Technical Data
Data Sheet N0076, Rev. B

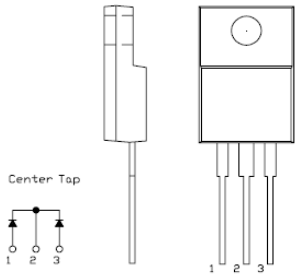
MBRF2080CTP SCHOTTKY RECTIFIER

Applications:

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

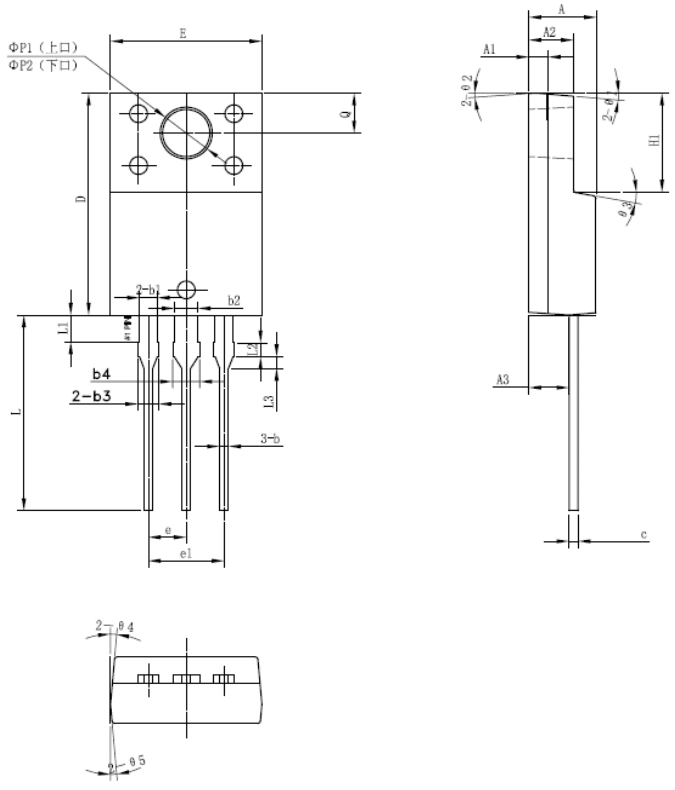
Features:

- **150 ℃ 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**
- **These Devices are Pb−Free and are RoHS Compliant**
- **All SMC parts are traceable to the wafer lot**
- **Additional testing can be offered upon request**



OUTLINE DRAWING

Mechanical Dimensions: In mm



SYMBOL	MIN.	TYP.	MAX.
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
b3	1.20	1.30	1.45
b4	1.60	1.70	1.85
c	0.55	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e		2.55	
e1		5.10	
H1	6.50	6.70	6.90
L	12.70	13.20	13.70
L1	1.60	1.80	2.00
L2	0.80	1.00	1.20
L3	0.60	0.80	1.00
ΦP1(上口)	3.30	3.50	3.70
ΦP2(下口)	2.99	3.19	3.39
Q	2.50	2.70	2.90
Θ1		5°	
Θ2		4°	
Θ3		10°	
Θ4		5°	
Θ5		5°	

OPTION 1(HD)

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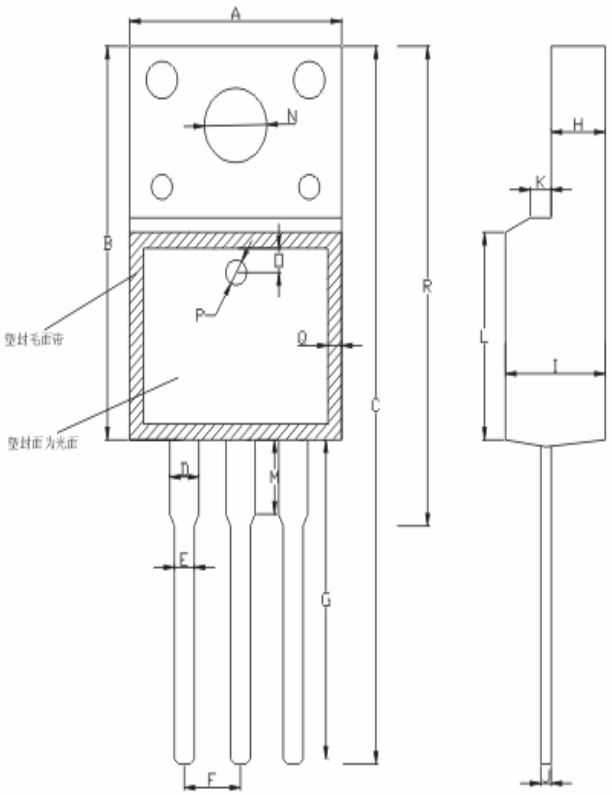

A:10.20 ± 0.50	B:15.90 ± 0.50	C:29.00 ± 1.00	D:1.24 ± 0.10
E:0.80 ± 0.10	F:2.54 ± 0.10	G:13.10 ± 1,0	H:2.55 ± 0.05
I:4.70 ± 0.05	J:0.50 ± 0.05	K:1.20 ± 0.20	L:8.00 ± 0.50
M:3.00 ± 0.50	N:3.20 ± 0.20	O:1,25 ± 0.05	P:1.5 ± 0.05
Q:1.0 ± 0.20	R:19.2 ± 1.0		

OPTION 2(SR)

