

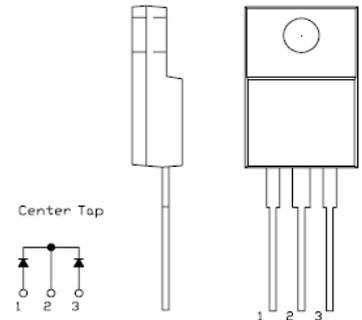
MBRF1060CTL SCHOTTKY RECTIFIER

Applications:

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

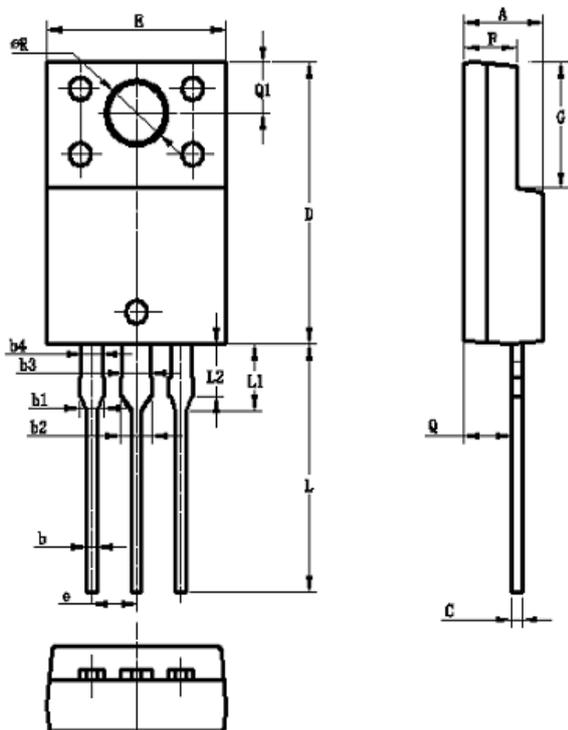
Features:

- 125 °C T_J operation
- Center tap configuration
- 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
- Pure tin plated, solderable per MIL-STD-750, Method 2026
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

