

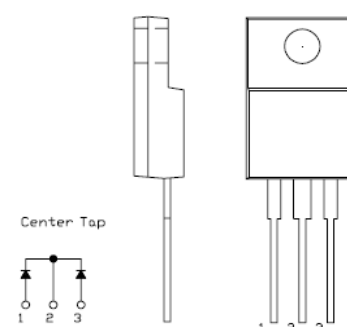
## MBRF3035CT / MBRF3040CT / MBRF3045CT SCHOTTKY RECTIFIER

### Applications:

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

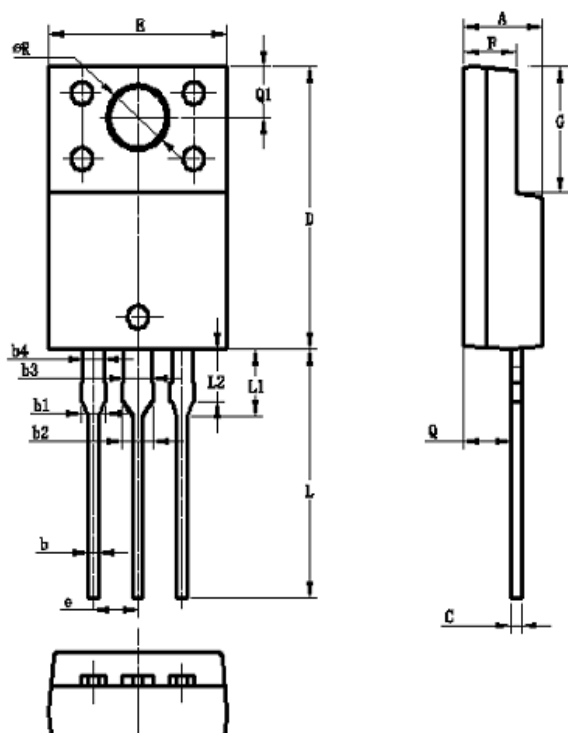
### Features:

