

Technical Data
Data Sheet N0076, Rev. B

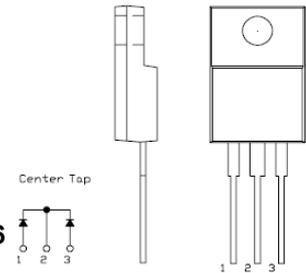
MBRF2080CTP SCHOTTKY RECTIFIER

Applications:

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

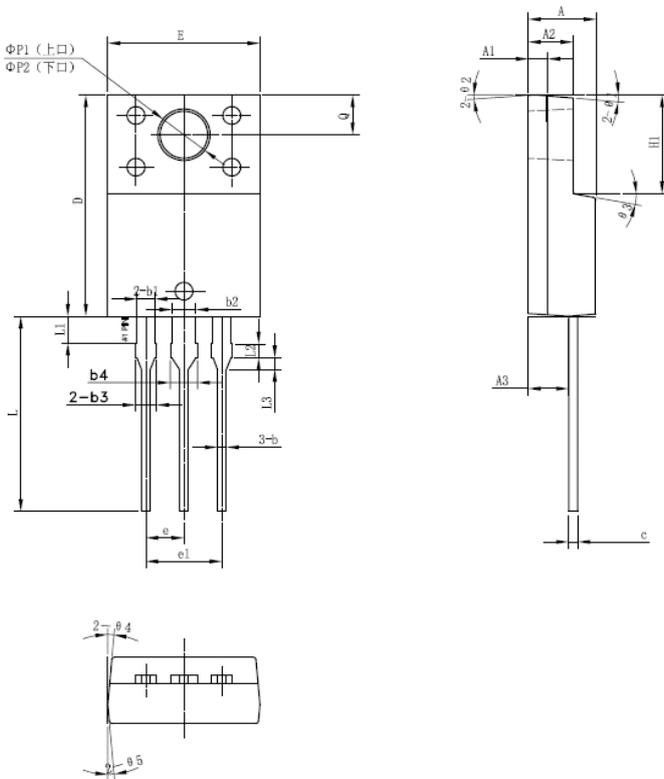
Features:

- 150 °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
- Terminals: pure tin plated, solderable per MIL-STD-750, Method 2026
- 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

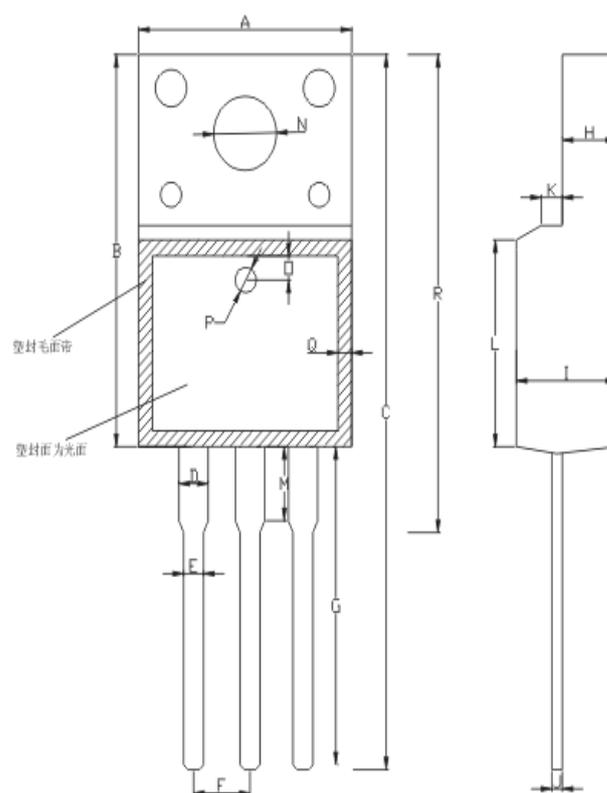
Mechanical Dimensions: In mm



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)

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

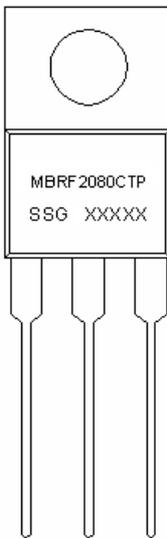
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A:10.20 ± 0.50	B:15.90 ± 0.50	C:29.00 ± 1.00	D:1.24 ± 0.10
E:0.80 ± 0.10	F:2.54 ± 0.10	G:13.10 ± 1,0	H:2.55 ± 0.05
I:4.70 ± 0.05	J:0.50 ± 0.05	K:1.20 ± 0.20	L:8.00 ± 0.50
M:3.00 ± 0.50	N:3.20 ± 0.20	O:1,25 ± 0.05	P:1.5 ± 0.05
Q:1.0 ± 0.20	R:19.2 ± 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 Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	80	V
Average Rectified Forward Current (per device)	$I_{F(AV)}$	50% duty cycle @ $T_C=116^{\circ}C$, rectangular wave form	20	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	180	A

