LITE-ON SEMICONDUCTOR

MBR3030PTL thru 3060PTL

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **60** Volts
FORWARD CURRENT - **30** Amperes

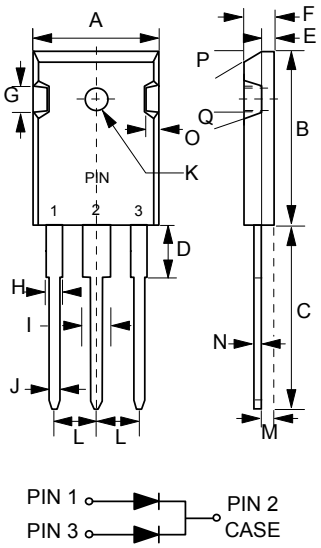
FEATURES

- 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-3P molded plastic
- Polarity : As marked on the body
- Weight : 0.2 ounces, 5.6 grams
- Mounting position : Any
- Max. mounting torque = 0.5 N.m (5.1 Kgf.cm)

TO-3P



TO-3P		
DIM.	MIN.	MAX.
A	15.75	16.25
B	21.25	21.75
C	19.60	20.10
D	3.78	4.38
E	1.88	2.08
F	4.87	5.13
G	4.4TYP.	
H	1.90	2.16
I	2.93	3.22
J	1.12	1.22
K	2.90 ⌀	3.20 ⌀
L	5.20	5.70
M	2.10	2.40
N	0.51	0.76
O	1.93	2.18
P	20°TYP	
Q	10°TYP	
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	MBR 3030PTL	MBR 3035PTL	MBR 3040PTL	MBR 3045PTL	MBR 3050PTL	MBR 3060PTL	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	35	40	45	50	60	V
Maximum RMS Voltage	V_{RMS}	21	24.5	28	31.5	35	42	V
Maximum DC Blocking Voltage	V_{DC}	30	35	40	45	50	60	V
Maximum Average Forward Rectified Current (See Fig.1) @T_C=110℃	$I_{(AV)}$	30						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	200						A
Voltage Rate of Change (Rated VR)	dv/dt	10000						V/us
Maximum Forward Voltage (Note 1) I_F=15A @ T_J=25℃ I_F=15A @ T_J=125℃ I_F=30A @ T_J=25℃ I_F=30A @ T_J=125℃	V_F	-		0.57 0.80 0.72		0.85 0.75 1.05 0.90		V
Maximum DC Reverse Current @T_J=25℃ at Rated DC Blocking Voltage @T_J=125℃	I_R	1 60				5 100		mA
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	5						°C/W
Typical Junction Capacitance per element (Note 3)	C_J	600						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. 4, Oct -2010, KTHD23

