

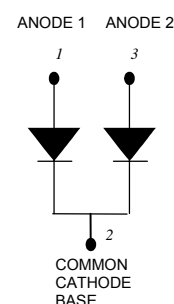
## MBR6060WT SCHOTTKY RECTIFIER

### Applications:

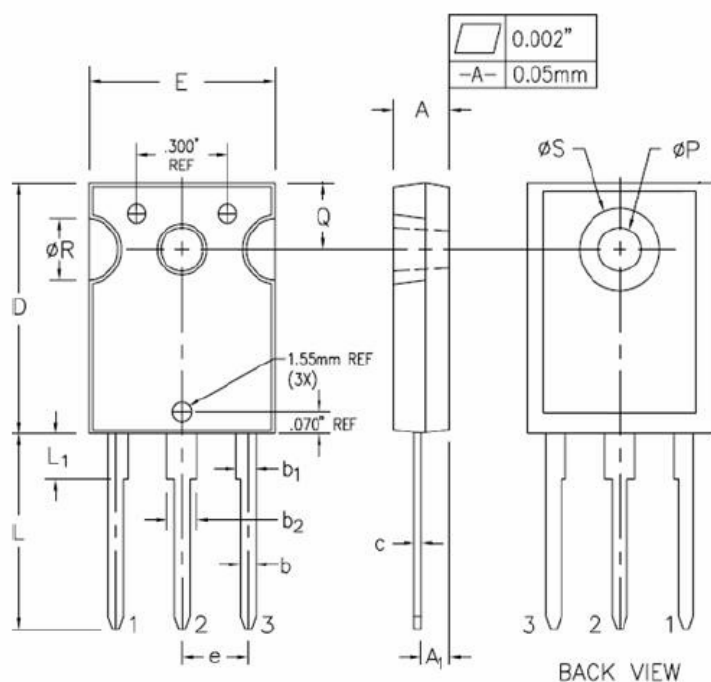
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration

### Features:

- 150°C T<sub>J</sub> operation
- Center tap TO-247AD package
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

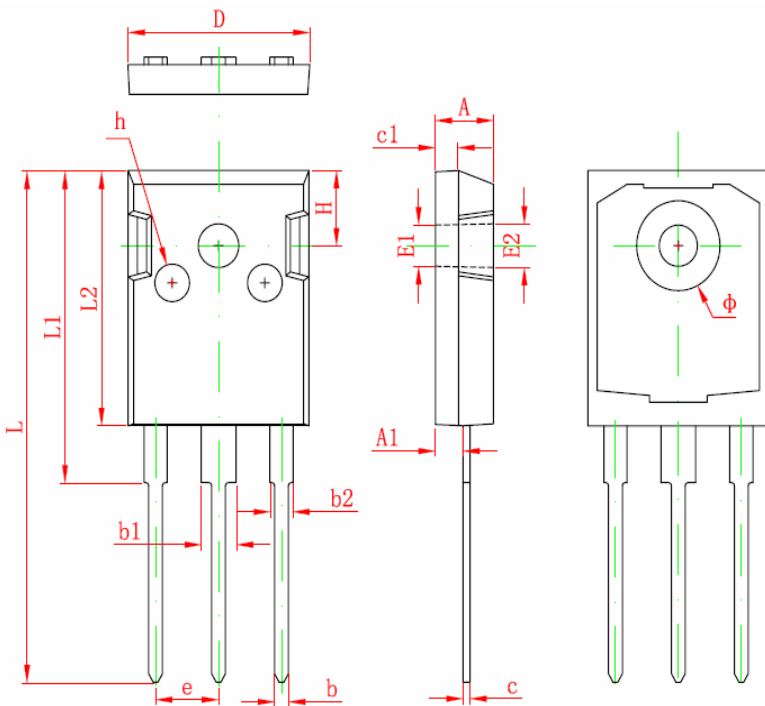


### Mechanical Dimensions: In mm



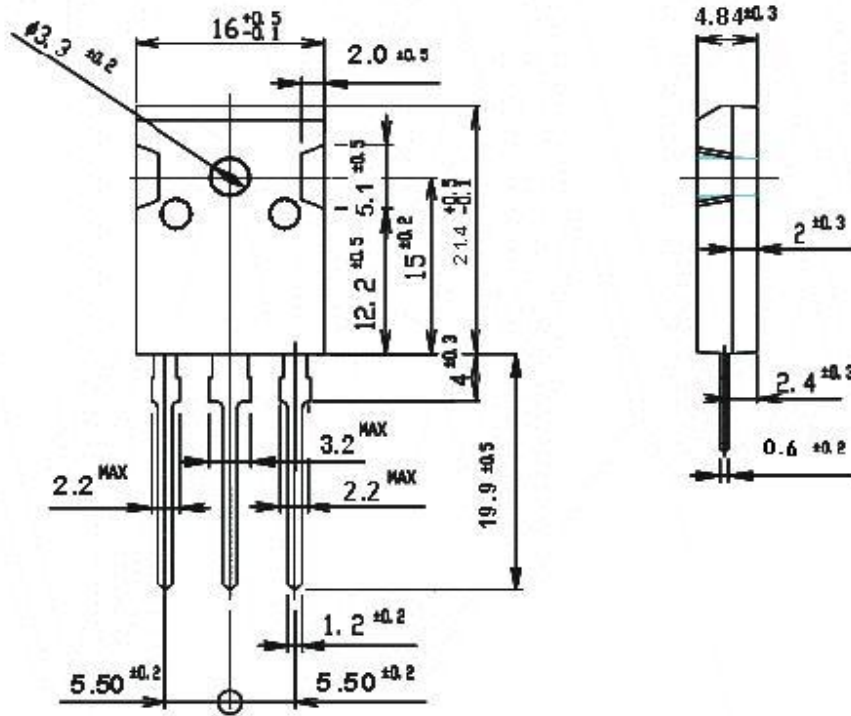
SYMBOL	MILLIMETERS	
	MIN.	MAX.
A	4.58	4.82
A <sub>1</sub>	2.29	2.66
b	1.17	1.35
b <sub>1</sub>	1.53	1.77
b <sub>2</sub>	2.42	2.66
c	0.51	0.71
D	20.32	20.82
E	15.37	15.87
e	5.56 BSC.	
L	15.75	16.25
L <sub>1</sub>	3.69	3.93
øP	3.51	3.65
Q	5.34	5.58
øR	4.96	5.20
øS	6.61	6.85

### OPTION 1



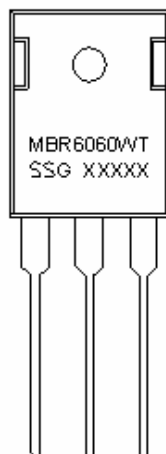
Symbol	Dimensions In Millimeters	
	Min	Max
A	4.850	5.150
A1	2.200	2.600
b	1.000	1.400
b1	2.800	3.200
b2	1.800	2.200
c	0.500	0.700
c1	1.900	2.100
D	15.450	15.750
E1	3.500 REF	
E2	3.600 REF	
L	40.900	41.300
L1	24.800	25.100
L2	20.300	20.600
Φ	7.100	7.300
e	5.450 TYP	
H	5.980 REF	
h	0.000	0.300

**OPTION 2**



**OPTION 3**

**TO-247AD**

**Technical Data**  
**Data Sheet N0747, Rev. -**
**Green Products**
**Marking Diagram:**


Where XXXXX is YYWWL

MBR	= Device Type
60	= Forward Current (60A)
60	= Reverse Voltage (60V)
WT	= Configuration
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

**Cautions:** Molding resin  
 Epoxy resin UL:94V-0

**Ordering Information:**

Device	Package	Shipping
MBR6060WT	TO-247AD (Pb-Free)	30pcs/ tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max	Units
Peak Reverse Voltage	$V_{RWM}$	-	60	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @TC =135°C rectangular wave form	30(per leg)	A
			60(per leg)	
Repetitive Avalanche Current(per leg)	$I_{AR}$	Current decaying linearly to zero in 1 $\mu$ sec Frequency limited by $T_J$ max. $V_A=1.5 \times V_R$ typical	6	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	510	A

**Electrical Characteristics:**

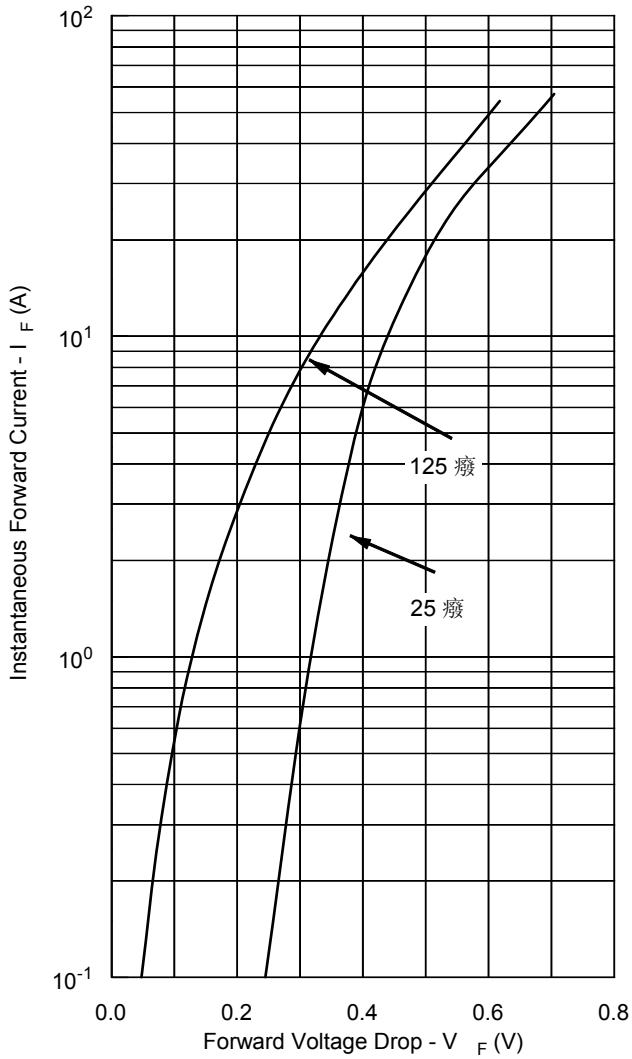
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	$V_{F1}$	@ 30A, Pulse, $T_J = 25^\circ\text{C}$	0.69	V
	$V_{F2}$	@ 30 A, Pulse, $T_J = 125^\circ\text{C}$	0.64	V
Max. Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated VDC}$ , $T_J = 25^\circ\text{C}$	1.0	mA
	$I_{R2}$	@ $V_R = \text{rated VDC}$ , $T_J = 125^\circ\text{C}$	150	mA
Max. Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$ $f_{\text{SIG}} = 1\text{MHz}$	1400	pF
Typical Series Inductance (per leg)	$L_S$	Measured lead to lead 5 mm from package body	7.5	nH
Max. Voltage Rate of Change	$dv/dt$	-	10,000	V/ $\mu\text{s}$

\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle <2%  
 Measured lead to lead 5 mm from package body

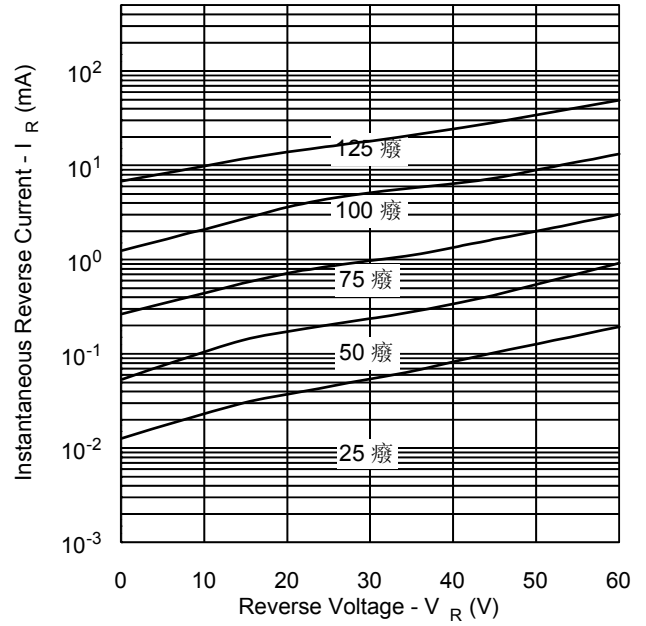
**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature Range	$T_J$	-	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{stg}}$	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta\text{JC}}$	DC operation	1.0 (per device)	$^\circ\text{C/W}$
			0.5 (per device)	
Maximum Thermal Resistance, Case to Heat Sink	$R_{\theta\text{CS}}$	Mounting surface, smooth and greased	0.24	$^\circ\text{C/W}$
Approximate Weight	wt	-	6	g
Case Style	TO-247AD			

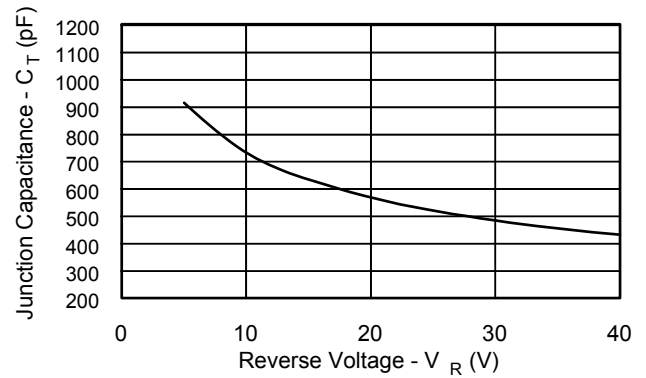
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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