LITE-ON SEMICONDUCTOR

MBRF2070CT thru 20100CT

SCHOTTKY BARRIER RECTIFIER

REVERSE VOLTAGE – 70 to 100 Volts
FORWARD CURRENT – 20 Amperes

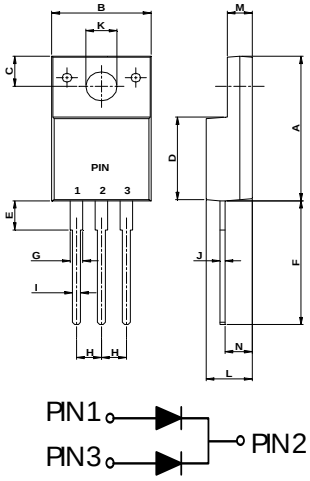
FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low V_F
- High surge capacity
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case :ITO-220AB molded plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free"
- Polarity : As marked on the body
- Weight : 1.649grams(Approximate)
- Lead free finish, RoHS compliant
- Mounting position : Any
- Max. mounting torque=0.5N.m(5.1Kgf.cm)

ITO-220AB



ITO-220AB		
DIM	MIN	MAX
A	15.50	16.50
B	10.00	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	2.40	2.70
I	0.75	1.00
J	0.45	0.70
K	3.00φ	3.30φ
L	4.36	4.77
M	2.48	2.80
N	2.50	2.80
All dimensions in millimeters		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwis e specified.

ABSOLUTE RATINGS

PARAMETER		SYMBOL	MBRF2070CT	MBRF2090CT	MBRF20100CT	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	70	90	100	V
Maximum DC blocking voltage		V_{DC}	70	90	100	V
Maximum Average rectified output current	@ T_C = 120°C	$I_{(AV)}$	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
Peak Repetitive Reverse Current, tp=2us, Square ,F=1KHz	T_J=25℃	I_{RRM}	1			A
Forward Power Dissipation (per diode)		P_D	8.5			W
Dielectric Strengh from terminals to case, AC with t=1 minute, RH<30%		Vdis	2000			V
Operating temperature range		T_J	-55 to +150			℃
Storage temperature range		T_{STG}	-55 to +175			℃

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	MAX	UNIT
Forward voltage (Note1)	I_F=10A	T_J=25℃	V_F	0.85	V
		T_J =125℃		0.75	
	I_F=20A	T_J =25℃		0.95	
		T_J =125℃		0.85	
Maximum DC reverse current at Rated Blocking voltage		T_J =25℃	I_R	0.01	mA
		T_J =125℃		10	
Typical junction capacitance (Note 3)			C_j	350	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 2)	$RthJ_c$	2.0	℃/W

Note :
(1) 300us pulse width, 2% duty cycle.
(2) Device mounted on 135 mm x 135 mm x 8 mm Aluminum Plate Heatsink
(3) Measured at 1.0MHz and applied reverse voltage of 4.0 DC.

