



MBR2040 THRU MBR20200

Schottky Barrier Rectifiers

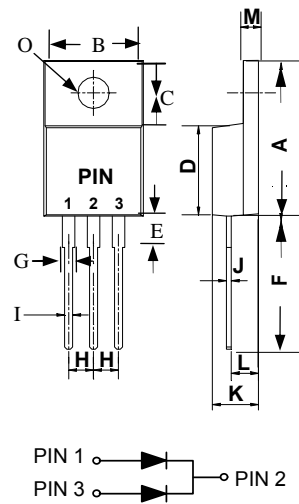
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. 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.
- Lead free in comply with EU RoHS

MECHANICAL DATA

- Case: TO-220AB molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any

TO-220AB



TO-220AB		
DIM.	MIN.	MAX.
A	14.50	15.50
B	9.90	10.40
C	6.35	6.65
D	7.85	8.75
E	2.90	3.90
F	12.80	—
G	1.10	1.40
H	2.35	2.55
I	0.45	0.95
J	0.40	0.65
K	4.35	4.75
L	2.55	3.15
M	1.25	1.45
O	∅3.65	∅3.95

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

PARAMETER	SYMBOL	MBR 2040	MBR 2045	MBR 2050	MBR 2060	MBR 2080	MBR 20100	MBR 20150	MBR 20200	UNITS	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	45	50	60	80	100	150	200	V	
Maximum RMS Voltage	V_{RMS}	28	31.5	35	42	56	70	105	140	V	
Maximum DC Blocking Voltage	V_{DC}	40	45	50	60	80	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}	150								A	
Maximum Forward Voltage at 10A, per leg	V_F	0.65		0.75		0.85		0.92		V	
Maximum DC Reverse Current $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=125^\circ\text{C}$	I_R	0.05 20				0.02 20				mA	
Typical Thermal Resistance	$R_{\theta JC}$	2								$^\circ\text{C} / \text{W}$	
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-50 to +150							-55 to +175		$^\circ\text{C}$



MBR2040 THRU MBR20200

Schottky Barrier Rectifiers

Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1- FORWARD CURRENT DERATING CURVE

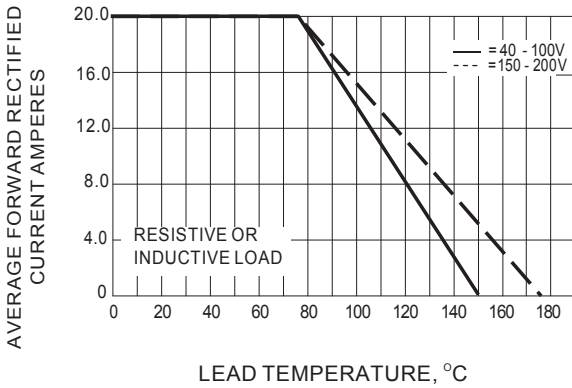


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

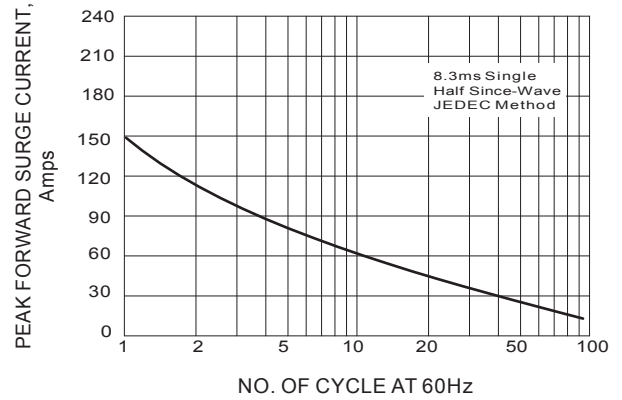


Fig.3- TYPICAL REVERSE CHARACTERISTICS

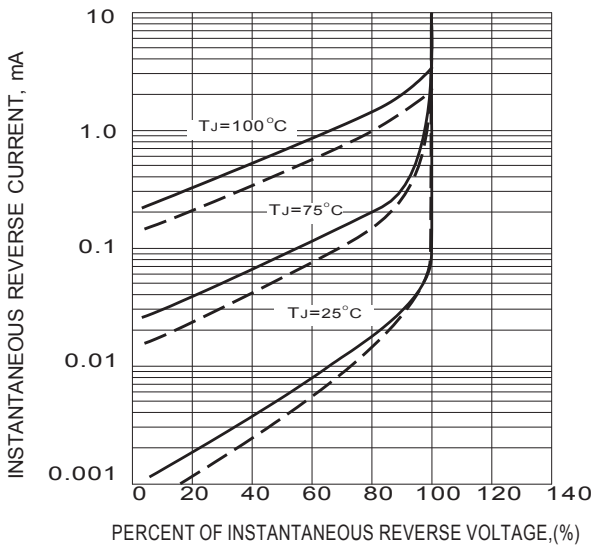


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