- 150 °C T<sub>J</sub> 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

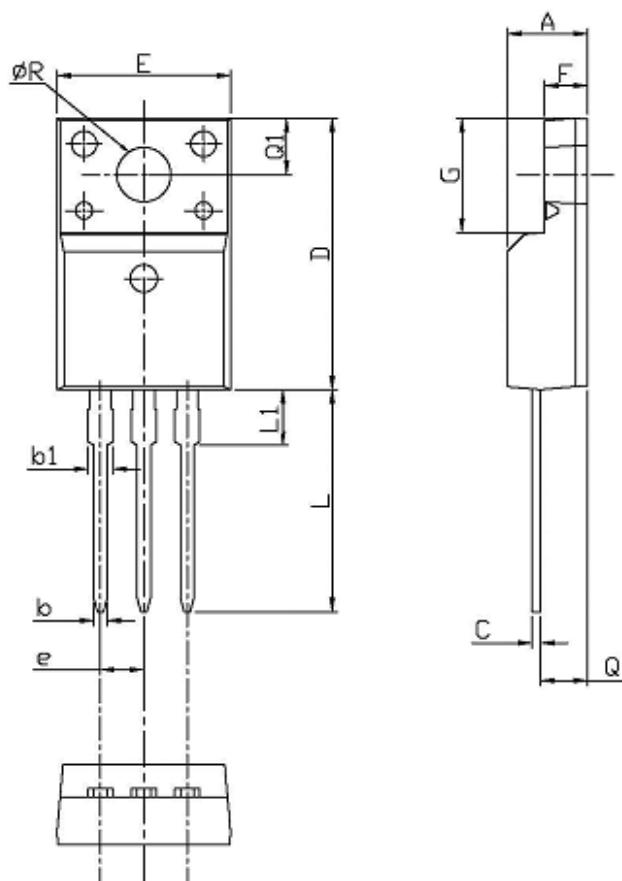


OUTLINE DRAWING

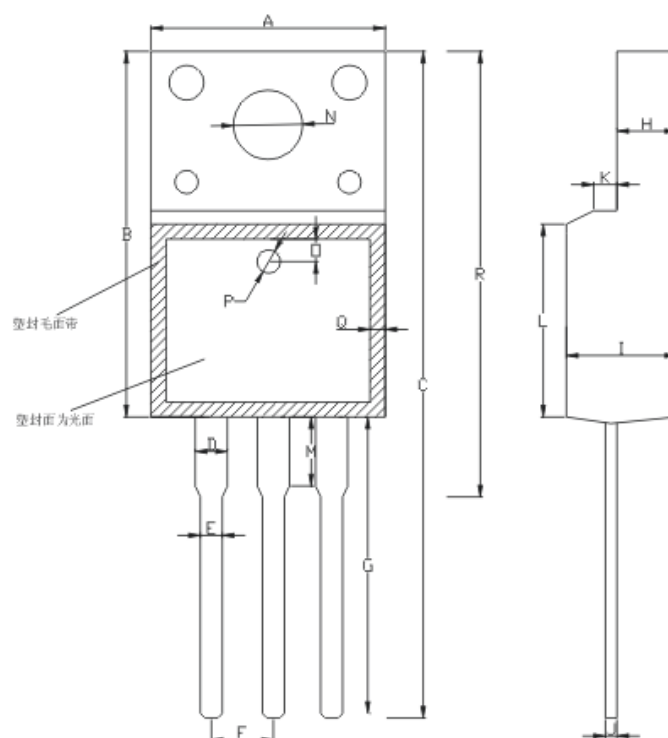
### Mechanical Dimensions: In mm



	OPTION 1(CJ)		OPTION 2(HD)	
Dim	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
ØR	2.98	3.38	3.08	3.28

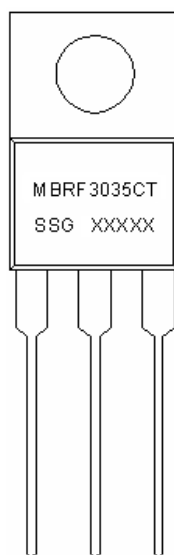


A:10.20 ± 0.50	B:15.90 ± 0.50	C:29.00 ± 1.00	D:1.24 ± 0.10
E:0.80 ± 0.10	F:2.54 ± 0.10	G:13.10 ± 1.0	H:2.55 ± 0.05
I:4.70 ± 0.05	J:0.50 ± 0.05	K:1.20 ± 0.20	L:8.00 ± 0.50
M:3.00 ± 0.50	N:3.20 ± 0.20	O:1.25 ± 0.05	P:1.5 ± 0.05
Q:1.0 ± 0.20	R:19.2 ± 1.0		

**OPTION 5 (SR)**

**ITO-220AB**

## Marking Diagram:



Where XXXXX is YYWWL

MBR = Device Type  
 F = Package type  
 30 = Forward Current (30A)  
 35 = Reverse Voltage (35V)  
 CT = Configuration  
 SSG = SSG  
 YY = Year  
 WW = Week  
 L = Lot Number

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

## Ordering Information:

Device	Package	Shipping
MBRF3035CT	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	$V_{RRM}$	-	35	MBRF3035CT
Working Peak Reverse Voltage	$V_{RWM}$		40	MBRF3040CT
DC Blocking Voltage	$V_R$		45	MBRF3045CT
Average Rectified Forward Current	$I_F (AV)$	50% duty cycle @ $T_C = 123^\circ C$ , rectangular wave form	15(per leg) 30(per device)	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	240	A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (per leg)*	V <sub>F1</sub>	@ 15 A, Pulse, T <sub>J</sub> = 25 °C @ 30 A, Pulse, T <sub>J</sub> = 25 °C	0.70 0.84	V
	V <sub>F2</sub>	@ 15 A, Pulse, T <sub>J</sub> = 125 °C @ 30 A, Pulse, T <sub>J</sub> = 125 °C	0.57 0.72	V
Reverse Current (per leg) *	I <sub>R1</sub>	@V <sub>R</sub> = rated V <sub>R</sub> T <sub>C</sub> = 25 °C	1.0	mA
	I <sub>R2</sub>	@V <sub>R</sub> = rated V <sub>R</sub> T <sub>C</sub> = 125 °C	100	mA
Junction Capacitance (per leg)	C <sub>T</sub>	@V <sub>R</sub> = 5V, T <sub>C</sub> = 25 °C f <sub>SIG</sub> = 1MHz	800	pF
Typical Series Inductance (per leg)	L <sub>S</sub>	Measured lead to lead 5 mm from package body	7.5	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	T <sub>J</sub>	-	-55 to +150	°C
Storage Temperature	T <sub>stg</sub>	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case(per leg)	R <sub>θJC</sub>	DC operation	2.4	°C/W
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

