

Technical Data  
Data Sheet 3493, Rev. A

**MBR3035WT-G/MBR3045WT-G SCHOTTKY RECTIFIER**

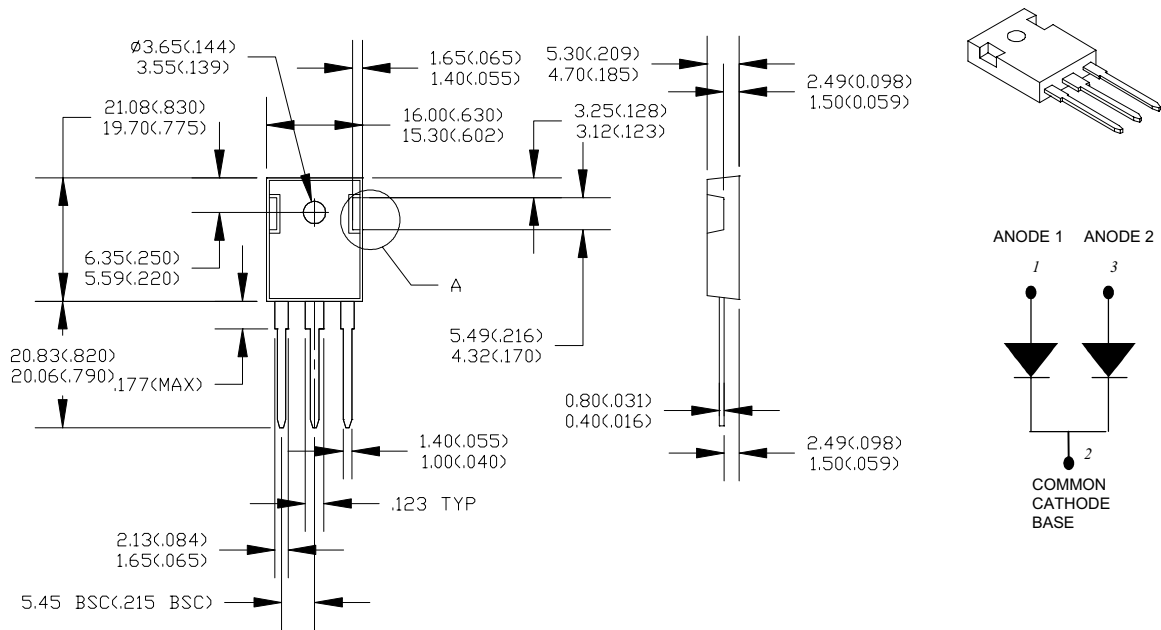
**Applications:**

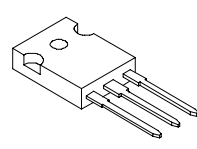
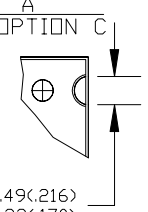
- Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection

**Features:**

- 150 °C T<sub>J</sub> operation
- Center tap TO-247AD package
- Very 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

**Mechanical Dimensions: In Inches / mm**



	<p>OPTION C</p>  <p>5.49(.216) 4.32(.170)</p>	<p>Option C is also available. To order specifically the option C, please add suffix “-C” to the part number: To order specifically the standard option, please add suffix “-S” to the part number.  If there is no suffix to the part number, the part could come with either option.</p>
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**TO-247AD**

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	35(MBR3035WT-G) 45(MBR3045WT-G)	V
Max. Average Forward Current	$I_{F(AV)}$	@ $T_C = 125^\circ\text{C}$ , Rated $V_R$	15(Per Leg)	A
			30(Per device)	
Peak Repetitive Forward Current (per leg)	$I_{FRM}$	Rated $V_R$ , square wave, 20kHz $T_C = 125^\circ\text{C}$	30	A
Max. Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse	240	A
Peak Repetitive Reverse Surge Current	$I_{RRM}$	2.0 $\mu\text{sec}$ 1.0 KHz	2.0	A

**Electrical Characteristics:**

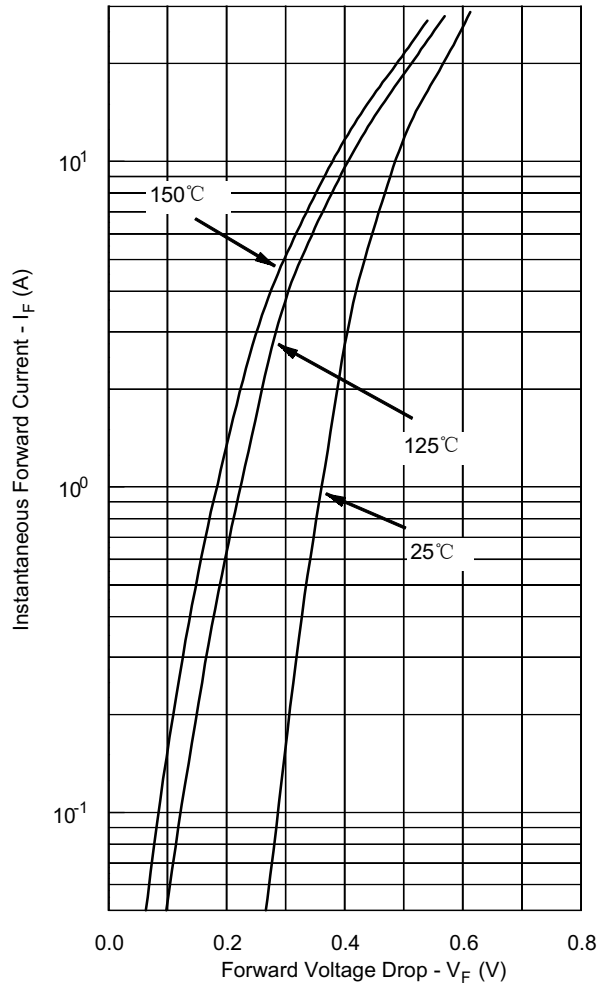
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	$V_{F1}$	@ 30 A, Pulse, $T_J = 25^\circ\text{C}$	0.84	V
	$V_{F2}$	@ 20 A, Pulse, $T_J = 125^\circ\text{C}$ @ 30 A, Pulse, $T_J = 125^\circ\text{C}$	0.60 0.72	V
Max. Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 25^\circ\text{C}$	1.0	mA
	$I_{R2}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 125^\circ\text{C}$	100	mA
Max. Junction Capacitance	$C_T$	@ $V_R = 5\text{ V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ ,	800	pF
Typical Series Inductance	$L_S$	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%

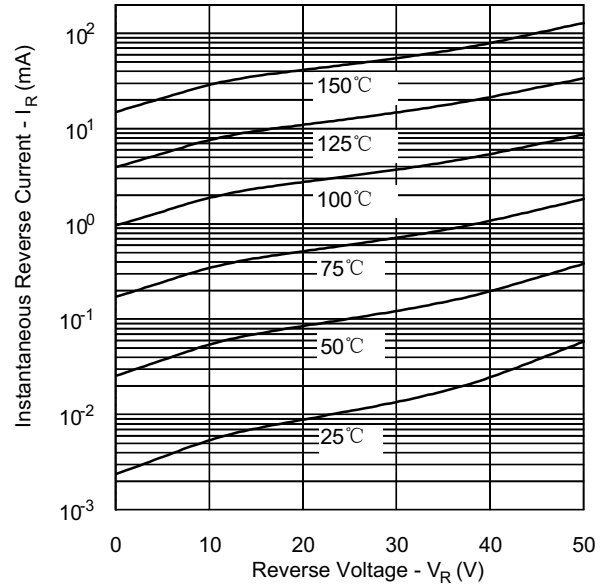
**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-65 to +150	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	1.40	$^\circ\text{C/W}$
Typical Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased, Only for TO-220	0.24	$^\circ\text{C/W}$
Approximate Weight	wt	-	6	g
Mounting Torque	$T_M$	-	6 (min) 12 (max)	Kg-cm
Case Style	TO-247AD			

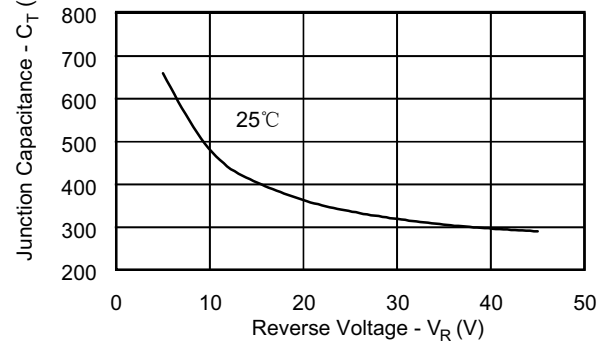
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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