

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

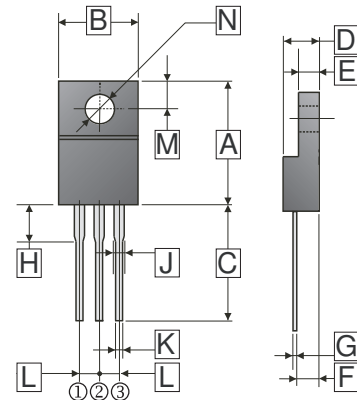
FEATURES

- Plastic Package has Underwriters Laboratory Flammability Classification 94V-0 Flame Retardant Epoxy Molding Compound
- Metal Silicon Junction, Majority Carrier Conduction
- 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-220J Molded Plastic
- Terminals: Solder Plated, Solderable Per MIL-STD-750 Method 2026
- Polarity: As Marked
- Mounting Position: Any

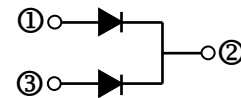
ITO-220J



ORDER INFORMATION

Part Number	Type
MBR3040F~MBR30200F	Lead (Pb)-free
MBR3040F-C~MBR30200F-C	Lead (Pb)-free and Halogen-free

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	14.5	15.5	H	3.8 TYP.	
B	9.5	10.5	J	1.30 REF.	
C	13.20 REF.		K	0.3	0.9
D	4.24	4.84	L	2.54 REF.	
E	2.52	3.20	M	2.70 REF.	
F	2.50	2.90	N	φ3.5 REF.	
G	0.47	0.75			



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
		MBR 3040F	MBR 3045F	MBR 3060F	MBR 30100F	MBR 30150F	MBR 30200F	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	45	60	100	150	200	V
Maximum RMS Voltage	V_{RMS}	28	31.5	42	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	40	45	60	100	150	200	V
Maximum Average Forward Current	$I_{F(AV)}$	30						A
Peak Forward Surge Current @8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	200						A
Maximum Forward Voltage @15A Per Leg	V_F	0.7	0.8	0.85	0.92		V	
Maximum DC Reverse Current @Rated DC Blocking Voltage	$T_J=25^\circ\text{C}$	0.05						mA
	$T_J=125^\circ\text{C}$	20						
Typical Thermal Resistance	$R_{\theta JC}$	4						°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55~150						°C

RATINGS AND CHARACTERISTIC CURVES

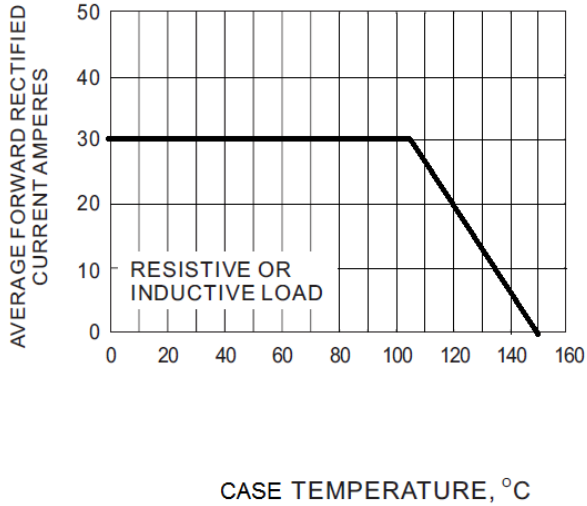


Fig.1- FORWARD CURRENT DERATING CURVE

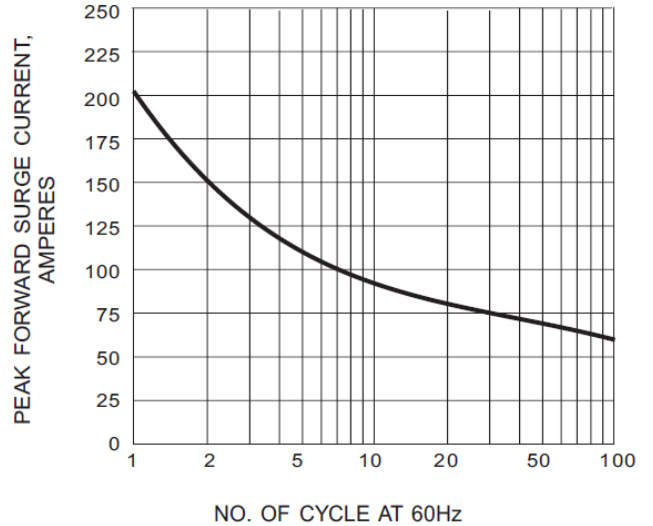


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

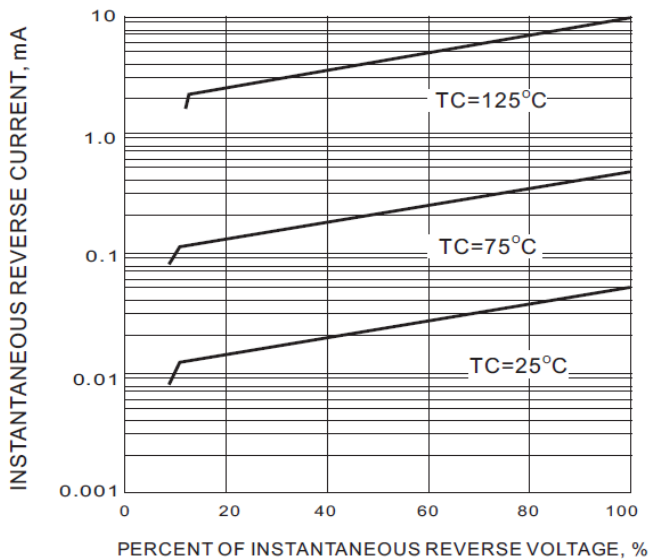


Fig.3- TYPICAL REVERSE CHARACTERISTIC

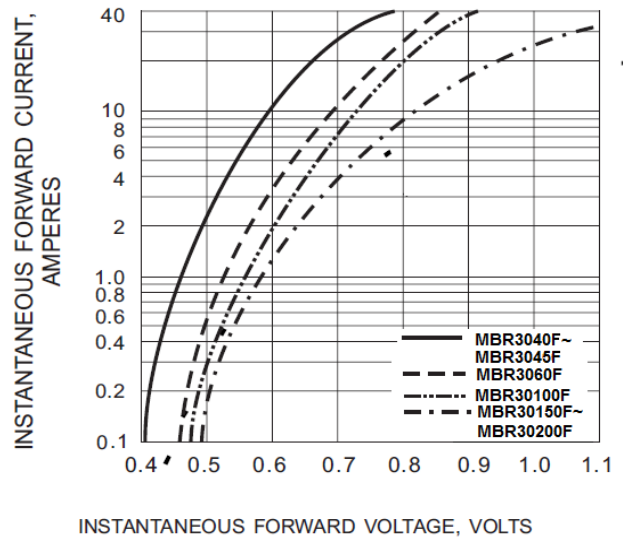


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC