LITE-ON SEMICONDUCTORS

MBRF10100

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 10 Amperes

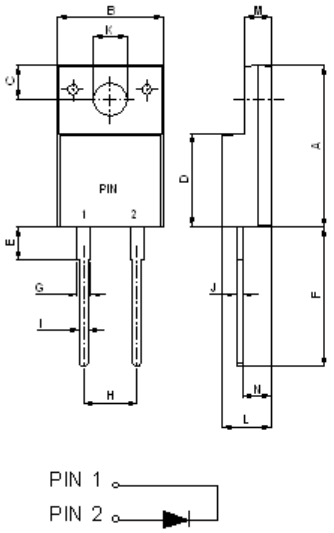
FEATURES

- 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: ITO-220AC molded plastic
- Plastic package has UL flammability classification 94V-0
- Terminals: Lead Free Finish, RoHS Compliant, solderable per MIL-STD-202 Method 208
- Moisture sensitivity: level 1 per J-STD-020D
- Polarity: As marked on the body
- Weight: 1.7 grams
- Mounting position: Any
- Max. mounting torque = 0.5 N.m (5.1 Kgf-cm)

ITO-220AC



ITO-220AC		
DIM.	MIN.	MAX.
A	15.50	16.50
B	10.0	10.40
C	3.00	3.50
D	9.00	9.30
E	2.90	3.60
F	13.46	14.22
G	1.15	1.70
H	4.83	5.33
I	0.75	1.00
J	0.45	0.70
K	3.00 ⌀	3.30 ⌀
L	4.36	4.77
M	2.48	2.80
N	2.50	2.80
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	MBRF10100	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS Voltage	V_{RMS}	71	V
Maximum DC Blocking Voltage	V_{DC}	100	V
Average Rectified Output Current @Tc=105°C	I_F	10	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150	A
Maximum Forward Voltage IF=10A@ Tj=25°C Note(1) IF=10A@ Tj=125°C	V_F	0.85 0.75	V
Maximum DC Reverse Current at Rated DC Blocking Voltage Tj=25°C Tj=125°C	IR	0.1 60	mA
Typical Junction Capacitance (2)	C_J	250	pF
Typical thermal resistance Junction to Case (3)	$R_{\Theta JC}$	5.0	°C/W
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

REV. 1, Oct-2010, KTHC87

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 Junction to Case, device mounted on L75mm x W75mm x H1.6mm Copper Plate Heat Sink,

RATING AND CHARACTERISTIC CURVES
MBRF10100

FIG.1- FORWARD CURRENT DERATING CURVE

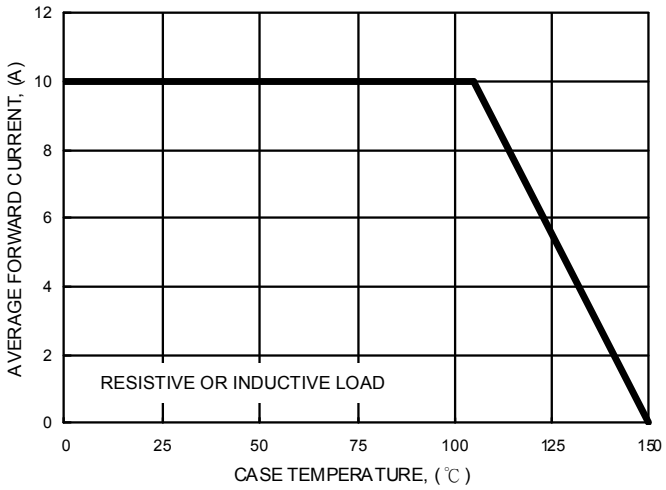


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

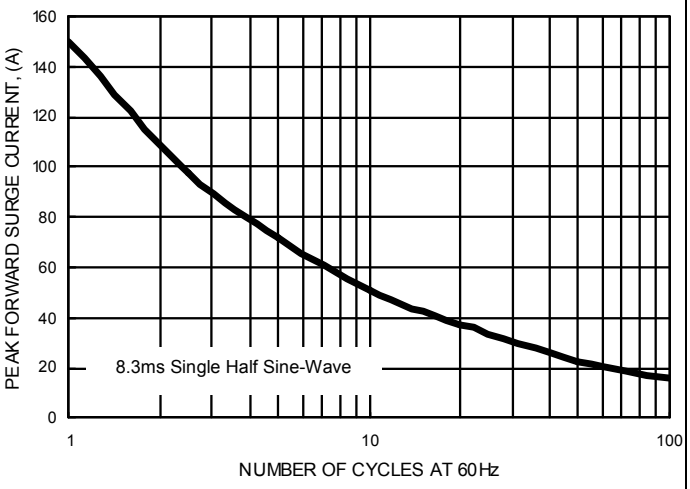


FIG.3- TYPICAL JUNCTION CAPACITANCE

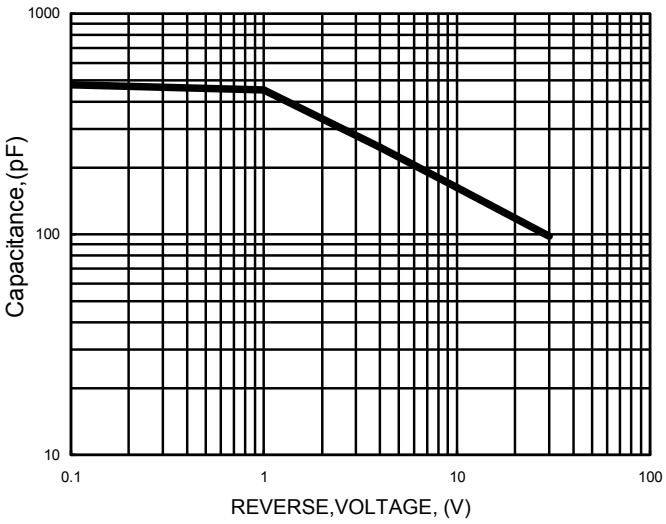


FIG.4- TYPICAL FORWARD CHARACTERISTICS

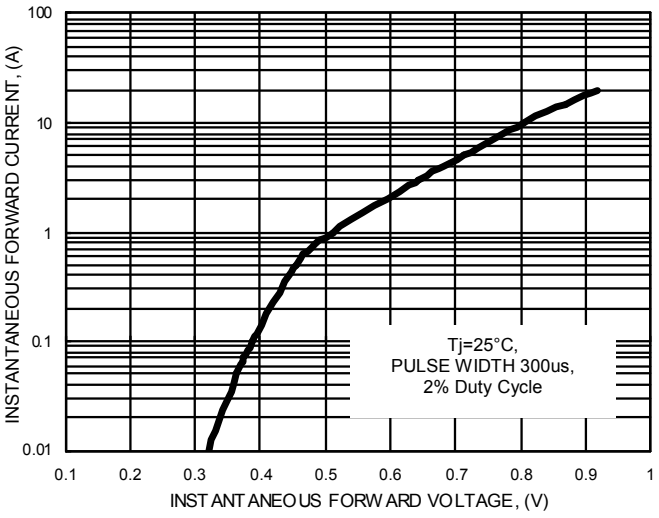
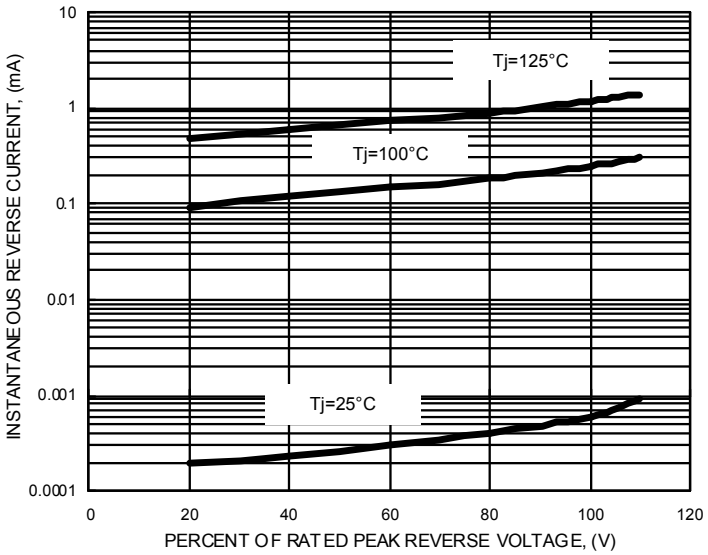


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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