Technical Data *Green products*

Data Sheet N0774, REV. A

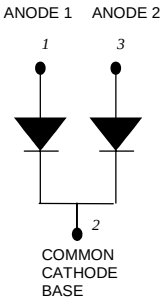
MBR40150WT SCHOTTKY RECTIFIER

Applications:

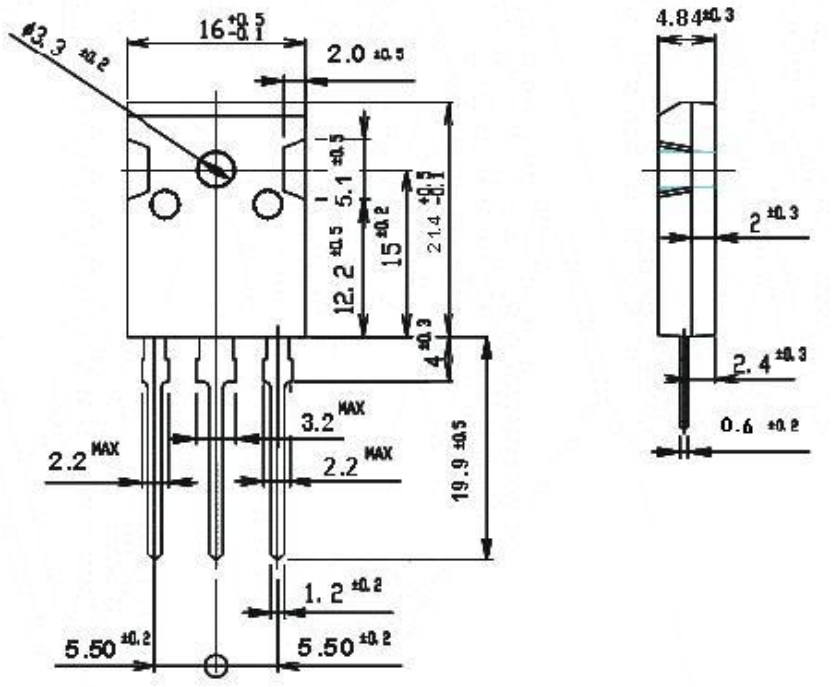
- **Switching power supply**
- **Converters**
- **Free-Wheeling diodes**
- **Reverse battery protection**
- **Center tap configuration**

Features:

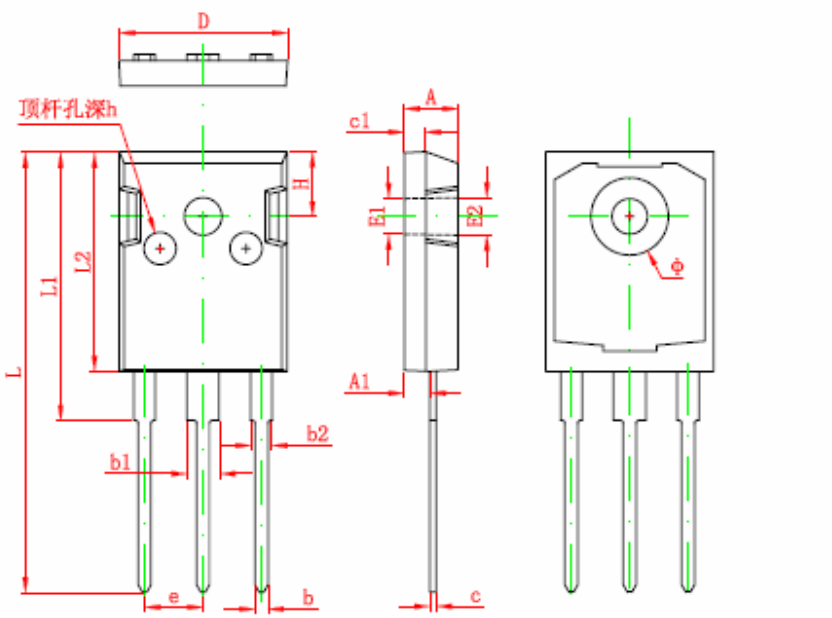
- **150 °C T_J operation**
- **Center tap TO-247AD package**
- **Low forward voltage drop**
- **High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance**
- **High frequency operation**
- **Guard ring for enhanced ruggedness and long term reliability**
- **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

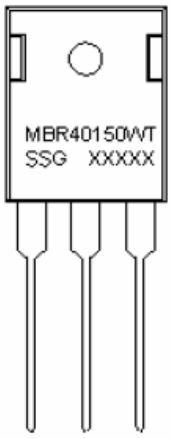
OPTION 2(CJ)

TO-247AD

Technical Data
Data Sheet N0774, REV. A

Green products

Marking Diagram:



Where XXXXX is YYWWL

MBR	= Device Type
40	= Forward Current (40A)
150	= Reverse Voltage (150V)
WT	= Configuration
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

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

Ordering Information:

Device	Package	Shipping
MBR40150WT	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 Reverse Voltage	V_{RWM}	-	150	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_C =110℃ rectangular wave form	40	A
Peak Repetitive Forward Current(per leg)	I_{FRM}	Rated V_R square wave, 20KHz T_C =135℃	20	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	250	A

Electrical Characteristics:

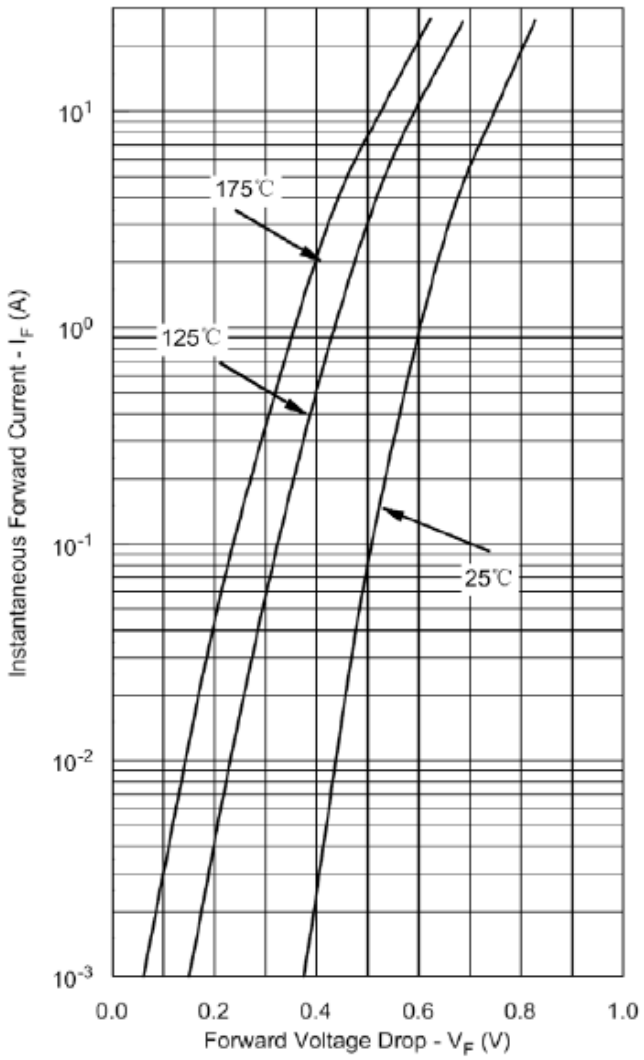
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 20A, Pulse, T_J = 25℃	0.95	V
	V_{F2}	@ 20 A, Pulse, T_J = 125℃	0.92	V
Max. Reverse Current (per leg) *	I_{R1}	@V_R = rated V_{DC} T_J = 25℃	1.0	mA
	I_{R2}	@V_R = rated V_{DC} T_J = 125℃	6.0	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25℃ f_{SIG} = 1MHz	400	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	8.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/μs

* Pulse Width < 300μs, Duty Cycle <2%

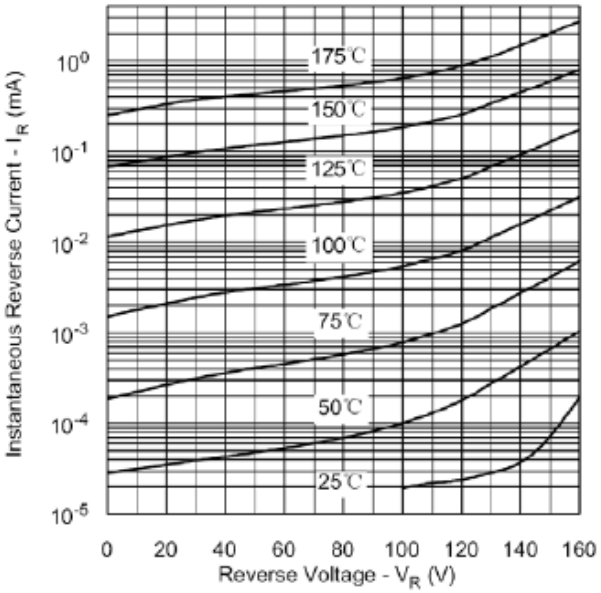
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature Range	T_J	-	-55 to +150	℃
Storage Temperature Range	T_{stg}	-	-55 to +150	℃
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	2.0	℃/W
Approximate Weight	wt	-	6.7	g
Case Style	TO-247AD			

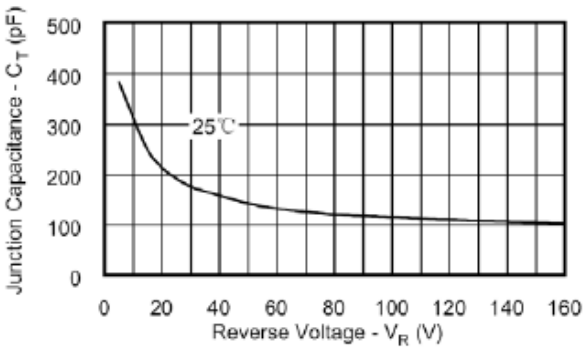
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



Technical Data ***Green products***
Data Sheet N0774, REV. A