

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-263(D²-Pack) Molded Plastic
- Terminals: Solder Plated, Solderable Per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting Position: Any

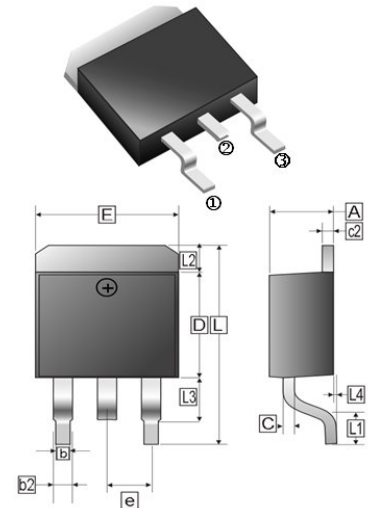
PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-263	0.8K	13 inch

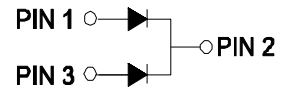
ORDER INFORMATION

Part Number	Type
MBR4040D~MBR40200D	Lead (Pb)-free
MBR4040D-C~MBR40200D-C	Lead (Pb)-free and Halogen-free

TO-263(D²-PACK)



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.00	4.87	c2	1.07	1.65
b	0.51	1.01	b2	1.34 REF	
L4	0.00	0.30	D	8.00	9.65
C	0.30	0.74	e	2.54 REF	
L3	1.50 REF		L	14.60	16.10
L1	2.50 REF		L2	1.27 REF	
E	9.60	10.67			



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 4040D	MBR 4060D	MBR 40100D	MBR 40150D	MBR 40200D	
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	I _F	40					A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	280					A
Maximum Forward Voltage @20A Per Leg	V _F	0.7	0.8	0.85	0.92		V
Maximum DC Reverse Current @Rated DC Blocking Voltage	T _J =25°C	0.05					mA
	T _J =125°C	20					
Typical Thermal Resistance	R _{θJC}	4					°C/W
Operating & Storage Temperature	T _J , T _{STG}	-55~150					°C

RATINGS AND CHARACTERISTIC CURVES

Fig.1- FORWARD CURRENT DERATING CURVE

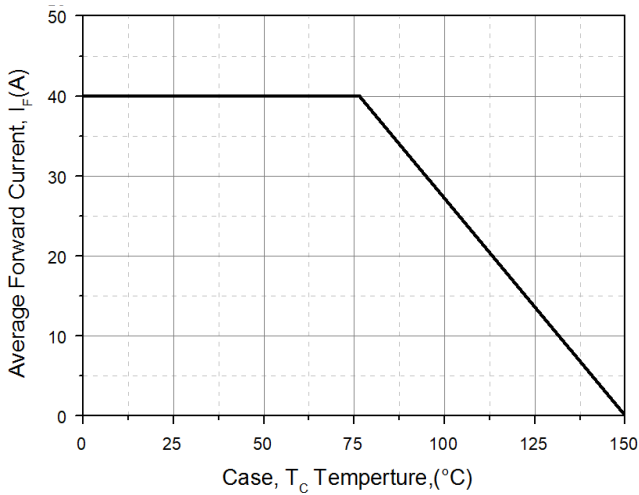


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

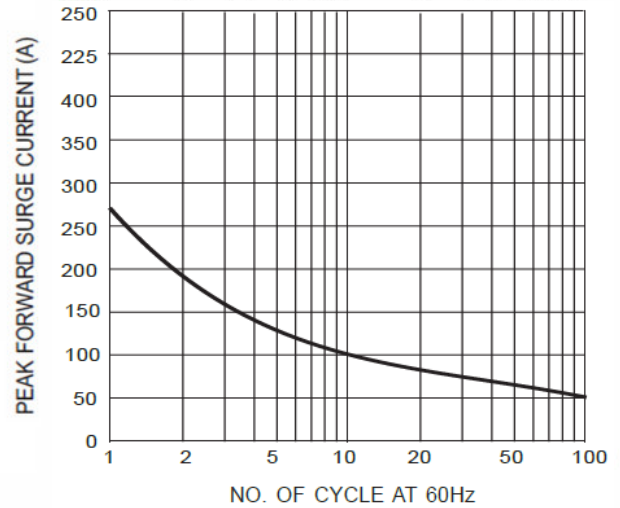


Fig.3- TYPICAL REVERSE CHARACTERISTIC

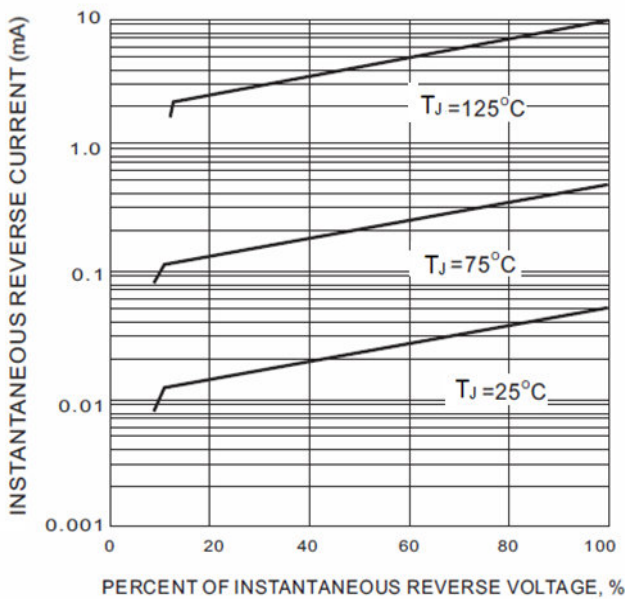
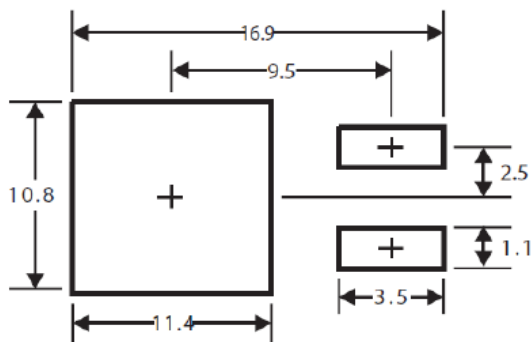
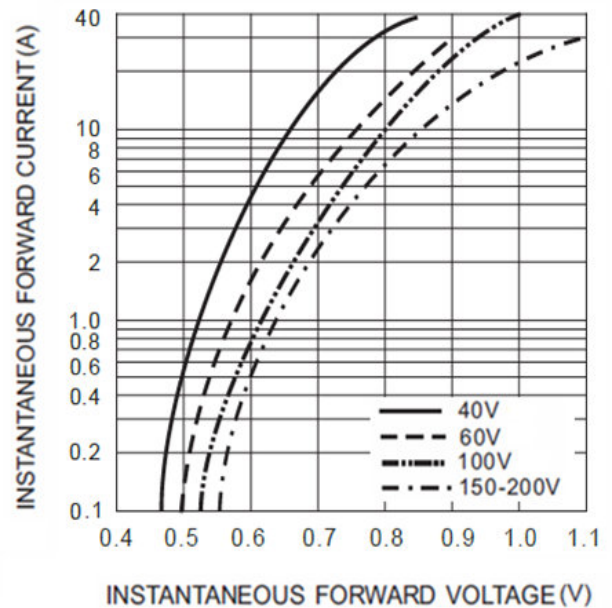


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC



*Dimensions in millimeters

Fig.5- MOUNTING PAD LAYOUT