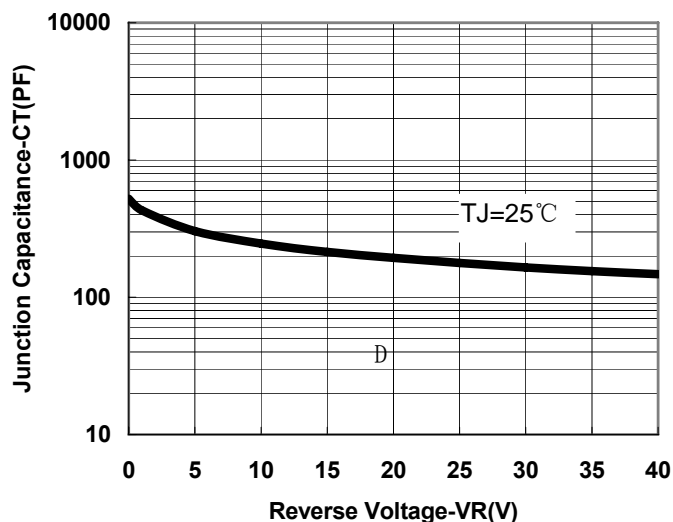


Fig.1-Typical Junction Capacitance

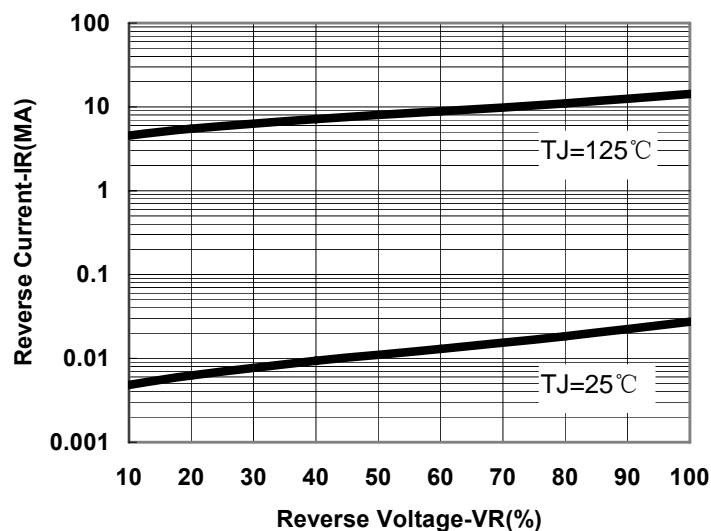


Fig.2-Typical Reverse Characteristics

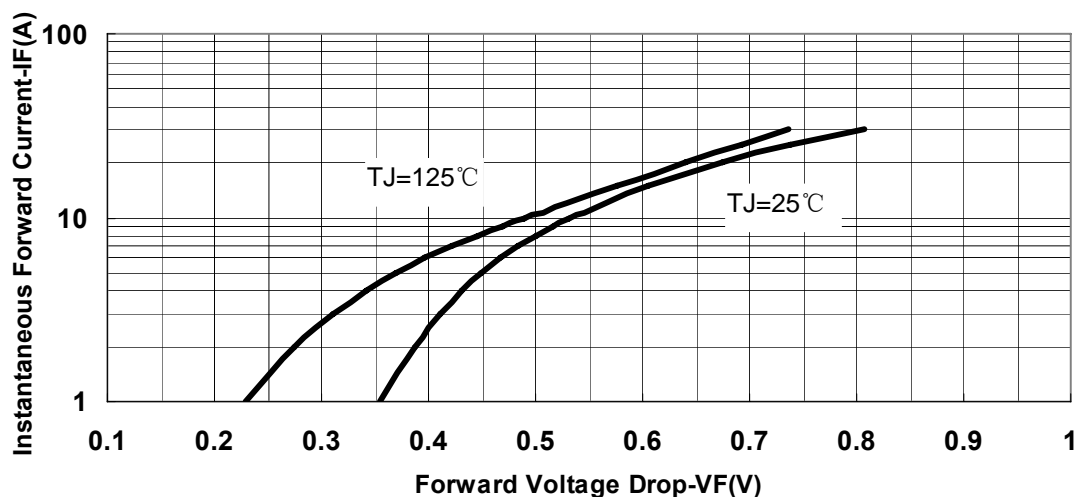


Fig.3-Typical Instantaneous Forward Voltage Characteristics



**MBRF3035CT**  
**MBRF3040CT**  
**MBRF3045CT**

**Technical Data**  
**Data Sheet N0831 Rev. A**

***Green Products***

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