LITE-ON SEMICONDUCTOR

MBR2070CT thru 20100CT

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE **- 70** to **100** Volts
FORWARD CURRENT **- 20** Amperes

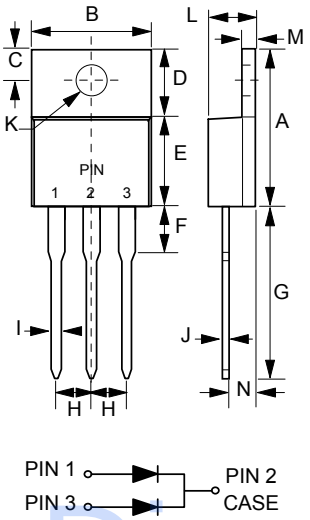
FEATURES

- 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-220AB molded plastic
- Polarity : As marked on the body
- Weight : 0.08 ounces, 2.24 grams
- Mounting position : Any
- Max. mounting torque = 0.5 N.m (5.1 Kgf.cm)

TO-220AB



TO-220AB		
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	2.29	2.79
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	MBR2070CT	MBR2080CT	MBR2090CT	MBR20100CT	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 =120℃	$I_{(AV)}$	20				A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	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 =125℃ I_F=10A @ T_J =25℃ I_F=20A @ T_J =125℃ I_F=20A @ T_J =25℃	V_F	0.75 0.85 0.85 0.95				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 per element (Note 3)	C_J	250				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. 6, Aug-2007, KTHC09

RATING AND CHARACTERISTIC CURVES
MBR2070CT thru MBR20100CT

FIG.1 - FORWARD CURRENT DERATING CURVE

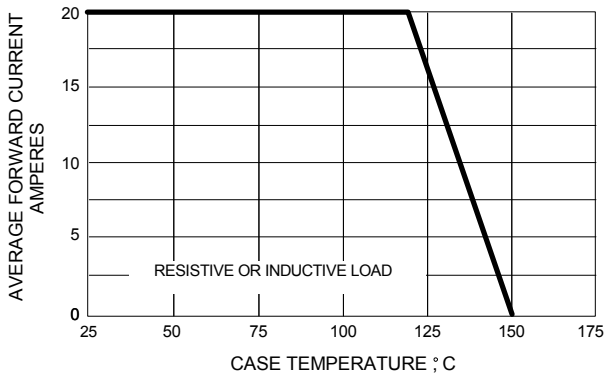


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

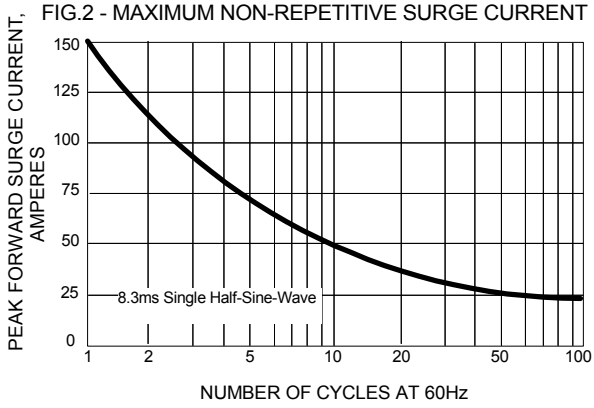


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

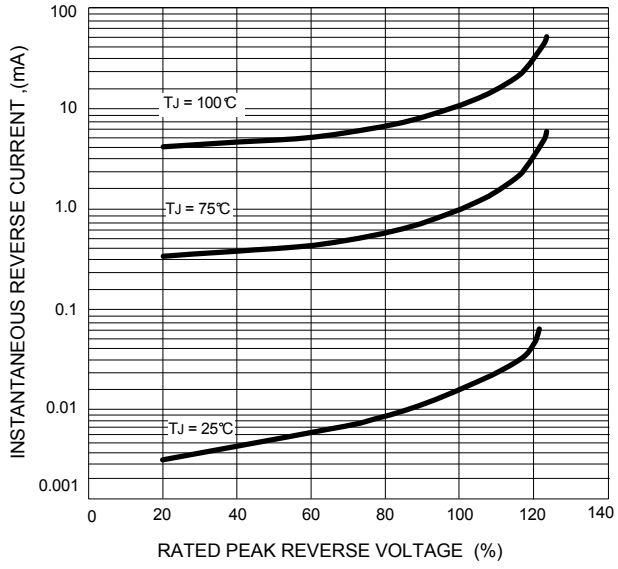


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

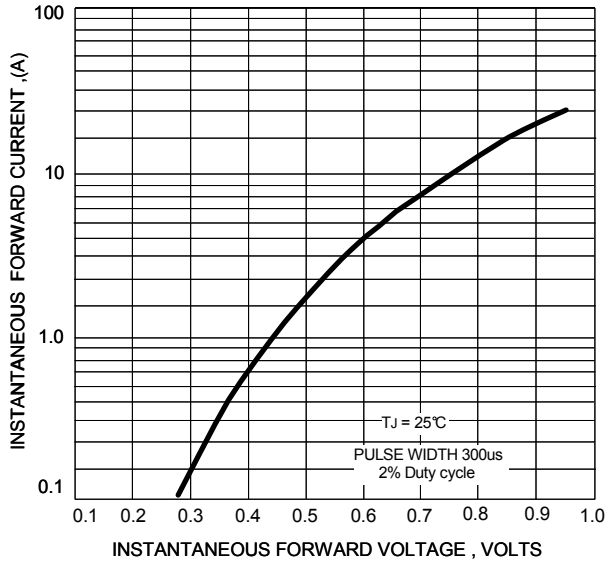


FIG.5 - TYPICAL JUNCTION CAPACITANCE

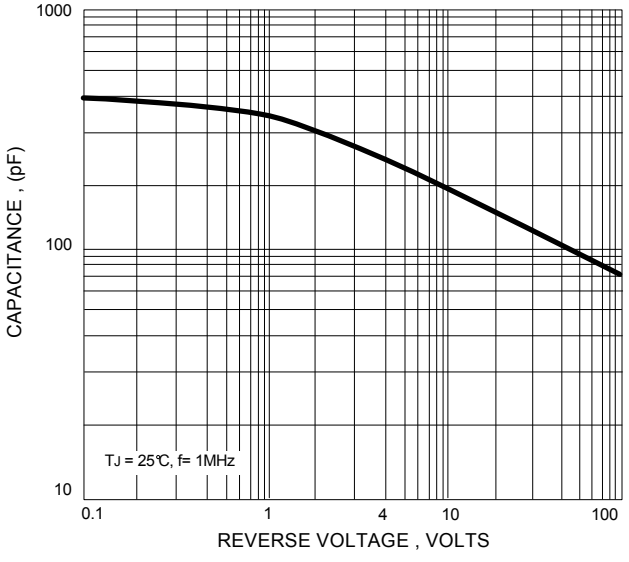


FIG.6 - MAXIMUM NON REPETITIVE SURGE PEAK FORWARD CURRENT VERSUS OVERLOAD DURATION PER DIODE