

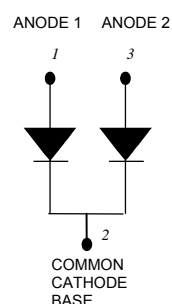
MBR3045WTP SCHOTTKY RECTIFIER

Applications:

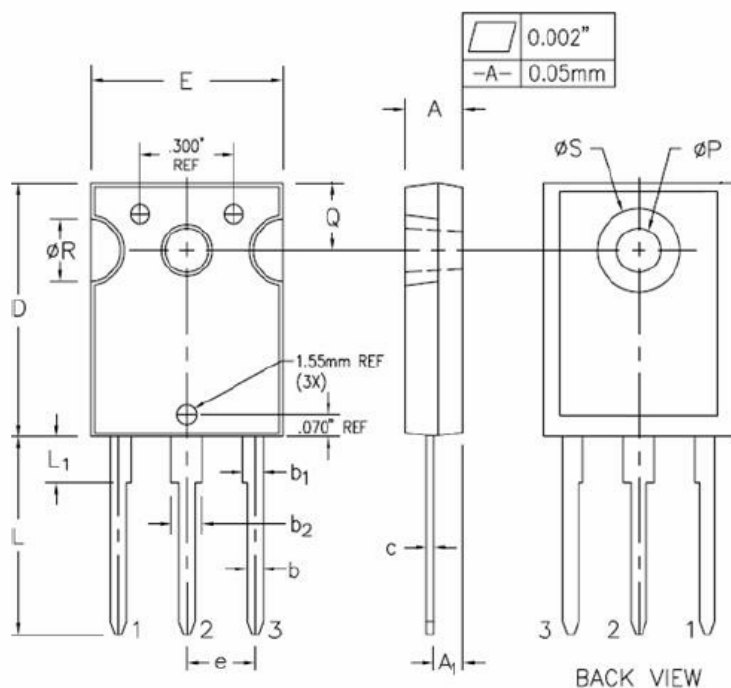
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

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

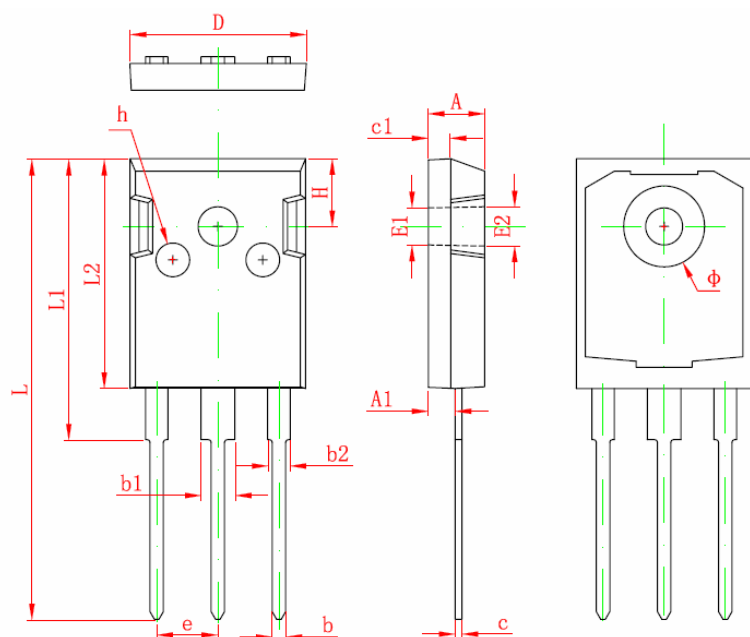


Mechanical Dimensions: In mm



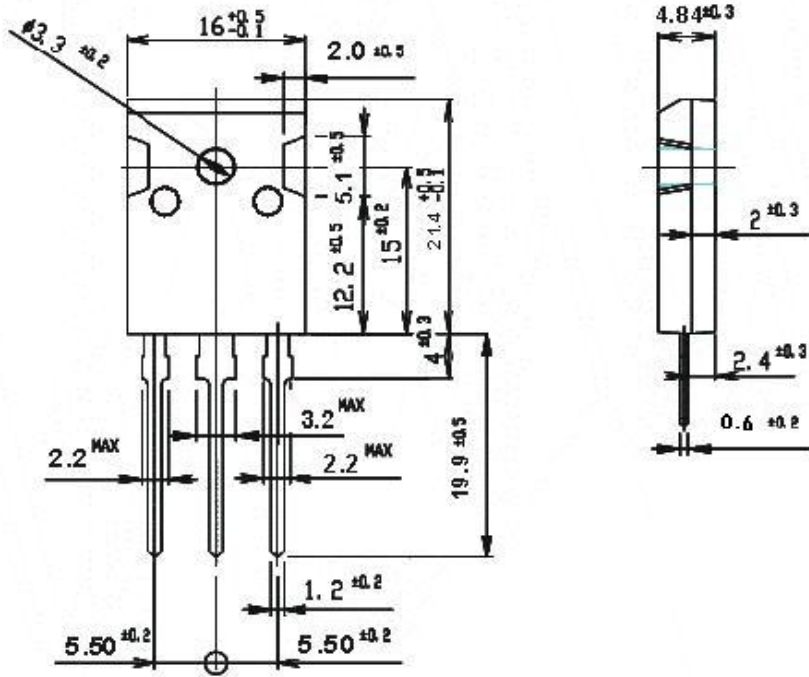
SYMBOL	MILLIMETERS	
	MIN.	MAX.
A	4.58	4.82
A ₁	2.29	2.66
b	1.17	1.35
b ₁	1.53	1.77
b ₂	2.42	2.66
c	0.51	0.71
D	20.32	20.82
E	15.37	15.87
e	5.56 BSC.	
L	15.75	16.25
L ₁	3.69	3.93
øP	3.51	3.65
Q	5.34	5.58
øR	4.96	5.20
øS	6.61	6.85

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

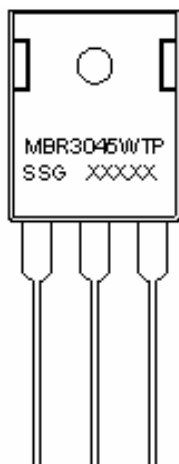
OPTION 2(CJ)



OPTION 3(SR)

TO-247AD

Marking Diagram:



Where XXXXX is YYWWL

MBR = Device Type
30 = Forward Current (30A)
45 = Reverse Voltage (45V)
WTP = Configuration
SSG = SSG
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

Device	Package	Shipping
MBR3045WTP	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}	-	45	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 123\text{ }^\circ\text{C}$, rectangular wave form	15(per leg) 30(per device)	A
Peak Repetitive Forward Current (per leg)	I_{FRM}	Rated V_R , square wave, 20KHz $T_C = 123\text{ }^\circ\text{C}$	30	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	240	A
Peak Repetitive Reverse Current	I_{RRM}	2.0 μsec 1.0KHz	2.0	A

Electrical Characteristics:

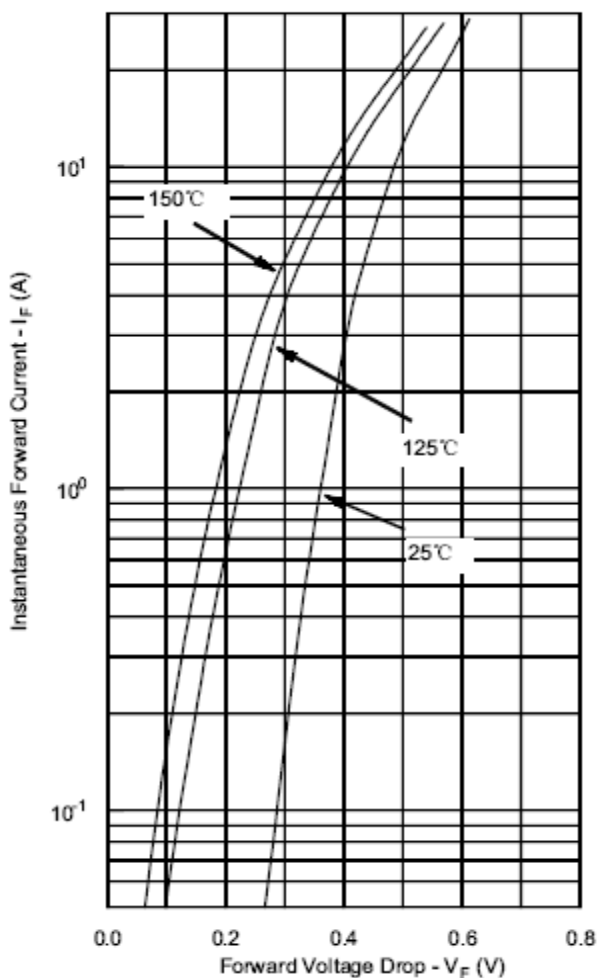
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V _{F1}	@ 15 A, Pulse, T _J = 25 °C	0.70	V
	V _{F2}	@ 15 A, Pulse, T _J = 125 °C	0.57	V
Max. Reverse Current (per leg) *	I _{R1}	@V _R = rated V _R T _C = 25 °C	1.0	mA
	I _{R2}	@V _R = rated V _R T _C = 125 °C	100	mA
Max. Junction Capacitance (per leg)	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	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 < 300μs, Duty Cycle <2%

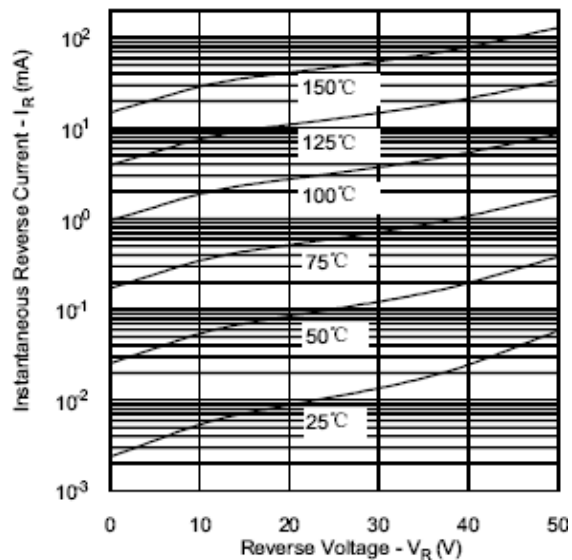
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature Range	T _J	-	-55 to +150	°C
Storage Temperature Range	T _{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Case (per leg)	R _{θJC}	DC operation	1.40	°C/W
Approximate Weight	wt	-	6	g
Case Style	TO-247AD			

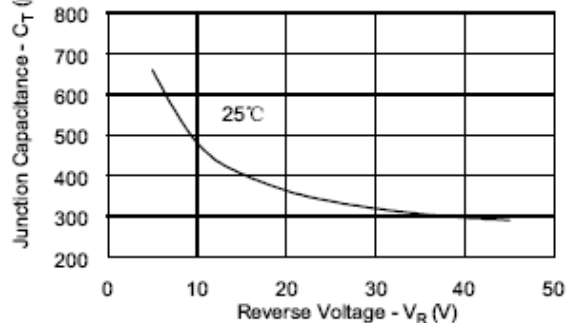
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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