LITE-ON SEMICONDUCTORS

MBR20100CTW

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 20 Amperes

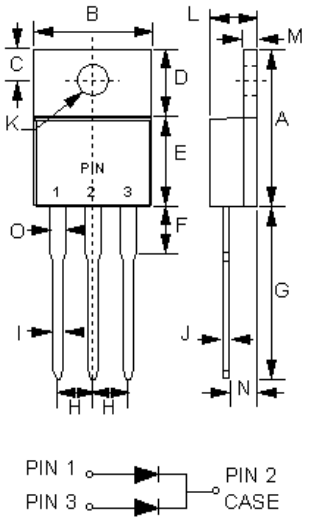
FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High surge&current capability, low VF
- For use in low voltage, high frequency inverters, free wheeling, 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)
- Case Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.)
- Terminal finish : Matted plating

TO-220AB



TO-220AB		
DIM.	MIN.	MAX.
A	14.40	15.20
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	-	4.20
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
O	1.14	1.70
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOL	MBR20100CTW	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS Voltage	V_{RMS}	70	V
Maximum DC Blocking Voltage	$V_{DC(AV)}$	100	V
Average Rectified Output Current @Tc=110°C	I_F	20	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150	A
Maximum Forward Voltage Note(1) IF=10A@ Tj=25°C IF=10A@ Tj=125°C IF=20A@ Tj=25°C IF=20A@ Tj=125°C	V_F	0.85 0.75 0.95 0.85	V
Maximum DC Reverse Current at Rated DC Blocking Voltage Tj=25°C Tj=125°C	IR	0.01 10	mA
Typical thermal resistance Junction to Case (Note 3)	$R_{\Theta JC}$	2.5	°C/W
Typical thermal resistance Junction to Lead (Note 3)	$R_{\Theta JL}$	2.5	°C/W
Typical Thermal Resistance (Note 2)	C_J	250	pF
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

REV. 2, Feb-2012, KTHC96

Note :

(1) 300us Pulse Width, 2% Duty Cycle.
(2) Measured at 1.0MHz and applied reverse voltage of 4.0 V_{DC}.
(3) Thermal Resistance test performed in accordance with JESD-51. Unit mounted on 0.75t glass-epoxy substrate with 75 x 75 x 2 copper plate heatsink, pad.