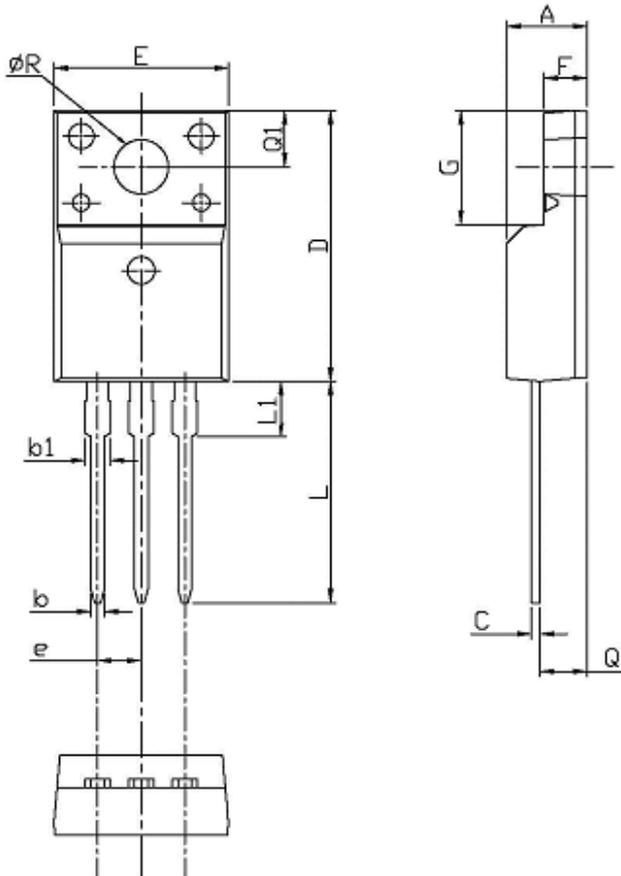


OUTLINE DRAWING

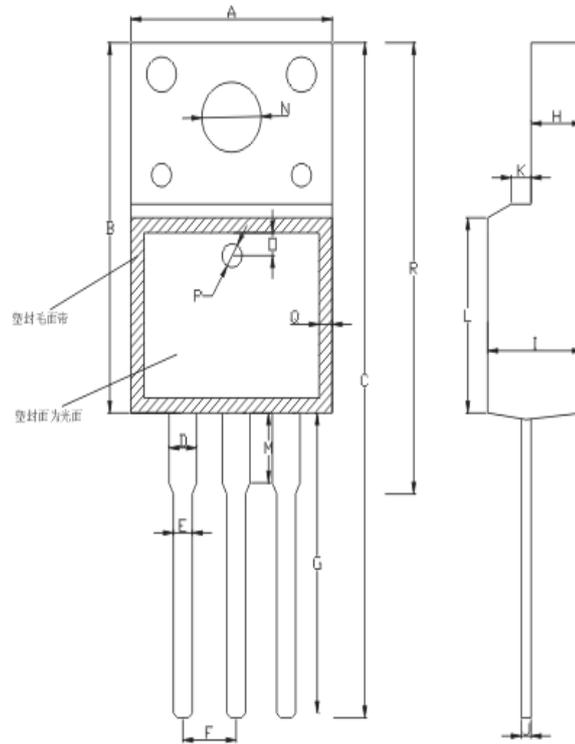
Mechanical Dimensions: In mm



Dim	OPTION 1(CJ)		OPTION 2(HD)	
	Min	Max	Min	Max
A	4.4	4.6	4.30	4.70
b	0.6TYP		0.50	0.75
b1	1.3TYP		1.30	1.40
b2	1.7TYP		1.70	1.80
b3	1.6TYP		1.50	1.75
b4	1.2TYP		1.10	1.35
C	0.60TYP		0.50	0.75
D	14.8	15.1	14.80	15.20
E	10.06	10.26	9.96	10.36
e	2.55TYP		2.54TYP	
F	2.9	3.1	2.80	3.20
G	6.5	6.9	6.50	6.90
L	12.7	13.7	12.8	13.2
L1	3.4	3.8	3.60	4.00
L2	2.6	3.0	-	-
Q	2.5	2.9	2.50	2.90
Q1	2.5	2.9	2.70REF	
ØR	3.5REF		3.50REF	



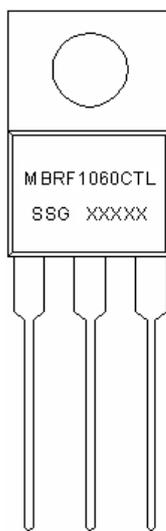
Dim	OPTION 3		OPTION 4	
	Min	Max	Min	Max
A	4.53	4.93	4.50	4.90
b	0.71	0.91	0.70	0.90
b1	1.15	1.39	1.33	1.47
C	0.36	0.53	0.45	0.60
D	15.67	16.07	15.67	16.07
E	9.96	10.36	9.96	10.36
e	2.54TYP		2.54 BSC	
F	2.34	2.76	2.34	2.74
G	6.50	6.90	6.48	6.88
L	12.37	12.77	12.78	13.18
L1	2.23	2.63	3.03	3.43
Q	2.56	2.96	2.56	2.96
Q1	3.10	3.50	3.10	3.50
ϕR	2.98	3.38	3.08	3.28



A:10.20 ± 0.50	B:15.90 ± 0.50	C:29.00 ± 1.00	D:1.24 ± 0.10
E:0.80 ± 0.10	F:2.54 ± 0.10	G:13.10 ± 1,0	H:2.55 ± 0.05
I:4.70 ± 0.05	J:0.50 ± 0.05	K:1.20 ± 0.20	L:8.00 ± 0.50
M:3.00 ± 0.50	N:3.20 ± 0.20	O:1,25 ± 0.05	P:1.5 ± 0.05
Q:1.0 ± 0.20	R:19.2 ± 1.0		

OPTION 5(SR)

ITO-220AB

Technical Data
Data Sheet N0147 Rev. A
Marking Diagram:


Where XXXXX is YYWWL

MBR	= Device Type
F	= Package Type
10	= Forward Current (10A)
60	= Reverse Voltage (60V)
CTL	= Configuration
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

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

Ordering Information:

Device	Package	Shipping
MBRF1060CTL	ITO-220AB (Pb-Free)	50pcs / 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 Repetitive Reverse Voltage	V_{RRM}	-	60	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Rectified Forward Current(per device)	$I_F (AV)$	50% duty cycle @ $T_C = 75^\circ C$, rectangular wave form	10	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	125	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (per leg) *	V _{F1}	@ 5A, Pulse, T _J = 25°C	0.55	0.60	V
	V _{F2}	@ 5A, Pulse, T _J = 100°C	-	0.55	V
Reverse Current (per leg) *	I _{R1}	@V _R = rated VR T _J = 25°C	0.09	1.0	mA
	I _{R2}	@V _R = rated VR T _J = 100°C	-	15	mA
Junction Capacitance (per leg)	C _T	@V _R = 5V, T _C = 25°C f _{SIG} = 1MHz	180	220	pF
Series Inductance (per leg)	L _S	Measured lead to lead 5 mm from package body	8.0	-	nH
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 +125	°C
Storage Temperature Range	T _{stg}	-	-55 to +125	°C
Maximum Thermal Resistance Junction to Case	R _{θJC}	DC operation	3.5	°C/W
Maximum Thermal Resistance Case to Heat Sink	R _{θJS}	DC operation	60	°C/W
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

