

Technical Data
Data Sheet N0015, Rev. -

Green Products

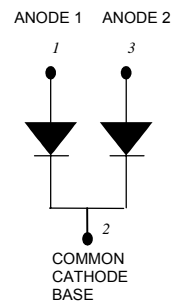
MBR3035WT/MBR3040WT/MBR3045WT SCHOTTKY RECTIFIER

Applications:

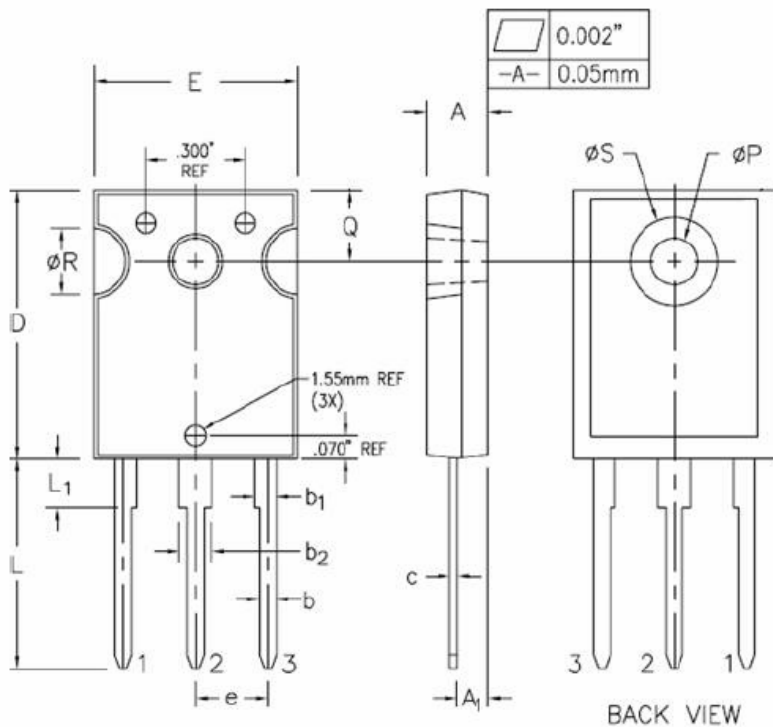
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration

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

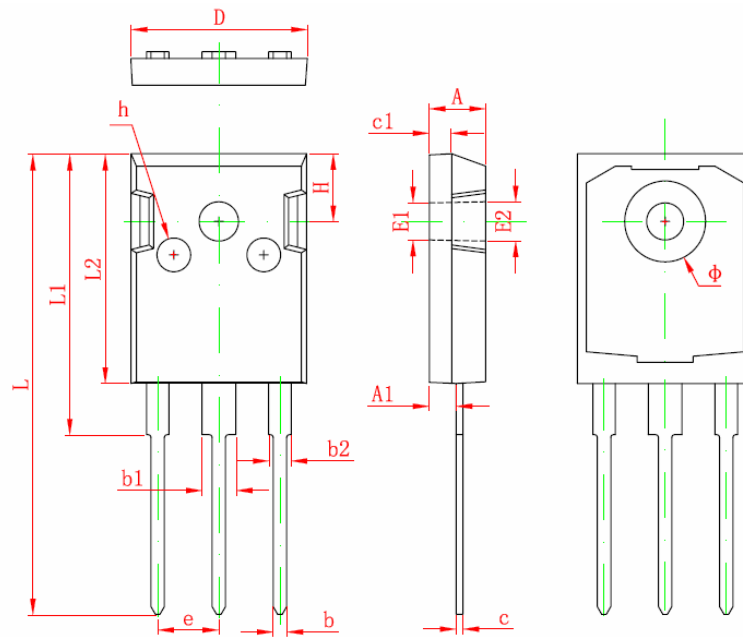


Mechanical Dimensions (In mm) and Marking:



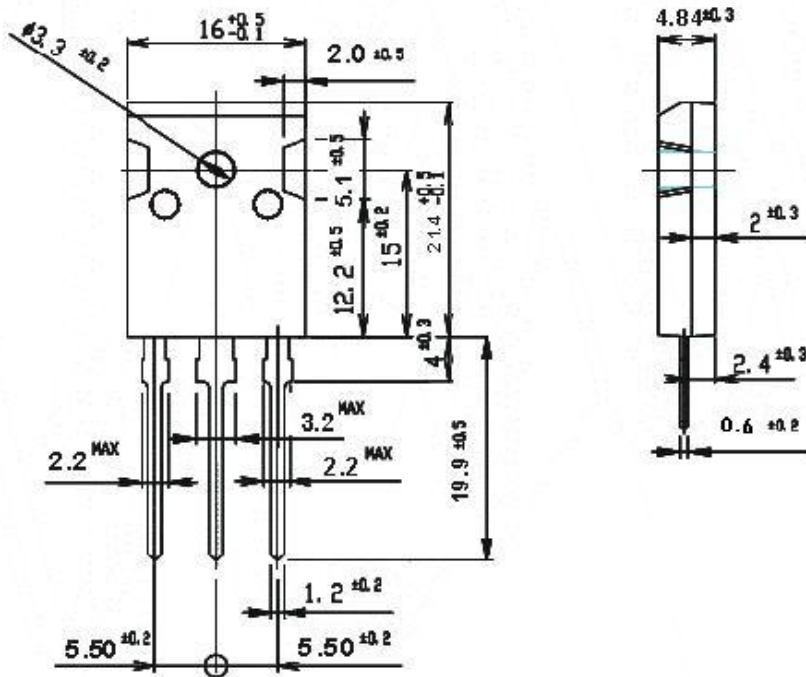
SYMBOL	MILLIMETERS	
	MIN.	MAX.
A	4.58	4.82
A ₁	2.29	2.66
b	1.17	1.35
b ₁	1.53	1.77
b ₂	2.42	2.66
c	0.51	0.71
D	20.32	20.82
E	15.37	15.87
e	5.56	BSC.
L	15.75	16.25
L ₁	3.69	3.93
øP	3.51	3.65
Q	5.34	5.58
øR	4.96	5.20
øS	6.61	6.85

OPTION 1(MX)



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(CJ)



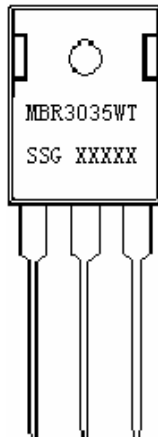
OPTION 2(SR)

TO-247AD

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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

Ordering Information:

Device	Package	Shipping
MBR3035WT	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
			35	40	
Peak Inverse Voltage	V_{RWM}	-	35	MBR3035WT	V
			40	MBR3040WT	
			45	MBR3045WT	
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 123$ °C, rectangular wave form	15(per leg)		A
			30(per device)		
Peak Repetitive Forward Current (per leg)	I_{FRM}	Rated V_R , square wave, 20KHz $T_C = 123$ °C	30		A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	240		A
Peak Repetitive Reverse Current	I_{RRM}	2.0µsec 1.0KHz	2.0		A

Electrical Characteristics:

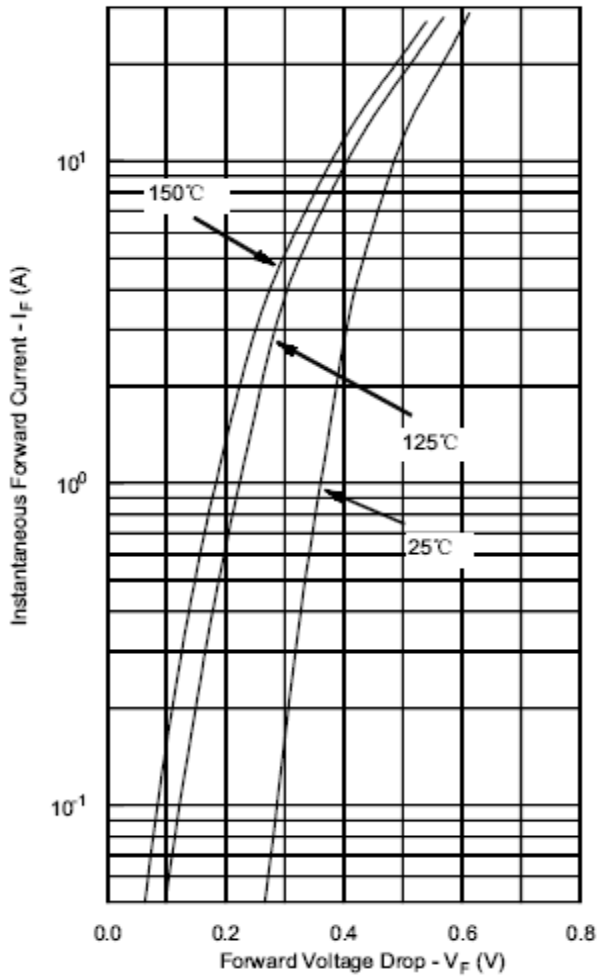
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V_{F1}	@ 15 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.70	V
		@ 30 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.84	
	V_{F2}	@ 15 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.57	V
		@ 30 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.72	
Max. Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{rated } V_R$ $T_C = 25\text{ }^\circ\text{C}$	1.0	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_C = 125\text{ }^\circ\text{C}$	100	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	800	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/ μs

Pulse Width < 300 μs , Duty Cycle <2%

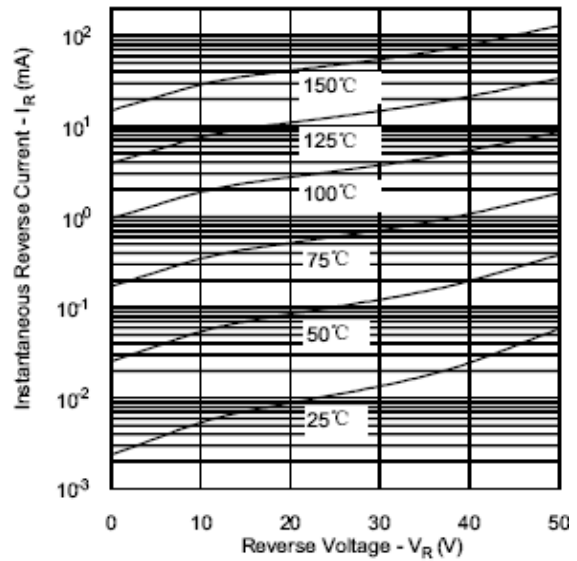
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature Range	T_J	-	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	1.40	$^\circ\text{C/W}$
Approximate Weight	wt	-	6.7	g
Case Style	TO-247AD			

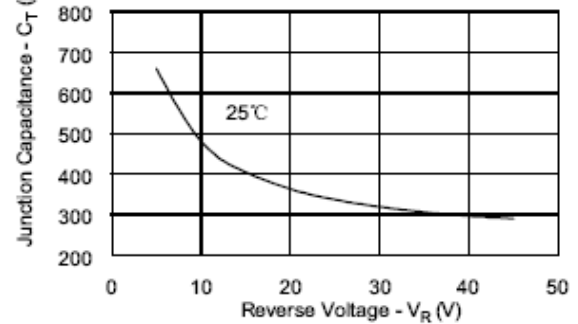
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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