RATING AND CHARACTERISTIC CURVES
MBR20100CTW

LITEON

FIG.1- FORWARD CURRENT DERATING CURVE

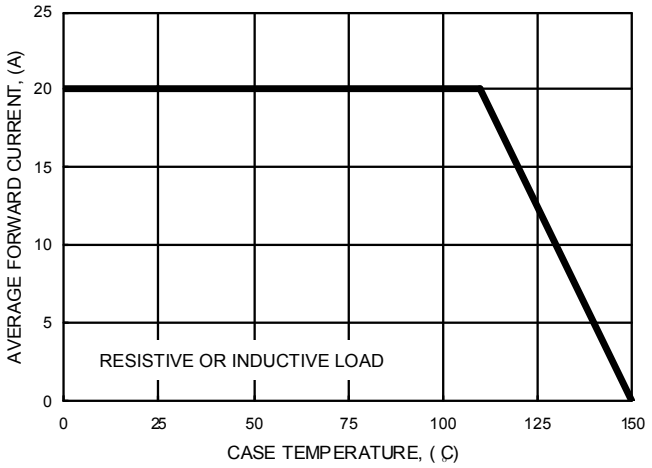


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

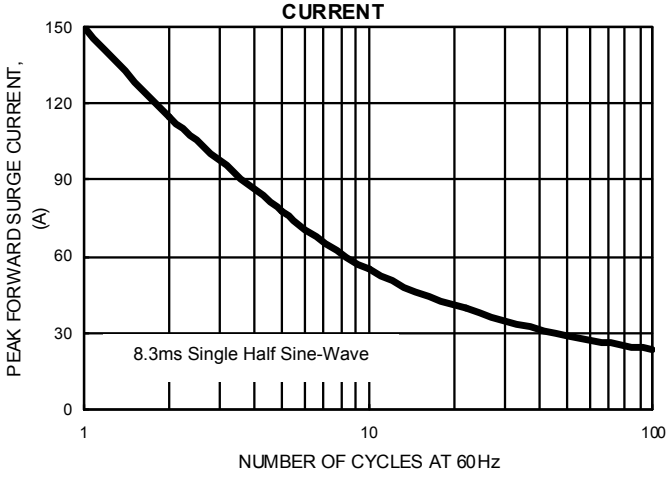


FIG.3- TYPICAL JUNCTION CAPACITANCE

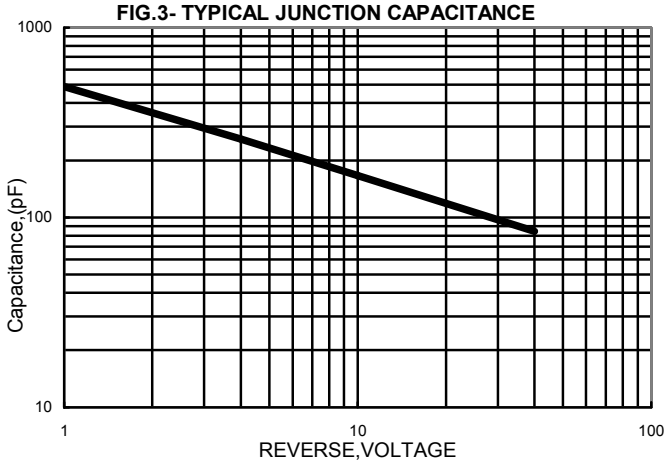


FIG.4- TYPICAL FORWARD CHARACTERISTICS

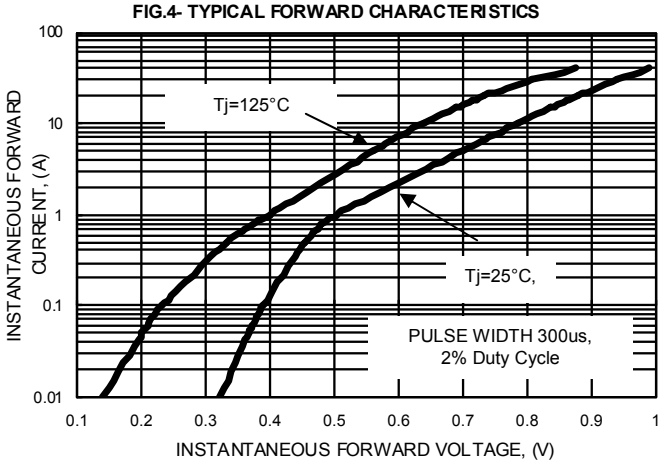
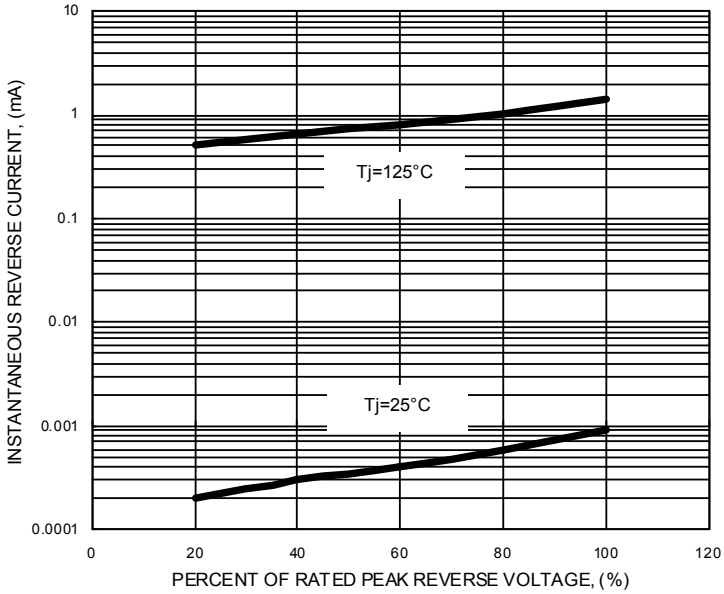


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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