ITO-220AB

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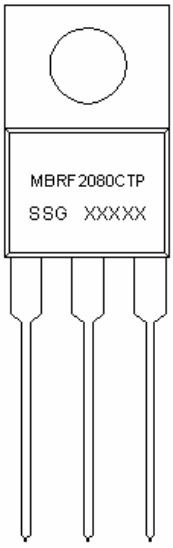
Marking Diagram:



Where XXXXX is YYWWL

MBR	= Device Type
F	= Package type
20	= Forward Current (20A)
80	= Reverse Voltage (80V)
CTP	= Configuration
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

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

Ordering Information:

Device	Package	Shipping
MBRF2080CTP	ITO-220AB	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}	-	80	V
Average Rectified Forward Current	I_O	50Hz Full Sine Wave Resistive Load @T_C =116 °C, V_{RM}=40V	20	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	50Hz Full Sine Wave	180	A

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Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (per leg) *	V_{F1}	@ 10 A, Pulse, T_J = 25 °C	0.75	V
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	50	mA
Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	500	pF
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	T_J	-	-55 to +150	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	2.0	°C/W
Approximate Weight	wt	-	2.0	g
Case Style	ITO-220AB			

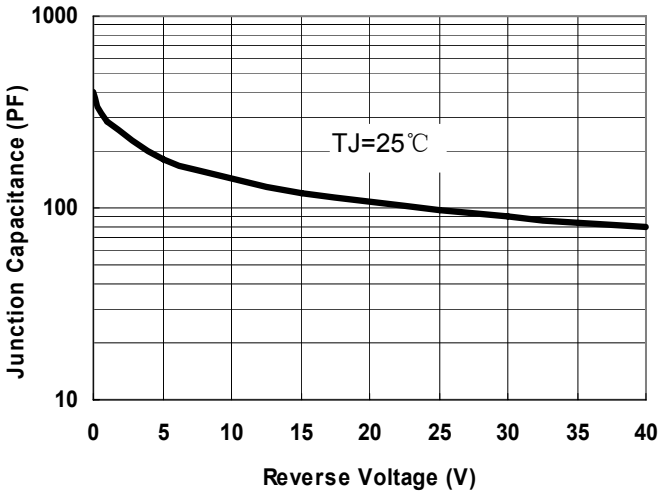

Fig.1-Typical Junction Capacitance

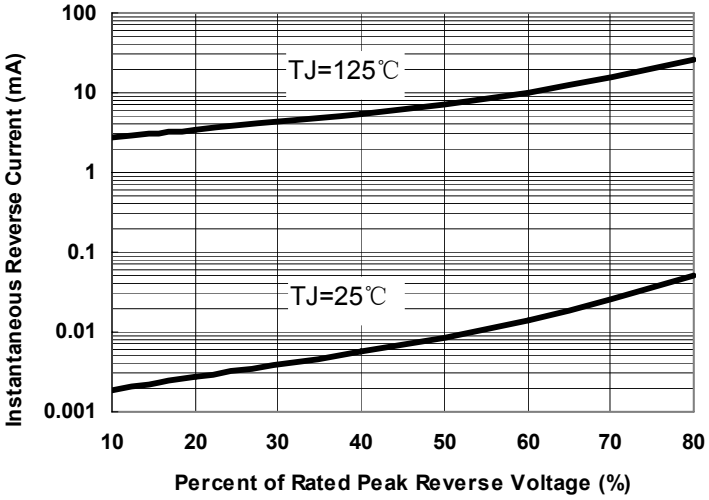

Fig.2-Typical Reverse Characteristics

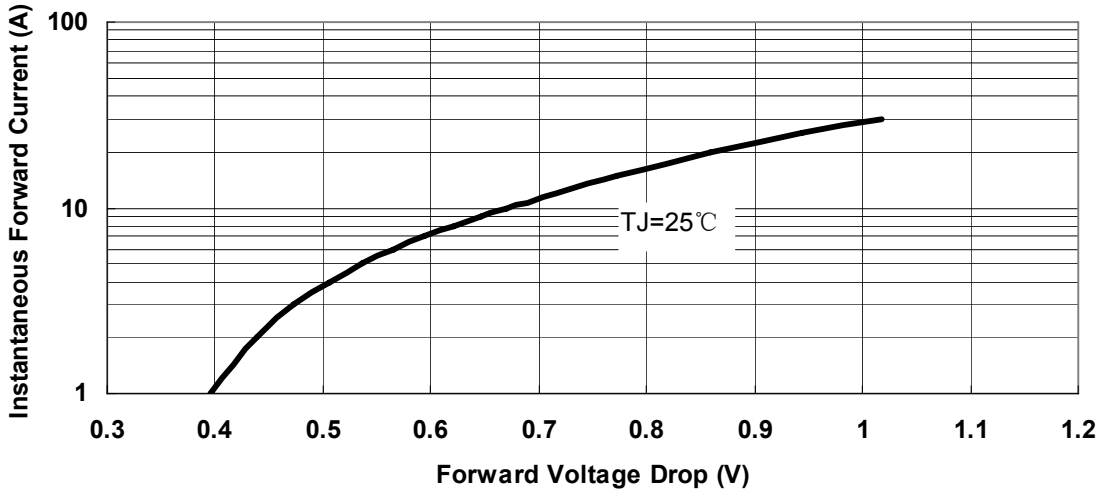

Fig.3-Typical Instantaneous Forward Voltage Characteristics

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