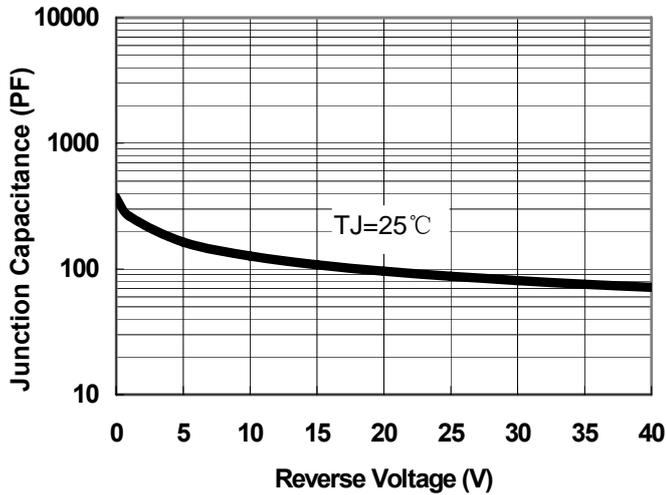


Fig.1-Typical Junction Capacitance

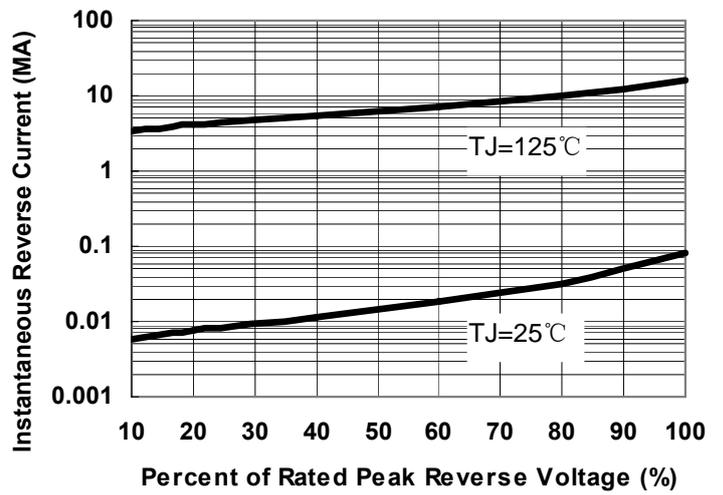


Fig.2-Typical Reverse Characteristics

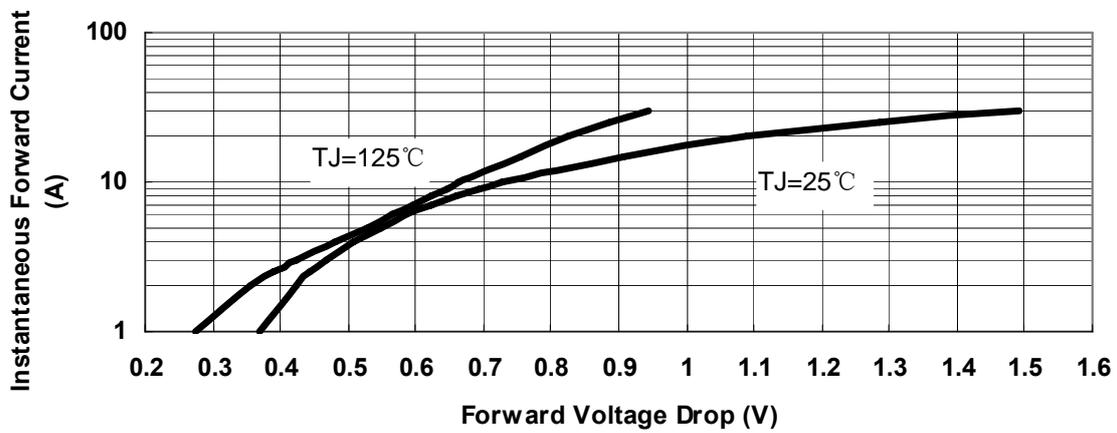


Fig.3-Typical Instantaneous Forward Voltage Characteristics



MBRF1060CTL

Technical Data
Data Sheet N0147 Rev. A

Green Products

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