

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

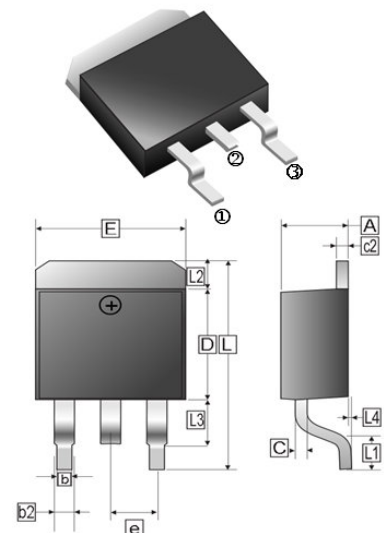
PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-263	0.8K	13 inch

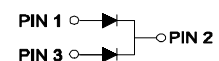
ORDER INFORMATION

Part Number	Type
MBR2040D~MBR20200D	Lead (Pb)-free
MBR2040D~MBR20200D-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	8.0	9.65
C	0.30	0.74	e	2.54	REF
L3	1.50	REF	L	14.6	16.1
L1	2.5	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 2040D	MBR 2060D	MBR 20100D	MBR 20150D	MBR 20200D	
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	$T_J=25^\circ\text{C}$	0.05		0.02			mA
	$T_J=125^\circ\text{C}$	20		20			
Typical Thermal Resistance	$R_{\theta Jc}$	3					°C/W
Operating & Storage Temperature	T_J, T_{STG}	-50~150					°C

RATINGS AND CHARACTERISTIC CURVES

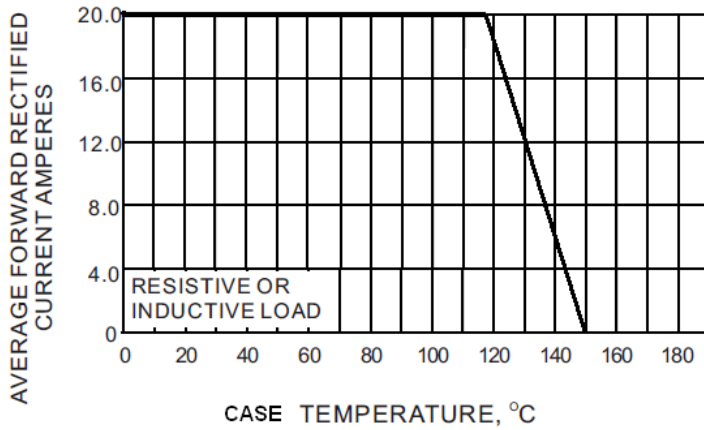


Fig.1- FORWARD CURRENT DERATING CURVE

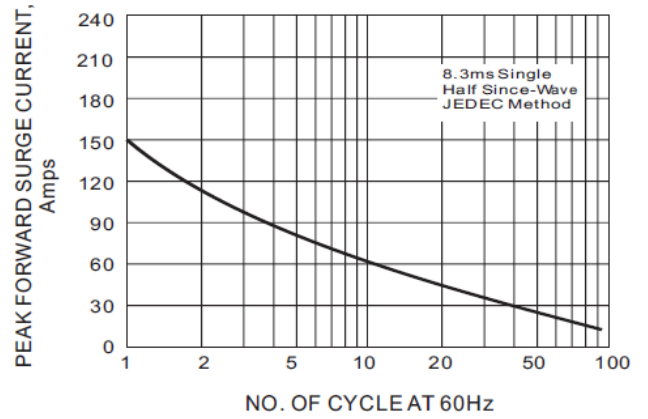


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

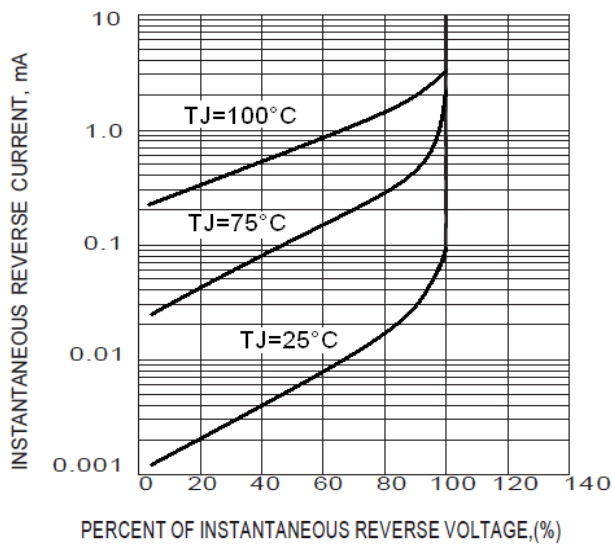


Fig.3- TYPICAL REVERSE CHARACTERISTICS

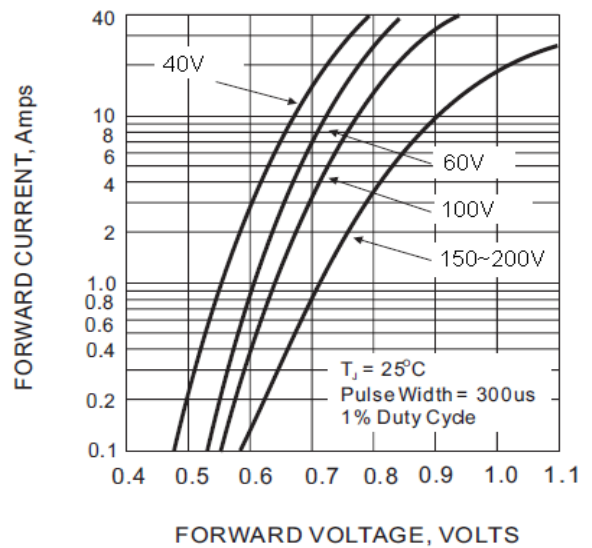


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS