Technical Data
Data Sheet N0617, Rev. -

Green Products

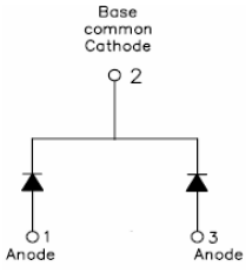
MBR1060CTL SCHOTTKY RECTIFIER

Applications:

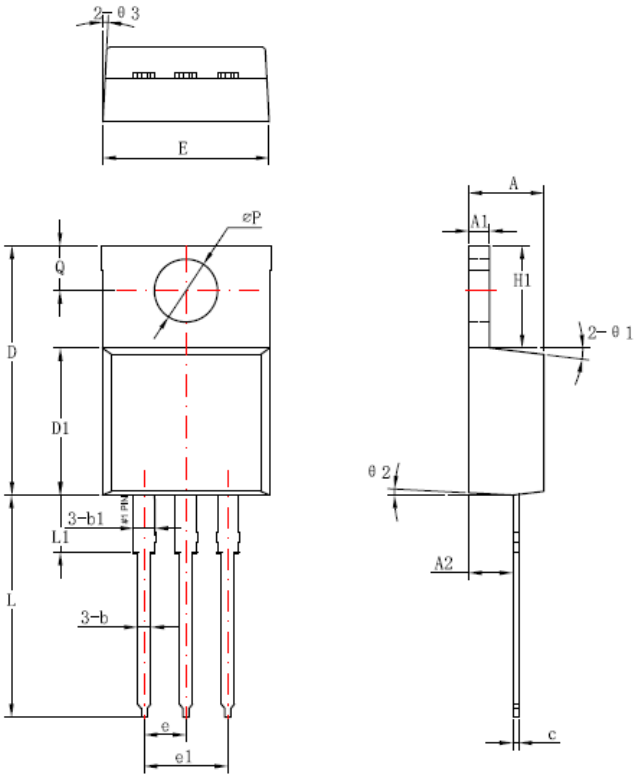
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

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
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

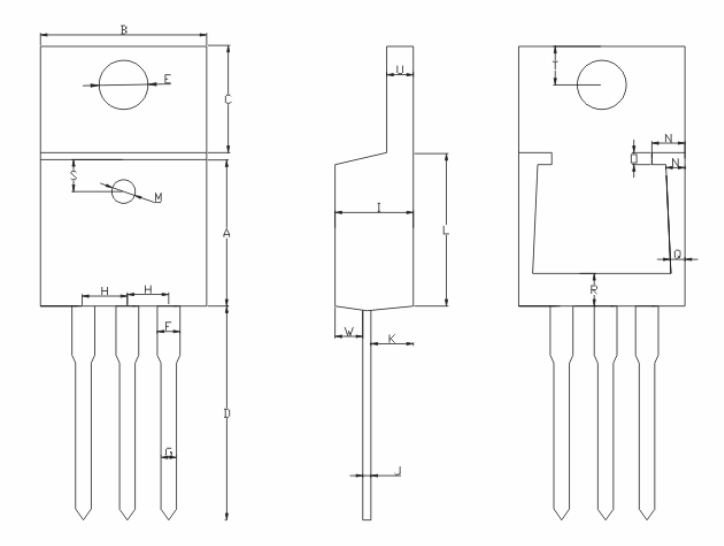


Mechanical Dimensions: In mm



Symbol	Dimensions in millimeters		
	Min	Typical	Max
A	4.42	4.57	4.72
A1	1.17	1.27	1.37
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
D	14.94	15.24	15.54
D1	8.85	9.00	9.15
E	10.01	10.16	10.31
e		2.54	
e1		5.06	
H1	6.04	6.24	6.44
L	12.7	13.56	13.78
L1		3.5	
ΦP	3.74	3.84	4.04
Q	2.54	2.74	2.94
Θ1		7°	
Θ2		3°	
Θ3		4°	

OPTION 1(HD)



A:8.5±0.5	B:9.5±0.5	C:6.4±0.5	D:14.1±1
E:3.84±0.03	F:1.27±0.03	G:0.85±0.10	H:2.54±0.025
I:4.6±0.5	J:0.38±0.015	K:2.75±025	L:9.0±0.5
M:1.5±0.05	N:1.8±0.05	O:0.5±0.05	P:1.2±0.05
Q:0.9±0.05	R:3.2±0.05	S:1.55±0.05	T:2.8±0.15
U:1.27±0.05	W:1.27±0.03		

OPTION 2(SR)

TO-220AB

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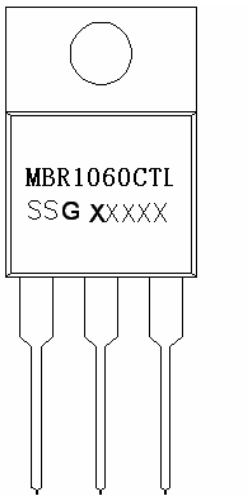
Marking Diagram:



Where XXXXX is YYWWL

MBR	= Device 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
MBR1060CTL	TO-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 Inverse Voltage	V_{RWM}	-	60	V
Max. Average Forward	$I_{F\ (AV)}$	50% duty cycle @Tc=100°C, rectangular wave form	10	A
Max. Peak One Cycle Non-Repetitive Surge Current (Per leg)	I_{FSM}	8.3ms, Half Sine pulse	125	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 5A, Pulse, T_J = 25℃	0.60	V
Max. Reverse Current (per leg) *	I_{R1}	@V_R = rated VR T_J = 25℃	1.0	mA
	I_{R2}	@V_R = rated VR T_J = 125℃	40	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25℃ f_{SIG} = 1MHz	220	pF
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 +125	℃
Storage Temperature Range	T_{stg}	-	-55 to +125	℃
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	2.0	℃/W
Approximate Weight	wt	-	2	g
Case Style	TO-220AB			

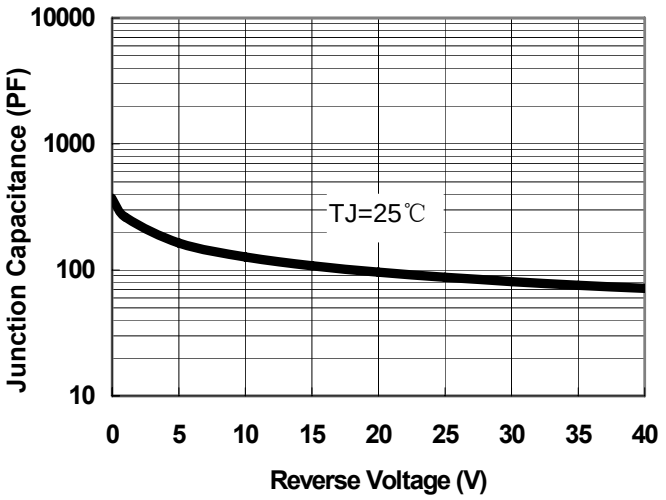


Fig.1-Typical Junction Capacitance

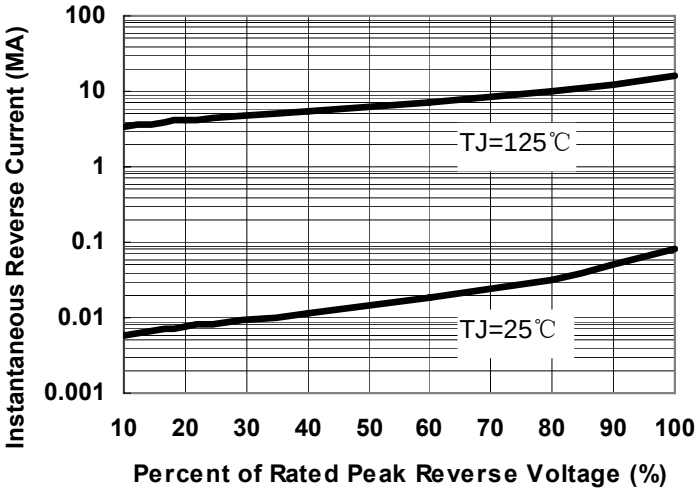


Fig.2-Typical Reverse Characteristics

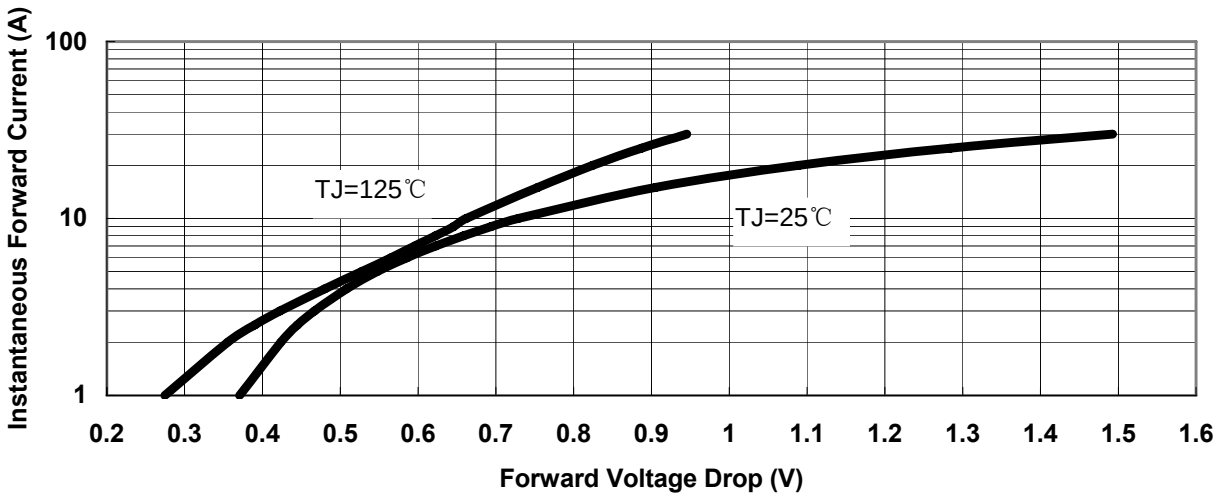


Fig.3-Typical Instantaneous Forward Voltage Characteristics

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