



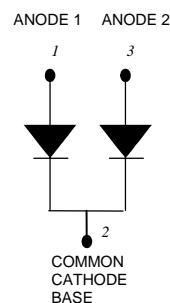
## **MBR20200WT SCHOTTKY RECTIFIER**

### **Applications:**

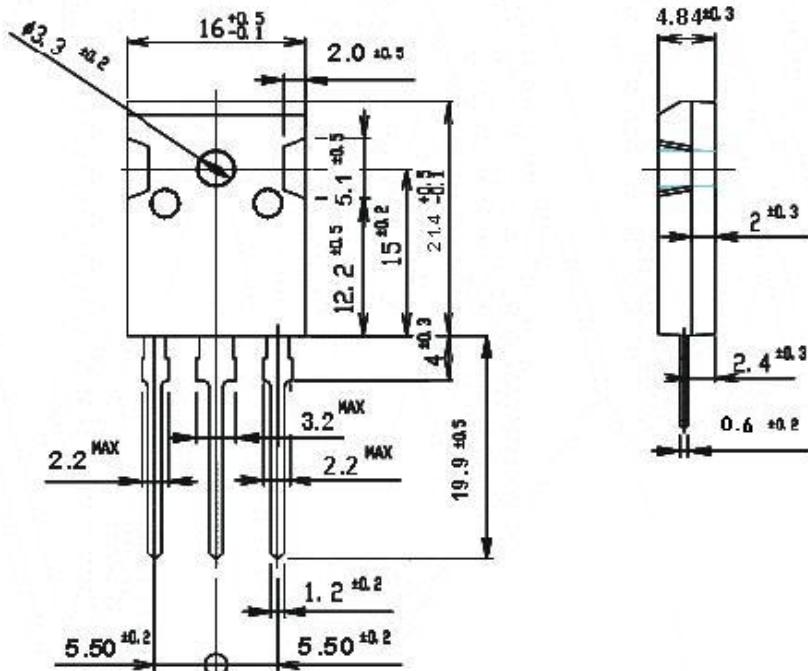
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration

### **Features:**

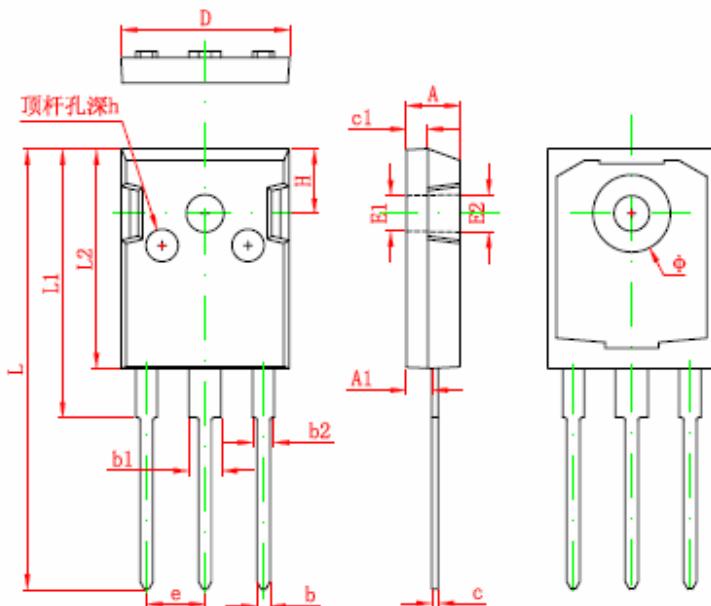
- 150°C  $T_J$  operation
- Center tap TO-247AD package
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb – Free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



### **Mechanical Dimensions: In mm/Inches**



### **OPTION 1(SR)**



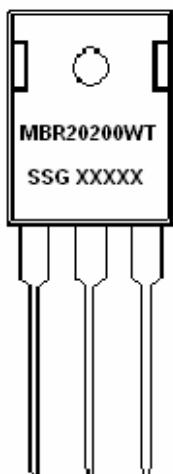
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.850	5.150	0.191	0.200
A1	2.200	2.600	0.087	0.102
b	1.000	1.400	0.039	0.055
b1	2.800	3.200	0.110	0.126
b2	1.800	2.200	0.071	0.087
c	0.500	0.700	0.020	0.028
c1	1.900	2.100	0.075	0.083
D	15.450	15.750	0.608	0.620
E1	3.500 REF		0.138 REF	
E2	3.600 REF		0.142 REF	
L	40.900	41.300	1.610	1.626
L1	24.800	25.100	0.976	0.988
L2	20.300	20.600	0.799	0.811
Φ	7.100	7.300	0.280	0.287
e	5.450 TYP		0.215 TYP	
H	5.980 REF		0.235 REF	
h	0.000	0.300	0.000	0.012

### OPTION 2(CJ)

**TO-247AD**



### Marking Diagram:



Where XXXXX is YYWWL

MBR	= Device Type
20	= Forward Current (20A)
200	= Reverse Voltage (200V)
WT	= Configuration
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

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

### Ordering Information:

Device	Package	Shipping
MBR20200WT	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 Inverse Voltage	$V_{RWM}$	-	200	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @ $T_C = 125^\circ C$ , rectangular wave form	20	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	180	A



### **Electrical Characteristics:**

<b>Characteristics</b>	<b>Symbol</b>	<b>Condition</b>	<b>Max.</b>	<b>Units</b>
Max. Forward Voltage Drop (per leg) *	$V_{F1}$	@ 10A, Pulse, $T_J = 25^\circ\text{C}$	0.90	V
	$V_{F2}$	@ 10A, Pulse, $T_J = 125^\circ\text{C}$	0.80	V
Max. Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated } V_R$ Pulse $T_J = 25^\circ\text{C}$	1.0	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R$ , Pulse $T_J = 125^\circ\text{C}$	50	mA
Max. Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	500	pF
Max. Voltage Rate of Change	$dv/dt$	-	10,000	V/ $\mu\text{s}$

\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle <2%

### **Thermal-Mechanical Specifications:**

<b>Characteristics</b>	<b>Symbol</b>	<b>Condition</b>	<b>Specification</b>	<b>Units</b>
Max. Junction Temperature	$T_J$	-	-55 to +150	°C
Max. Storage Temperature	$T_{stg}$	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	2.0	°C/W
Approximate Weight	wt	-	2	g
Case Style		TO-247AD		

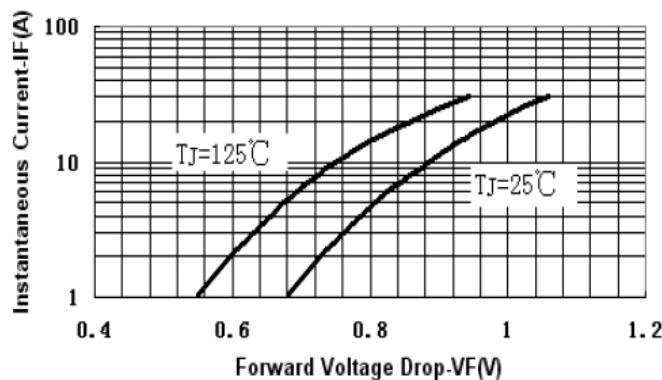


Fig.1-Typical Forward Voltage Drop Characteristics

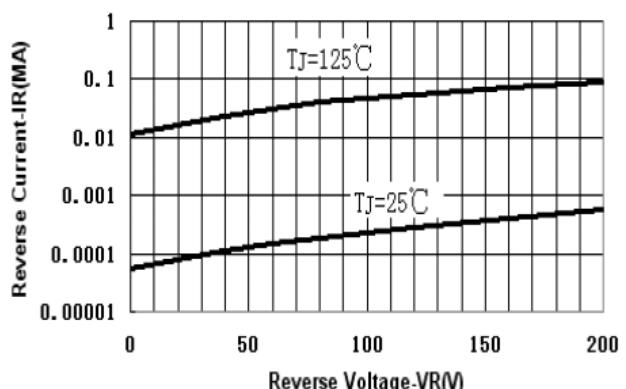


Fig.2-Typical Values Of Reverse Current Vs.Reverse Voltage

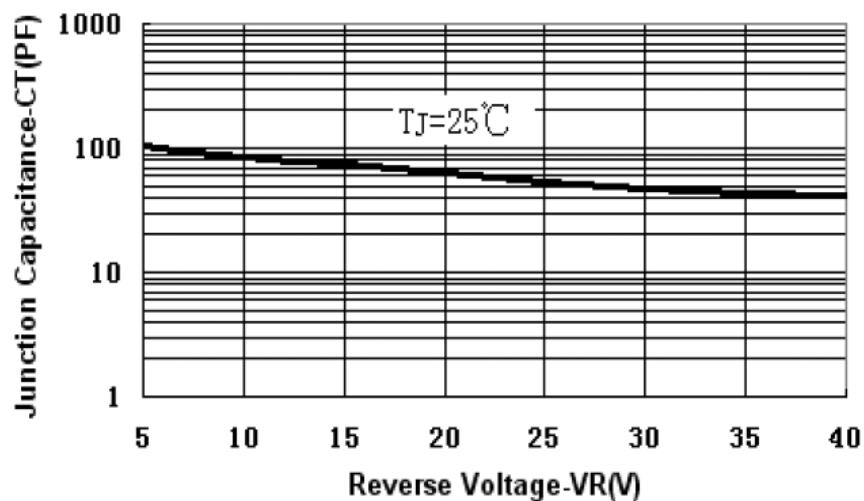


Fig.3-Typical Junction Capacitance Vs.Reverse Voltage



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