LITE-ON SEMICONDUCTOR

MBR1070 thru 10100

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE **- 70** to **100** Volts
FORWARD CURRENT **- 10** Amperes

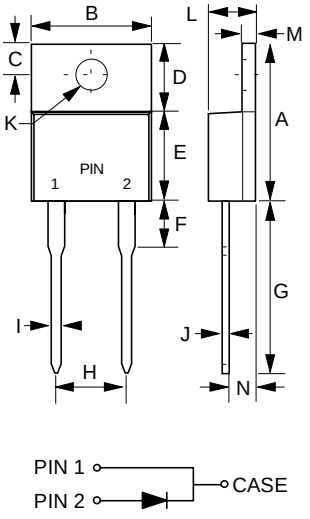
FEATURES

- Metal of silicon rectifier,majority carrier conducton
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free whelling,and polarity protection applications

MECHANICAL DATA

- Case : TO-220AC molded plastic
- Polarity : As marked on the body
- Weight : 0.08 ounces, 2.24 grams
- Mounting position : Any

TO-220AC



TO-220AC		
DIM.	MIN.	MAX.
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	-	6.35
G	12.70	14.73
H	4.83	5.33
I	0.51	1.14
J	0.30	0.64
K	3.53 ∅	4.09 ∅
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	MBR1070	MBR1080	MBR1090	MBR10100	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	70	80	90	100	V
Maximum RMS Voltage	V_{RMS}	49	56	63	70	V
Maximum DC Blocking Voltage	V_{DC}	70	80	90	100	V
Maximum Average Forward Rectified Current (See Fig.1) @T_C=135℃	$I_{(AV)}$	10				A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)	I_{FSM}	150				A
Voltage Rate of Change (Rated VR)	dv/dt	10000				V/us
Maximum Forward Voltage (Note 1) I_F=10A @ T_J=25℃ I_F=10A @ T_J=125℃ I_F=20A @ T_J=125℃	V_F	0.85 0.75 0.80				V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T_J=25℃ @T_J=125℃	I_R	0.1 100				mA
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	2.0				℃/W
Typical Junction Capacitance (Note 3)	C_J	1100				pF
Operating Temperature Range	T_J	-55 to +150				℃
Storage Temperature Range	T_{STG}	-55 to +175				℃

NOTES : 1.300us Pulse Width, 2% Duty Cycle.
2.Thermal Resistance Junction to Case.
3.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

REV. 0, 04-Mar-2002, KTHA12

FIG.1 - FORWARD CURRENT DERATING CURVE

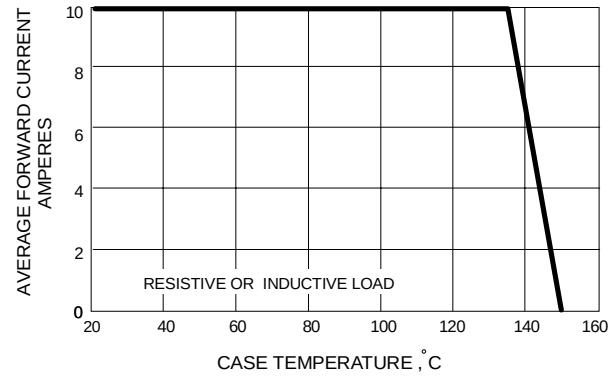


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

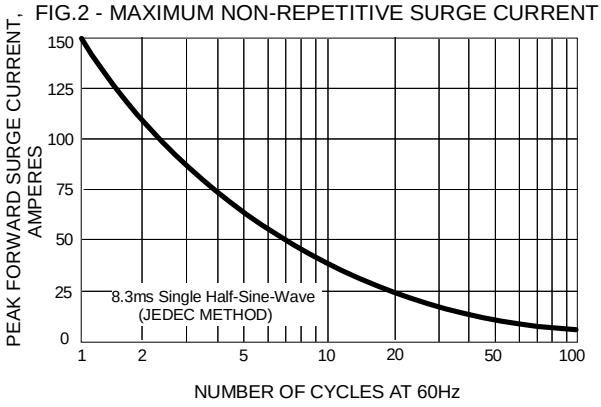


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

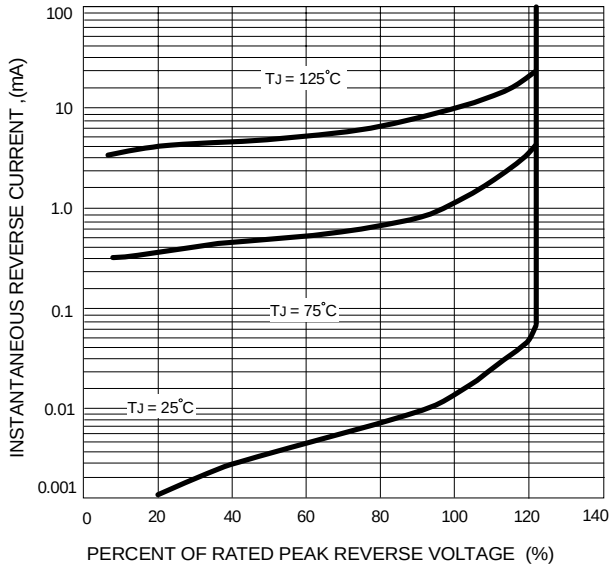


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

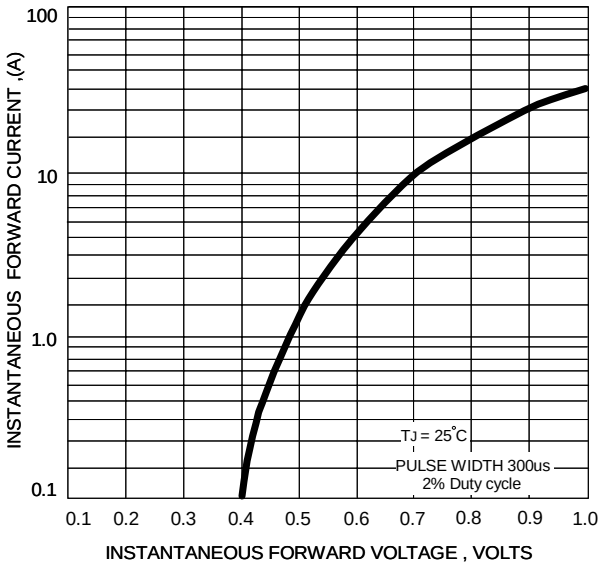


FIG.5 - TYPICAL JUNCTION CAPACITANCE