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Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (per leg) *	V_{F1}	@ 10 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.68	0.75	V
Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{rated } V_R$ $T_C = 25\text{ }^\circ\text{C}$	0.05	1.0	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_C = 125\text{ }^\circ\text{C}$	28	50	mA
Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	190	500	pF

* Pulse Width < 300 μ s, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$
Typical Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	2.0	$^\circ\text{C/W}$
Approximate Weight	wt	-	2.0	g
Case Style	ITO-220AB			

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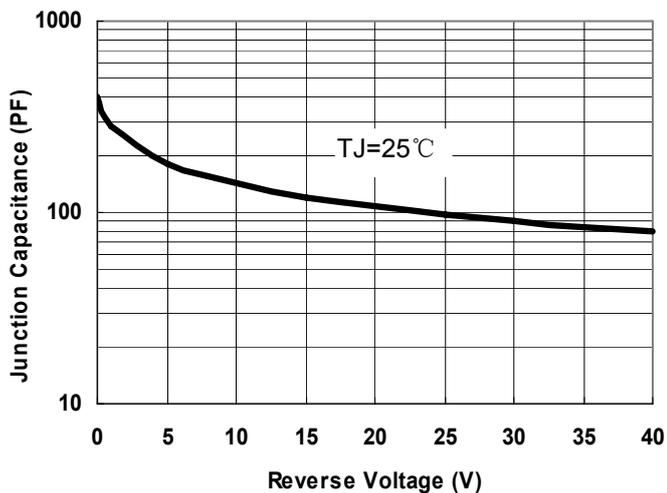


Fig.1-Typical Junction Capacitance

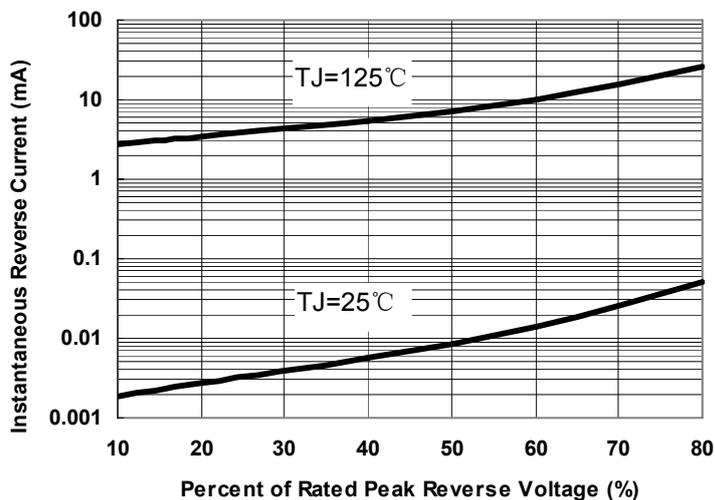


Fig.2-Typical Reverse Characteristics

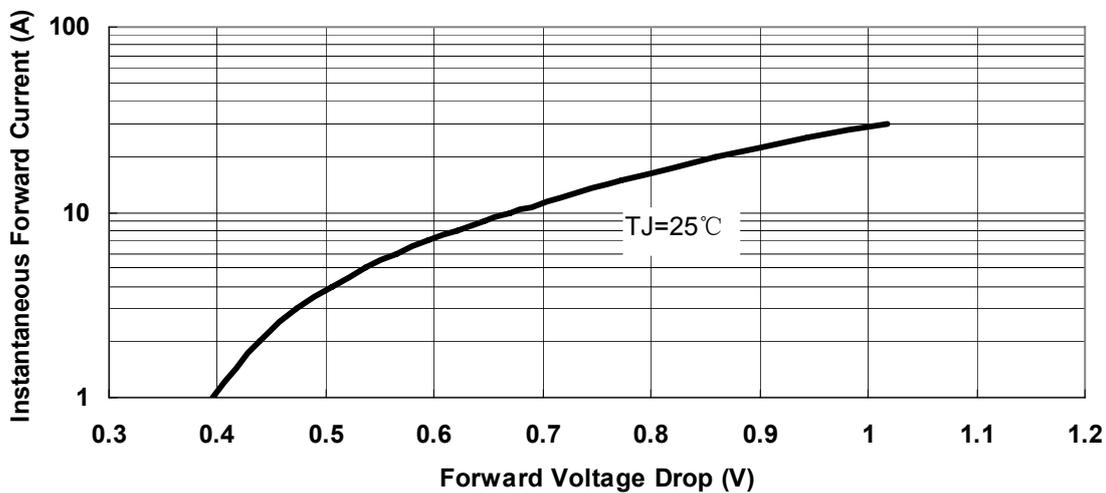


Fig.3-Typical Instantaneous Forward Voltage Characteristics



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