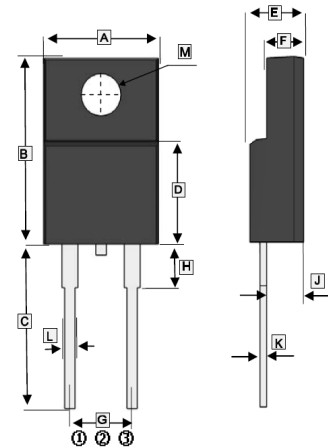
## FEATURES

- Plastic Package has Underwriters Laboratory Flammability Classification 94V-0  
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

## MECHANICAL DATA

- Case: ITO-220A Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750 Method 2026
- Polarity: As Marked
- Mounting Position: Any

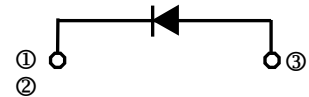
ITO-220A



## ORDER INFORMATION

Part Number	Type
MBRF1040S~MBRF10200S	Lead (Pb)-free
MBRF1040S-C~MBRF10200S-C	Lead (Pb)-free and Halogen-free

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	9.50	10.70	G	3.60	5.90
B	14.40	15.90	H	3.30	4.50
C	12.70	14.20	J	2.65 TYP.	
D	8.40 TYP.		K	0.40	0.80
E	4.20	5.10	L	0.30	0.90
F	2.50	3.56	M	φ2.60	φ3.80



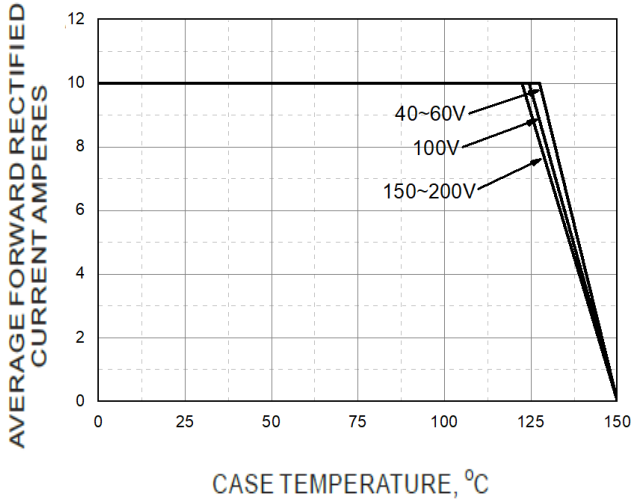
## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, de-rate current by 20%.)

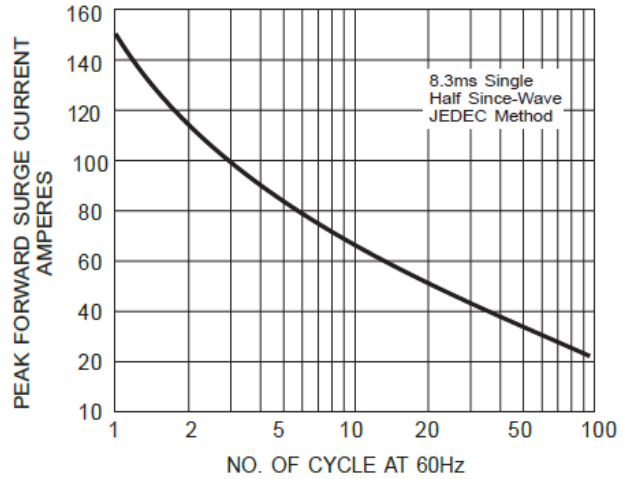
Parameter	Symbol	Ratings					Unit
		MBRF 1040S	MBRF 1060S	MBRF 10100S	MBRF 10150S	MBRF 10200S	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	40	60	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	28	42	70	105	140	
Maximum DC Blocking Voltage	$V_{DC}$	40	60	100	150	200	
Maximum Average Forward Current, 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 @10A	$V_F$	0.65	0.75	0.85	0.92		V
Maximum DC Reverse Current @Rated DC Blocking Voltage	$T_J=25^\circ\text{C}$	0.05					mA
	$T_J=100^\circ\text{C}$	20					
Typical Thermal Resistance	$R_{\theta JC}$	3					°C/W
Operating & Storage Temperature Range	$T_J, T_{STG}$	-55~150					°C

**RATINGS AND CHARACTERISTIC CURVES**

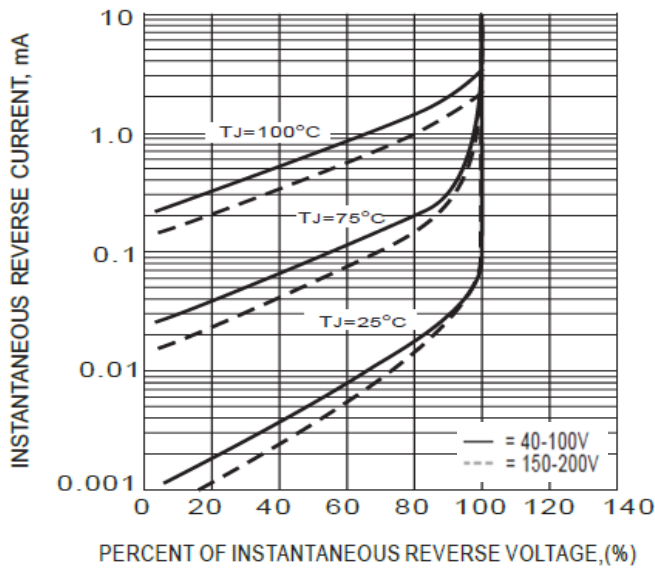
**Fig.1- FORWARD CURRENT DERATING CURVE**



**Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT**



**Fig.3- TYPICAL REVERSE CHARACTERISTICS**



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