REV. 8, Sep.-2016, KTHC24

RATING AND CHARACTERISTIC CURVES
MBRF2070 thru MBRF20100CT

LITEON

FIG.1- FORWARD CURRENT DERATING CURVE

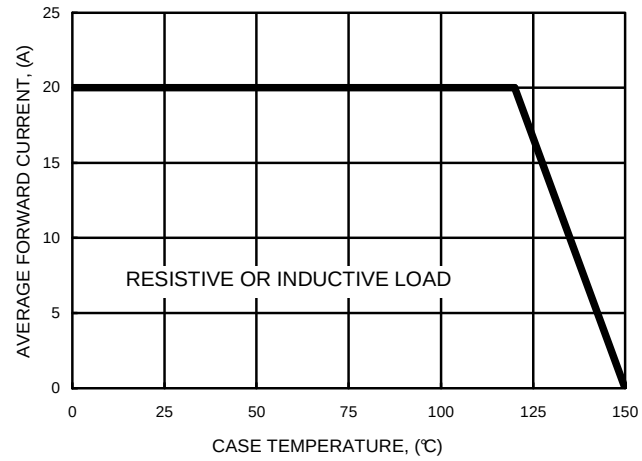


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

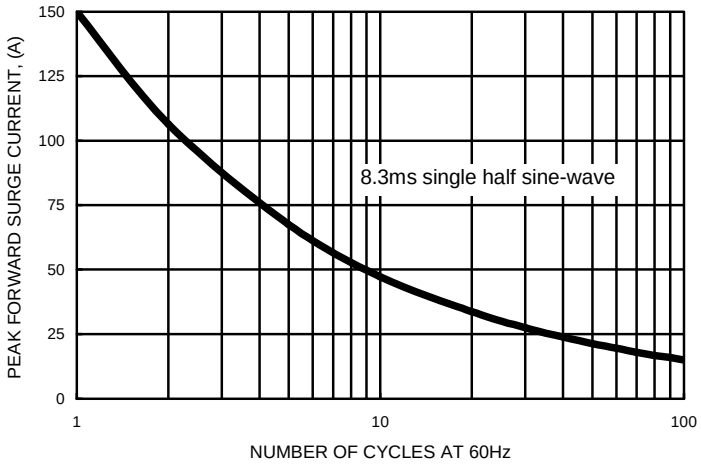


FIG.3- TYPICAL FORWARD CHARACTERISTICS

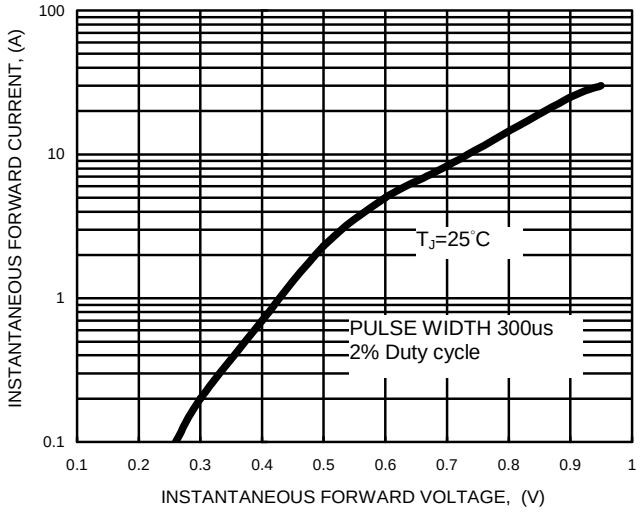


FIG.4- TYPICAL JUNCTION CAPACITANCE

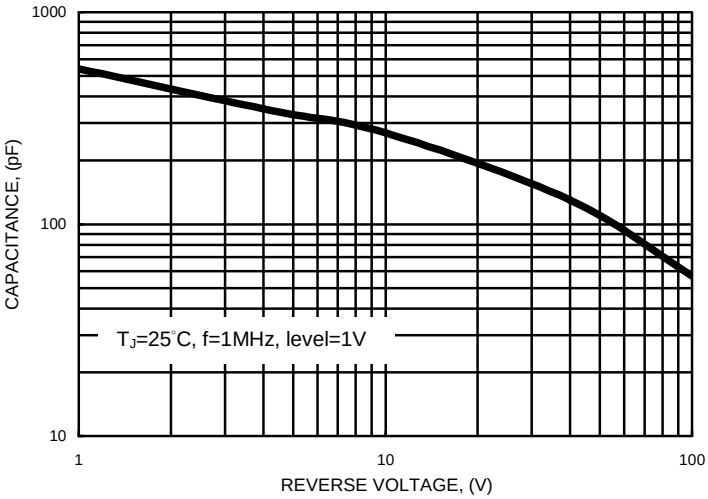


FIG.5- TYPICAL REVERSE CHARACTERISTICS

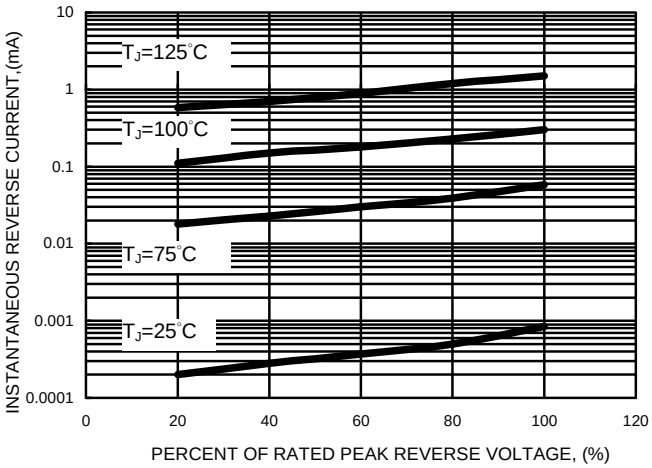
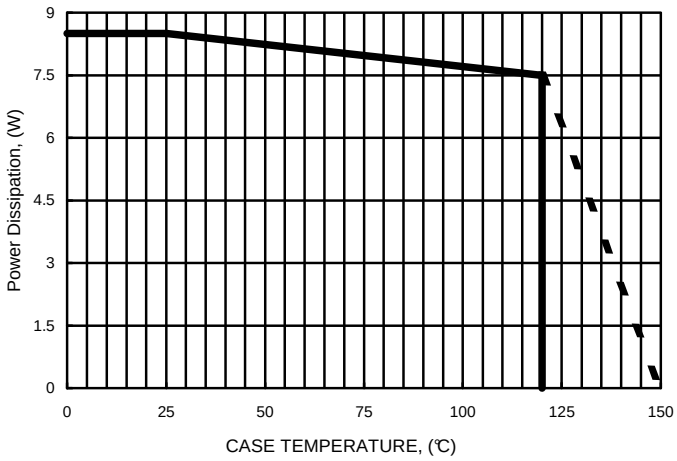


FIG.6- PD VS TEMPERATURE (per diode)



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