LITE-ON SEMICONDUCTOR

MBR4060PTW

SCHOTTKY BARRIER RECTIFIER

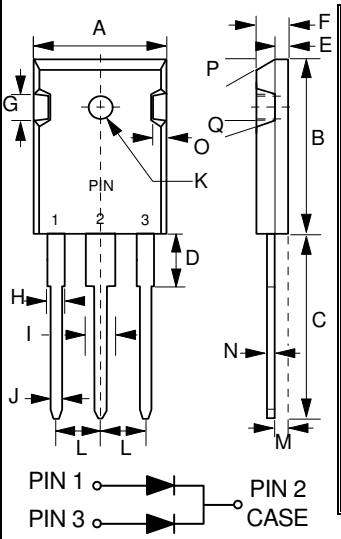
REVERSE VOLTAGE – 60 Volts
FORWARD CURRENT – 40 Amperes

FEATURES
- High Surge Capability
- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low V_F
- Qualification is according to AEC-Q101 Rev_C

APPLICATION
- Low voltage high frequency inverters
- Polarity protection application
- Freewheeling diodes

MECHANICAL DATA
- Case: JEDEC TO-247
- Case Material: "Green" molding compound, UL flammability classification 94V-0,(No Br. Sb. Cl.) "Halogen-free".
- Lead free finish, RoHS compliant
- Weight: 6.4 grams (Approximate)
- Marking code: MBR4060PTW

TO-247



TO-247		
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	4.4 TYP	
H	1.90	2.16
I	2.93	3.22
J	1.12	1.22
K	2.90Φ	3.20Φ
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°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER		SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	60	V
Maximum DC blocking voltage		V_{DC}	60	V
Maximum Average rectified output current	@T_C=120°C	$I_{(AV)}$	40	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.		I_{FSM}	400	A
Operating junction Temperature range		$T_{J,}$	-55 ~ +150	°C
Storage Temperature range		T_{STG}	-55 ~ +175	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS		SYMBOL	TYP	MAX	UNIT
Forward voltage (Note1)	I_F=20A	T_J=25°C T_J=125°C	V_F	-- 0.62	0.80 0.70	V
Leakage current	V_R=60V	T_J=25°C T_J=125°C	I_R	-- 1.19	0.1 100	mA
Typical junction capacitance (Note 2)			C_J	680		pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 3,4)	$RthJ_C$ $RthJ_L$	1 1	°C/W

Note :

(1) 300us pulse width, 2% duty cycle.
(2) Measured at 1.0MHz and applied voltage of 4.0V DC.
(3) Thermal resistance test performed in accordance with JESD-51.
(4) The unit mounted on copper heat sink 151.37mm x 151.37mm x 1.38mm