RATING AND CHARACTERISTIC CURVES
MBR3030PTL thru MBR3060PTL

FIG.1 - FORWARD CURRENT DERATING CURVE

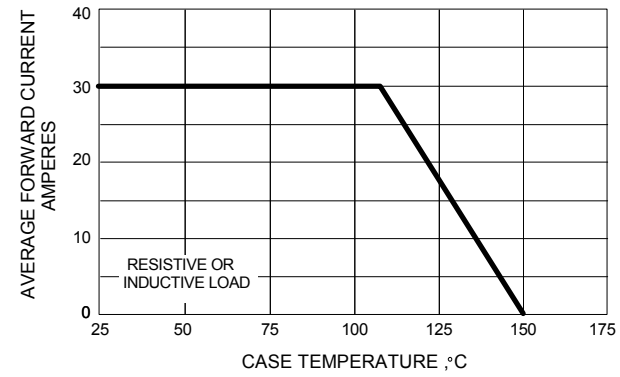


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

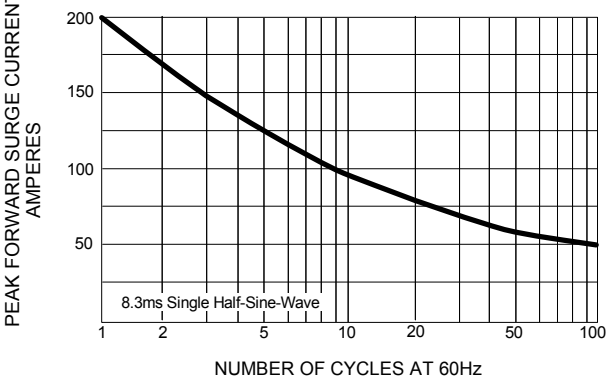


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

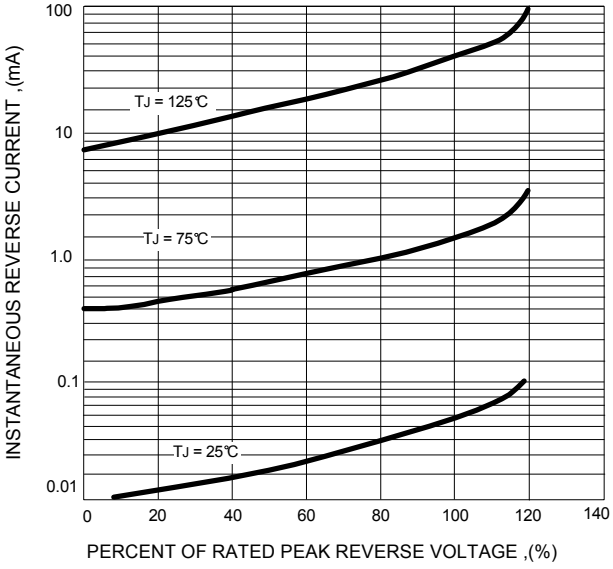


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

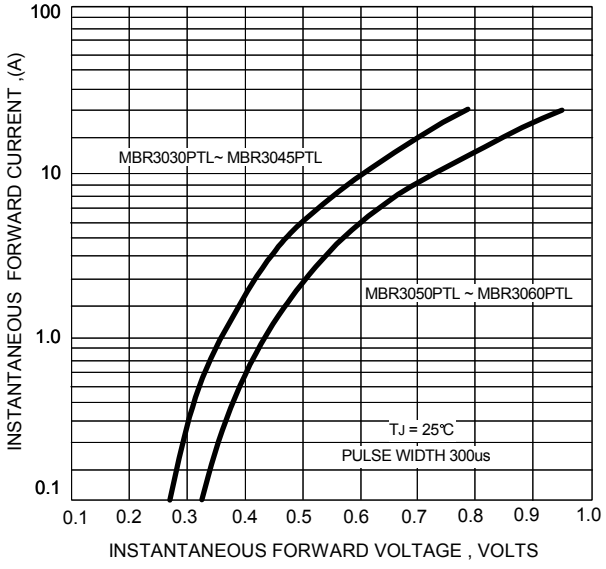
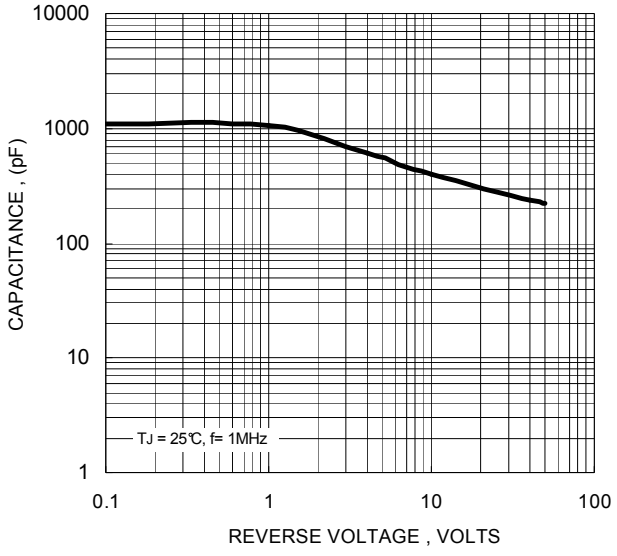


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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