

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

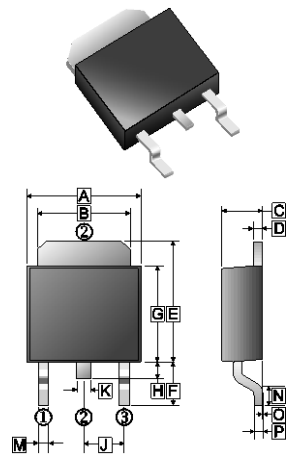
FEATURES

- 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-252(D-Pack) Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: As Marked
- Mounting position: Any

TO-252(D-PACK)



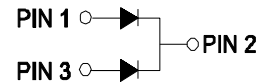
PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-252	2.5K	13 inch

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.30	6.90	J	2.30	REF.
B	4.95	5.53	K	0.89	REF.
C	2.10	2.50	M	0.45	1.14
D	0.40	0.90	N	1.55	TYP.
E	6.00	7.70	O	0	0.15
F	2.90	REF.	P	0.58	REF.
G	5.40	6.40			
H	0.60	1.20			

ORDER INFORMATION

Part Number	Type
MBR2040D1-C~MBR20200D1-C	Lead (Pb)-free and Halogen-free



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	Part Number						Unit
		MBR 2040D1-C	MBR 2045D1-C	MBR 2060D1-C	MBR 20100D1-C	MBR 20150D1-C	MBR 20200D1-C	
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 see fig.1	$I_{F(AV)}$	20						A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	100						A
Maximum Forward Voltage @10A per leg	V_F	0.7	0.8	0.85	0.92			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_J=25^{\circ}C$	0.05						mA
	$T_J=125^{\circ}C$	20						
Typical Thermal Resistance	$R_{\theta JC}$	6						°C/W
Operating & Storage Temperature	T_J, T_{STG}	-50~150						°C

RATINGS AND CHARACTERISTIC CURVES

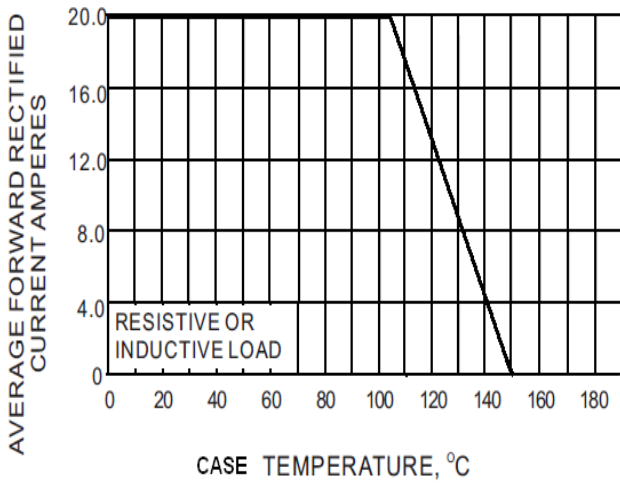


Fig.1- FORWARD CURRENT DERATING CURVE

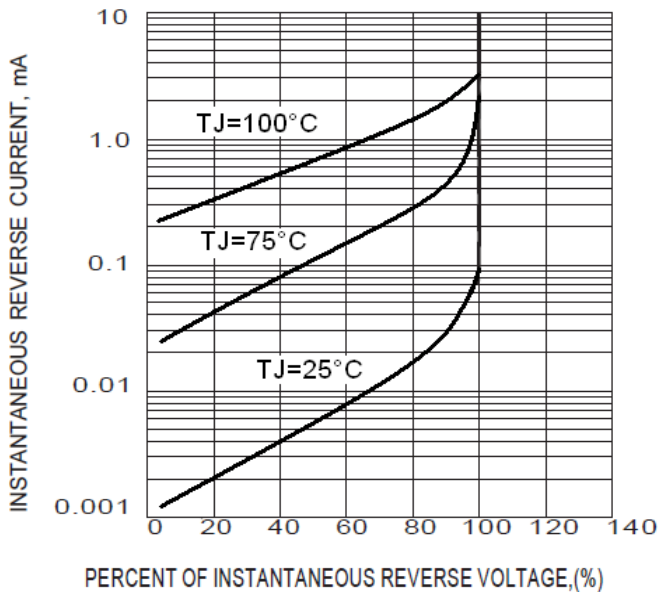


Fig.3- TYPICAL REVERSE CHARACTERISTICS

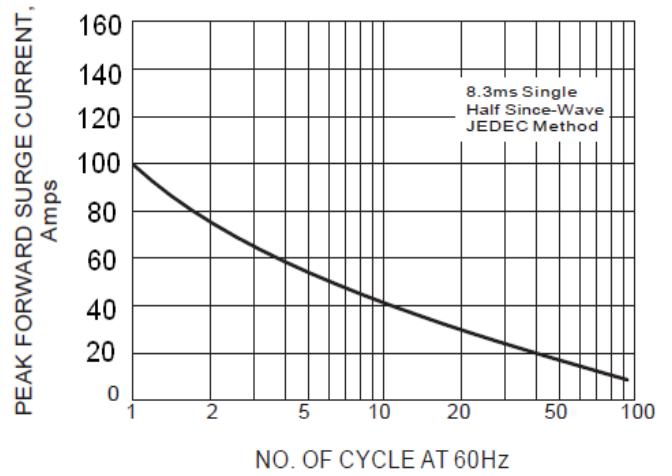


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

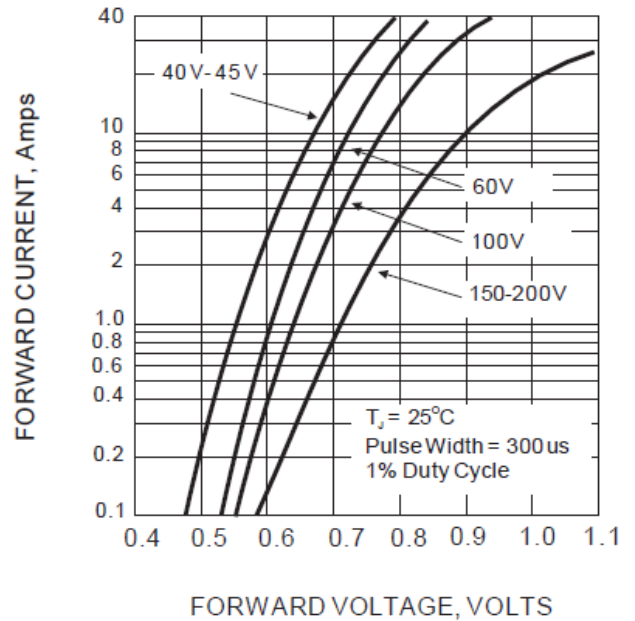


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

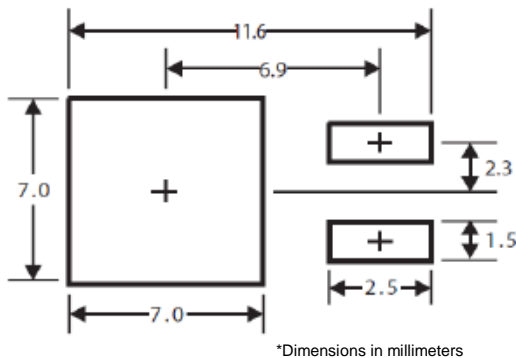


Fig.5- MOUNTING PAD LAYOUT