REV.-0 , Mar-2018, KTHC180

RATING AND CHARACTERISTIC CURVES
MBR4060PTW

LITEON

FIG.1 FORWARD CURRENT DERATING CURVE

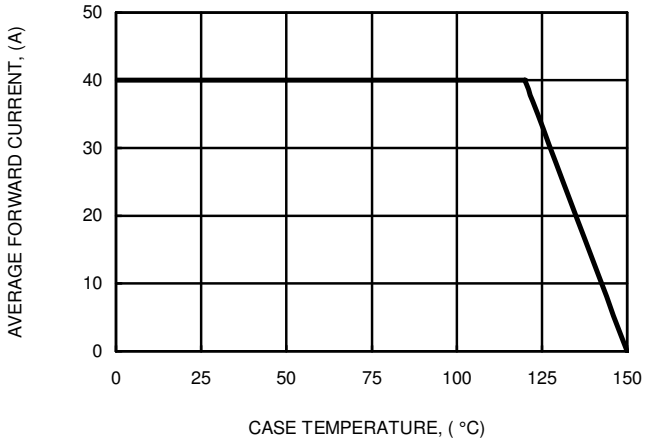


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

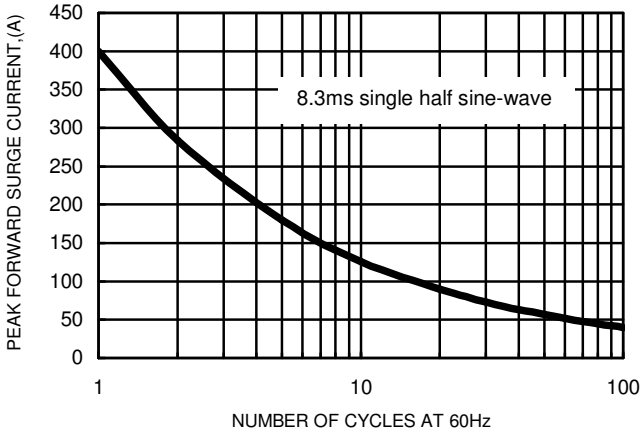


FIG.3 TYPICAL FORWARD CHARACTERISTICS

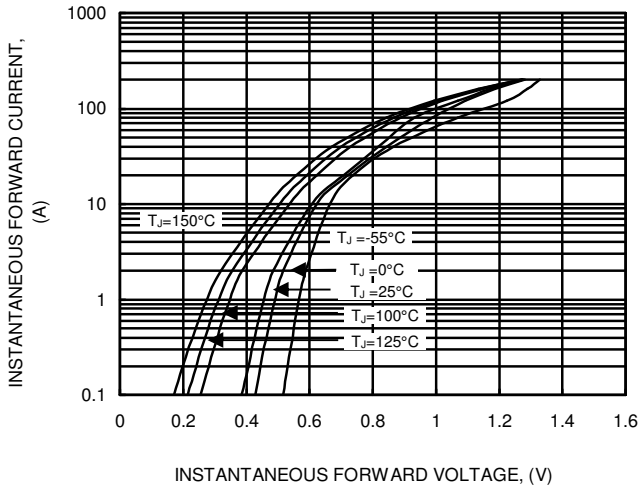


FIG.4 TYPICAL JUNCTION CAPACITANCE

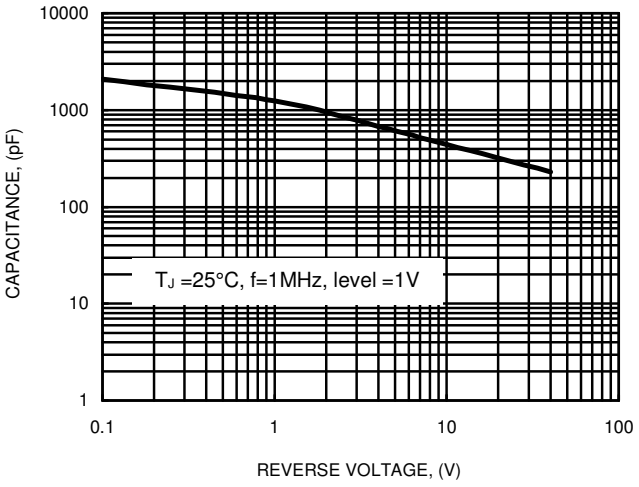


FIG.5 TYPICAL REVERSE CHARACTERISTICS

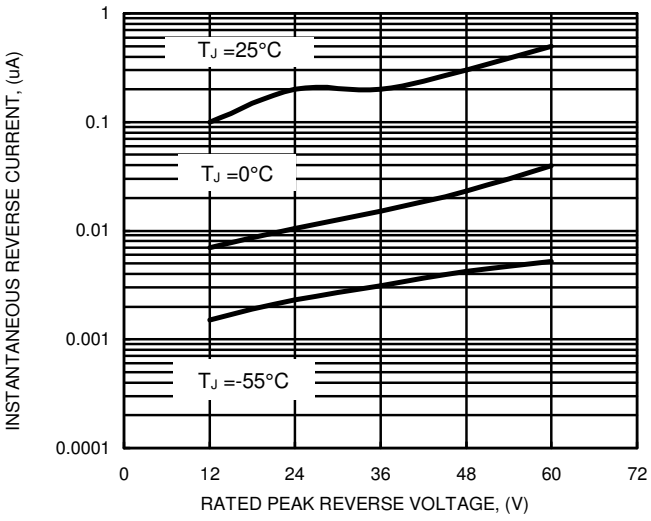
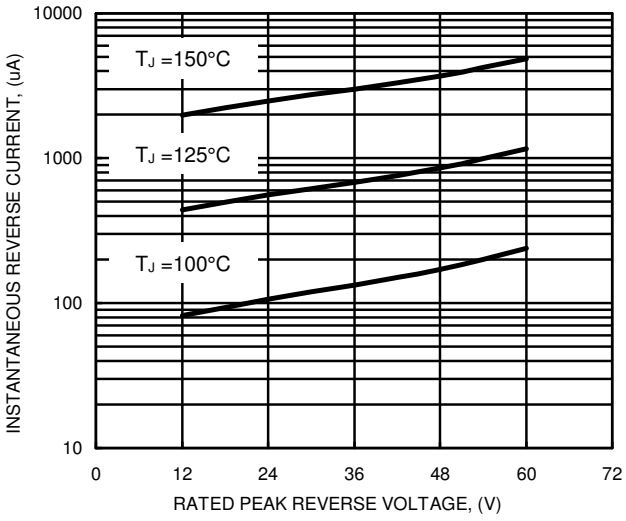


FIG.6 TYPICAL REVERSE CHARACTERISTICS



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