

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

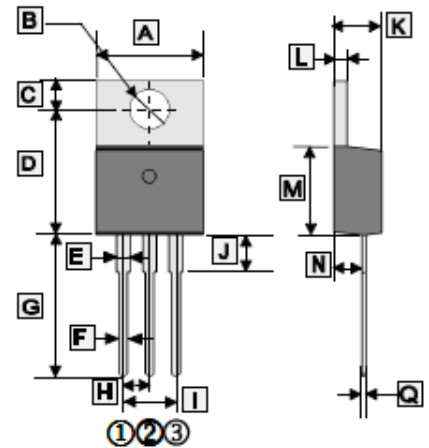
MECHANICAL DATA

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

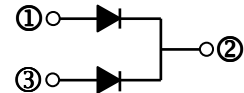
ORDER INFORMATION

Part Number	Type
MBR3045	Lead (Pb)-free
MBR3045-C	Lead (Pb)-free and Halogen-free

TO-220J



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	9.57	10.57	I	4.68	5.48
B	3.54	4.14	J	2.95	3.96
C	2.54	2.94	K	4.27	4.87
D	11.86	13.26	L	1.07	1.47
E	0.97	1.57	M	8.0	10.0
F	0.51	1.11	N	2.03	2.92
G	12.7	13.8	Q	0.30	0.65
H	2.540 TYP.				



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
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS Voltage	V_{RMS}	31.5	V
Maximum DC Blocking Voltage	V_{DC}	45	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	V
Maximum DC Reverse Current @Rated DC Blocking Voltage	I_R	$T_J=25^\circ\text{C}$	0.05
		$T_J=125^\circ\text{C}$	20
Typical Thermal Resistance	$R_{\theta JC}$	2	$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55~150	$^\circ\text{C}$

CHARACTERISTIC CURVES

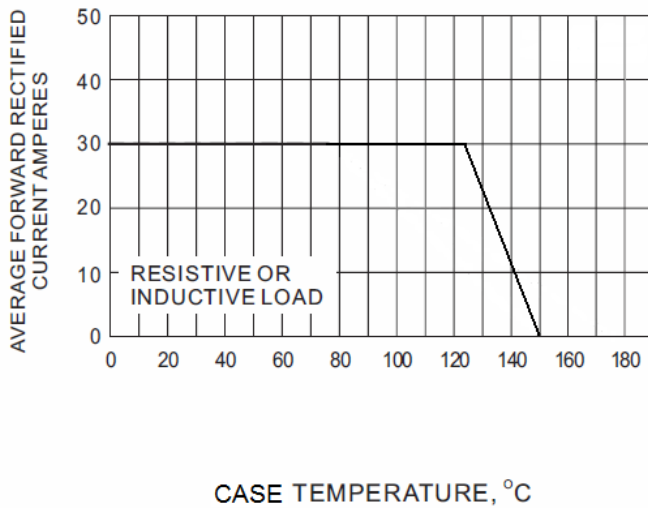


Fig.1- FORWARD CURRENT DERATING CURVE

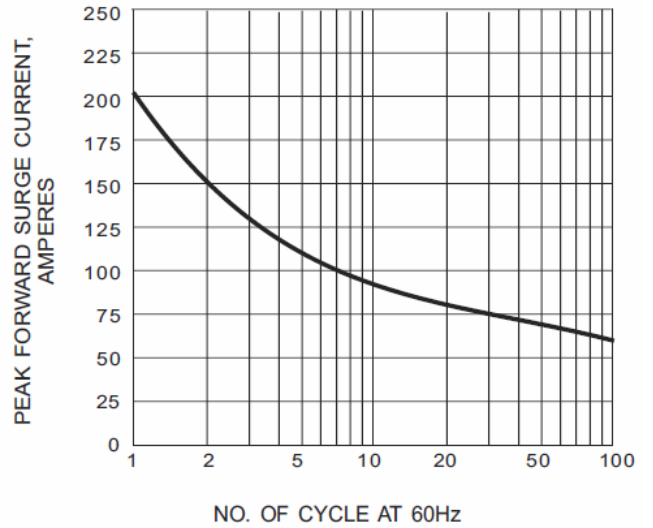


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

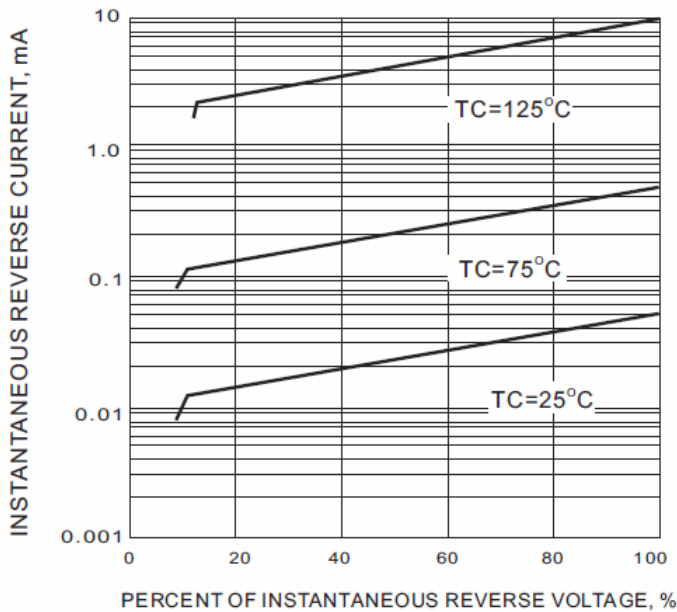


Fig.3- TYPICAL REVERSE CHARACTERISTIC

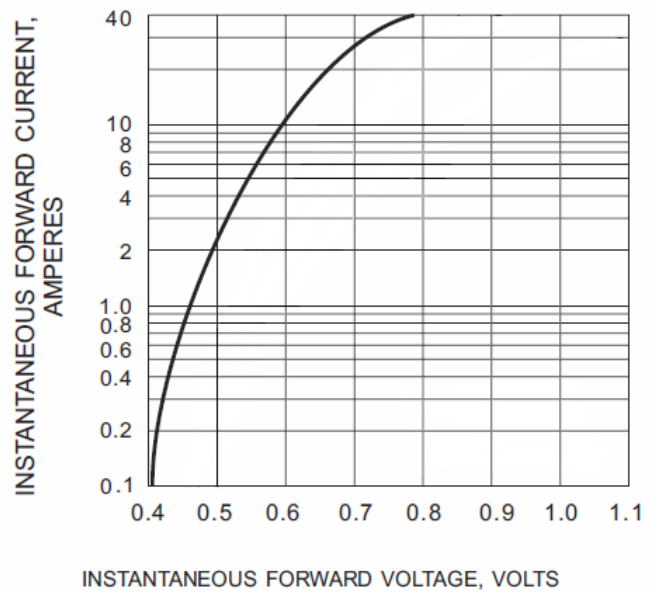


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC