

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

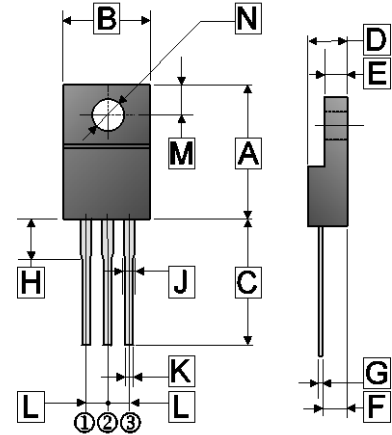
MECHANICAL DATA

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

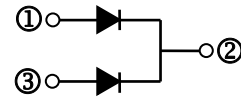
ORDER INFORMATION

Part Number	Type
MBR2040F~MBR20200F	Lead (Pb)-free
MBR2040F-C~MBR20200F-C	Lead (Pb)-free and Halogen-free

ITO-220J



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	14.50	15.50	H	3.80 TYP.	
B	9.50	10.50	J	1.30 REF.	
C	13.20 REF.		K	0.30	0.90
D	4.24	4.84	L	2.54 REF.	
E	2.52	3.20	M	2.70 REF.	
F	2.50	2.90	N	φ 3.50 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 2040F	MBR 2060F	MBR 20100F	MBR 20150F	MBR 20200F	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	60	100	150	200	V
Maximum RMS Voltage	V_{RMS}	28	42	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	40	60	100	150	200	V
Maximum Average Forward Current	$I_{F(AV)}$	20					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 Per Leg	V_F	0.7	0.8	0.85	0.92		V
Maximum DC Reverse Current @Rated DC Blocking Voltage	$T_J=25^{\circ}C$	0.05					mA
	$T_J=125^{\circ}C$	20					
Junction Capacitance	C_J	700	500	400	300	250	pF
Typical Thermal Resistance	$R_{\theta JC}$	4					°C/W
Operating & Storage Temperature Range	T_J, T_{STG}	-50~150					°C

Note:

1. Measured at 1MHz and applied reverse voltage of 4V D.C.

RATINGS AND CHARACTERISTIC CURVES

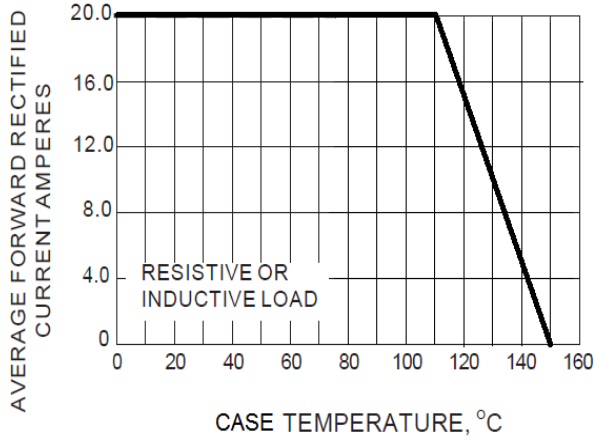


Fig.1- FORWARD CURRENT DERATING CURVE

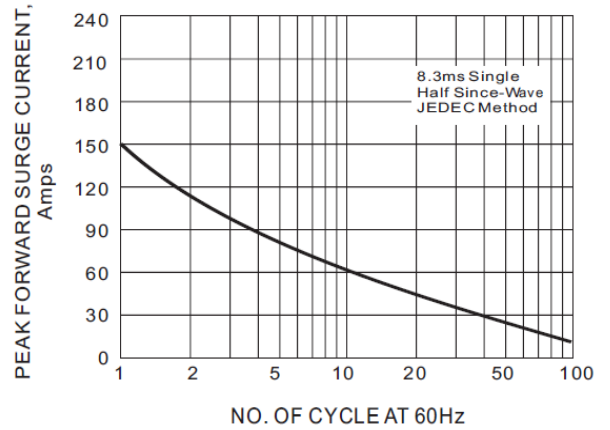


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

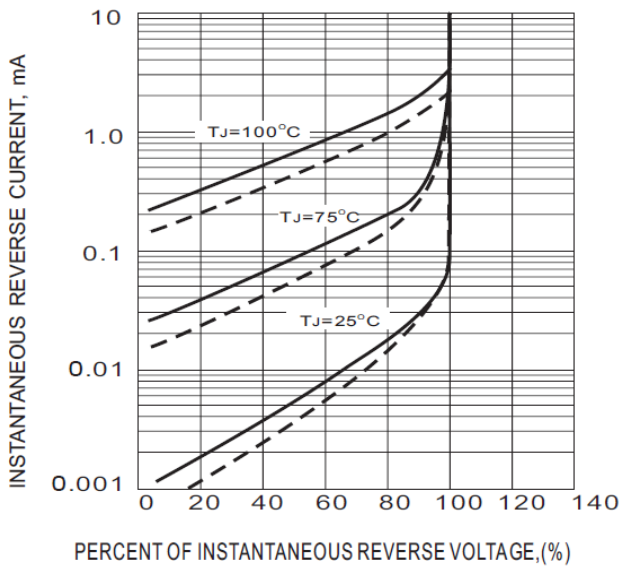


Fig.3- TYPICAL REVERSE CHARACTERISTICS

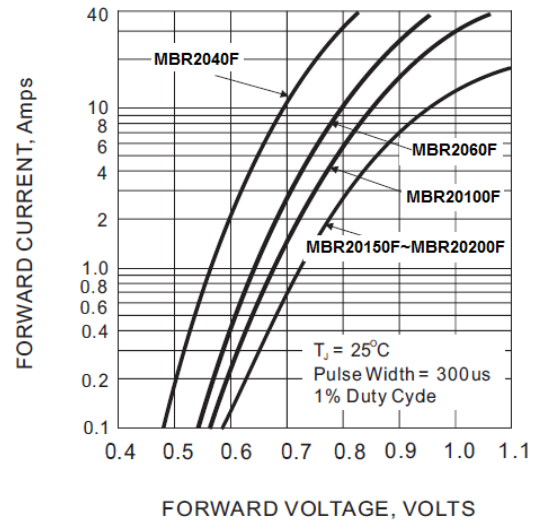


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS