

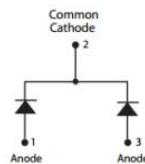
## **MBR3035WT/MBR3040WT/MBR3045WT** **SCHOTTKY RECTIFIER**



### Features

- 150 °C T<sub>J</sub> operation
- 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

### Circuit Diagram



### Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

### Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
			35	40	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	-	35	MBR3035WT	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		40	MBR3040WT	
DC Blocking Voltage	V <sub>R</sub>		45	MBR3045WT	
Average Rectified Forward Current	I <sub>F(AV)</sub>	50% duty cycle @T <sub>c</sub> =123°C, rectangular wave form	15(Per Leg) 30(Per Device)		A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I <sub>FSM</sub>	8.3ms, Half Sine pulse, T <sub>c</sub> = 25 °C	240		A
Peak Repetitive Forward Current (per leg)	I <sub>FRM</sub>	Rated V <sub>R</sub> ,square wave, 20KHz T <sub>c</sub> =123 °C	30		A
Peak Repetitive Reverse Current	I <sub>RRM</sub>	2.0µsec 1.0KHz	2.0		A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Per Leg)*	V <sub>F1</sub>	@ 15A, Pulse, T <sub>J</sub> = 25 °C	0.55	0.70	V
		@ 30A, Pulse, T <sub>J</sub> = 25 °C	0.61	0.84	
Reverse Current (Per Leg)*	I <sub>R1</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 25 °C	0.06	1.0	mA
		@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 125 °C	3	100	
Junction Capacitance(Per Leg)	C <sub>T</sub>	@V <sub>R</sub> = 5V, T <sub>c</sub> = 25 °C, f <sub>sig</sub> = 1MHz	700	800	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/µs

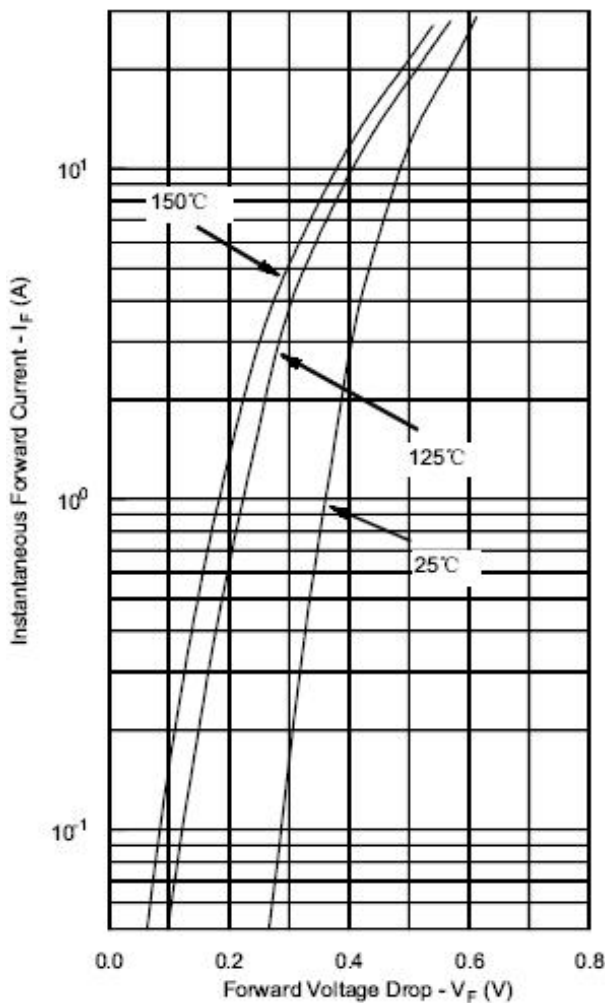
\* Pulse width < 300 µs, duty cycle < 2%

**Thermal-Mechanical Specifications:**

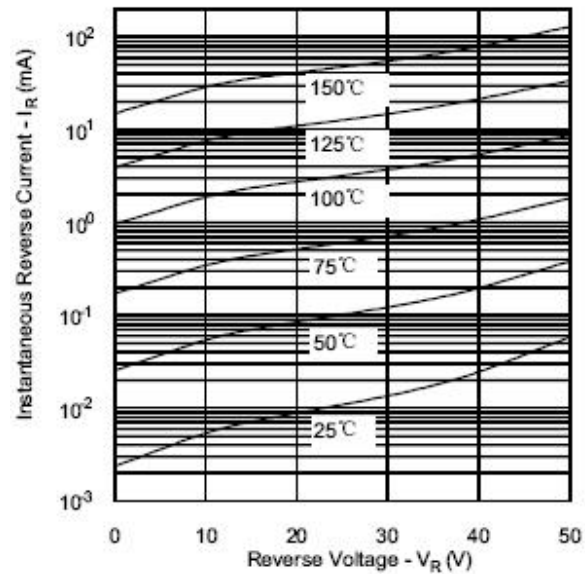
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +150	$^{\circ}\text{C}$
Storage Temperature	$T_{\text{stg}}$	-	-55 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Case(Per Leg)	$R_{\theta\text{JC}}$	DC operation	1.4	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	6.28	g
Case Style	TO-247AD			

**Ratings and Characteristics Curves**

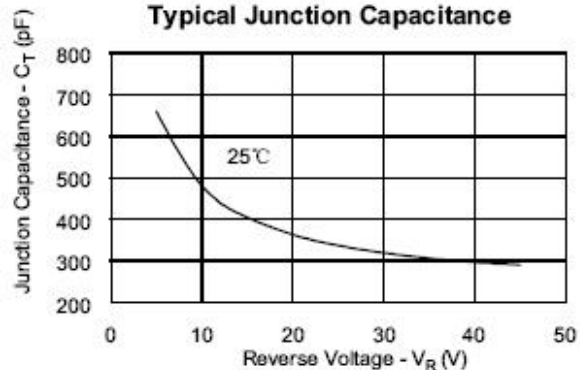
**Typical Forward Characteristics**



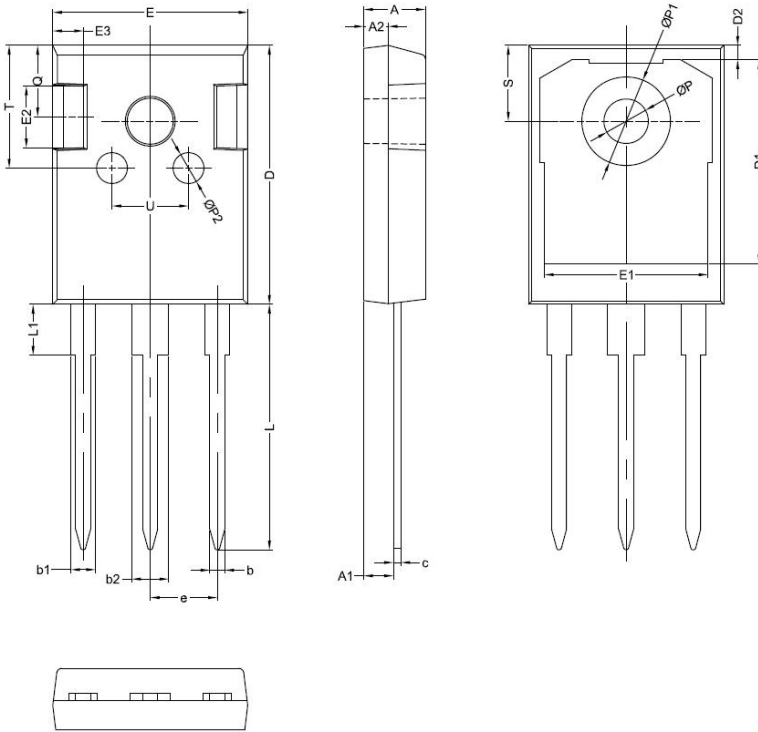
**Typical Reverse Characteristics**



**Typical Junction Capacitance**



**Mechanical Dimensions TO-247AD**



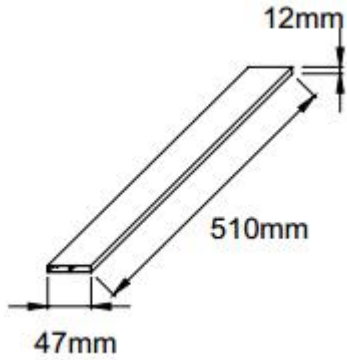
SYMBOL	Millimeters		
	MIN.	TYP.	MAX.
A	4.80	5.00	5.20
A1	2.20	2.41	2.61
A2	1.90	2.00	2.10
b	1.10	1.20	1.40
b1	1.80	2.00	2.20
b2	2.80	3.00	3.20
c	0.50	0.60	0.75
D	20.30	21.00	21.20
D1		16.55	
D2		1.20	
E	15.45	15.80	16.00
E1		13.30	
E2		5.00	
E3		2.50	
e		5.44	
L	19.42	19.92	20.70
L1		4.13	
P	3.50	3.60	3.70
P1	7.1		7.40
P2		2.50	
Q		5.80	
S	6.05	6.15	6.25
T		10.00	
U		6.20	

**Ordering Information:**

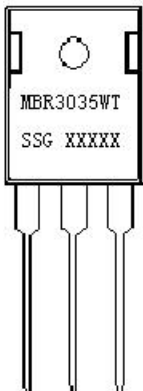
Device	Package	Shipping
MBR3035WT-MBR3045WT	TO-247AD(Pb-Free)	25pcs / tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Tube Specification**



**Marking Diagram**



Where XXXXX is YYWWL

- MBR = Device Type
- 30 = Forward Current (30A)
- 35 = Reverse Voltage (35V)
- WT = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

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



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