

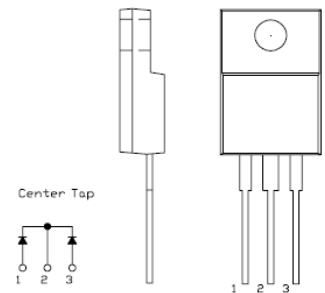
**SBRF30100CT SCHOTTKY RECTIFIER**

**Applications:**

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

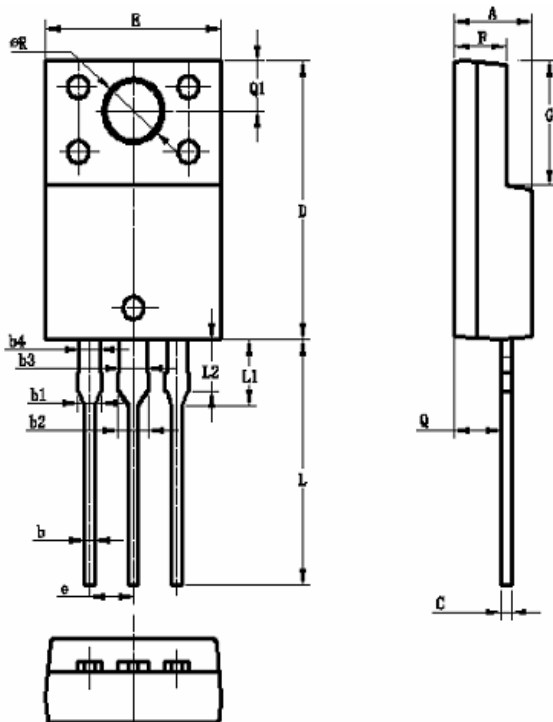
**Features:**

- 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

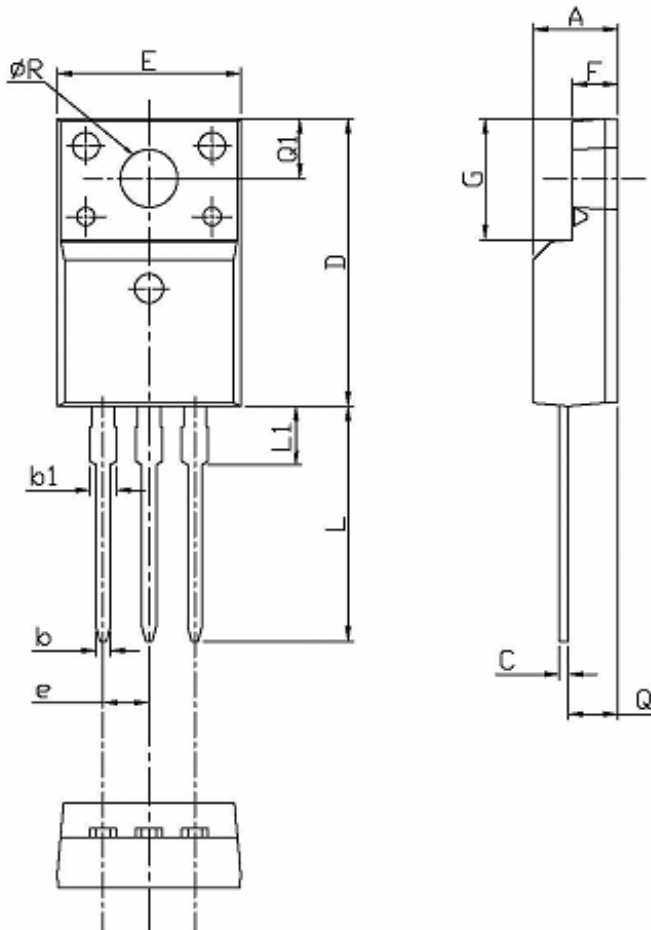


OUTLINE DRAWING

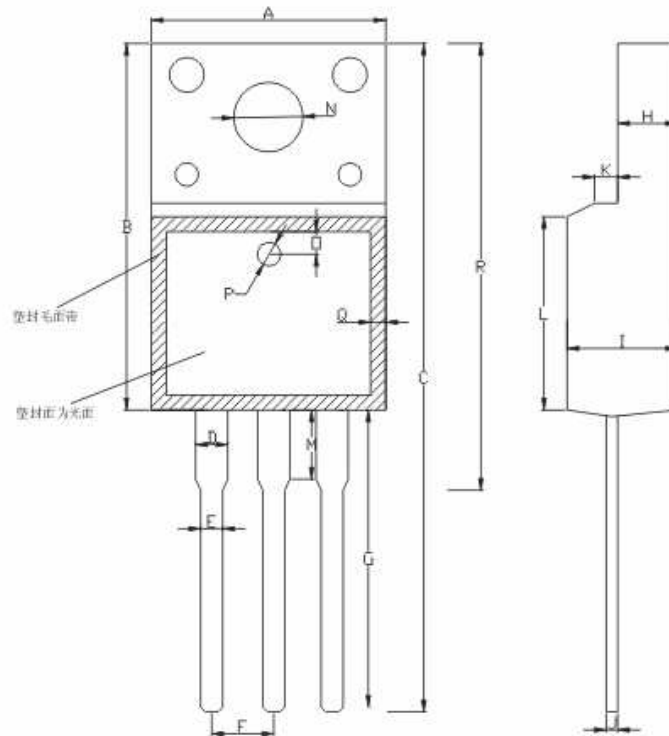
**Mechanical Dimensions: In mm**



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	2.54 TYP		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
$\phi R$	2.98	3.38	3.08	3.28

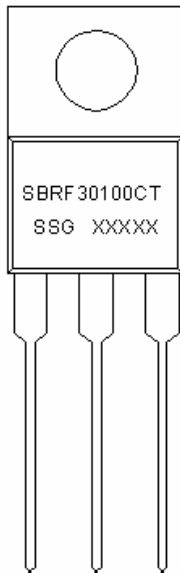


A:10.20 ± 0.50	B:15.90 ± 0.50	C:29.00 ± 1.00	D:1.24 ± 0.10
E:0.80 ± 0.10	F:2.54 ± 0.10	G:13.10 ± 1,0	H:2.55 ± 0.05
I:4.70 ± 0.05	J:0.50 ± 0.05	K:1.20 ± 0.20	L:8.00 ± 0.50
M:3.00 ± 0.50	N:3.20 ± 0.20	O:1,25 ± 0.05	P:1.5 ± 0.05
Q:1.0 ± 0.20	R:19.2 ± 1.0		

**OPTION 5 (SR)**

**ITO-220AB**

**Marking Diagram:**



Where XXXXX is YYWWL

- SBR = Device Type
- F = Package type
- 30 = Forward Current (30A)
- 100 = Reverse Voltage (100V)
- CT = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

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

**Ordering Information:**

Device	Package	Shipping
SBRF30100CT	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 Inverse Voltage	$V_{RWM}$	-	100	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @ $T_C = 133^\circ\text{C}$ , rectangular wave form	30	A
Peak Repetitive Forward Current(per leg)	$I_{FRM}$	Rated $V_R$ square wave, 20KHz $T_C = 133^\circ\text{C}$	20	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	Surge applied at rated load conditions halfwave, single phase,60Hz	150	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	$V_{F1}$	@ 15 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.90	V
	$V_{F2}$	@ 15 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.80	V
Max. Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	1.0	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$	6.0	mA
Max. Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	400	pF
Typical Series Inductance (per leg)	$L_S$	Measured lead to lead 5 mm from package body	8.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/ $\mu\text{s}$

\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle <2%

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-55 to +150	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	3.0	$^\circ\text{C/W}$
Maximum Thermal Resistance, Case to Heat Sink	$R_{\theta JA}$	DC operation	50	$^\circ\text{C/W}$
Maximum Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	0.50	$^\circ\text{C/W}$
Approximate Weight	wt	-	2.0	g
Case Style		ITO-220AB		

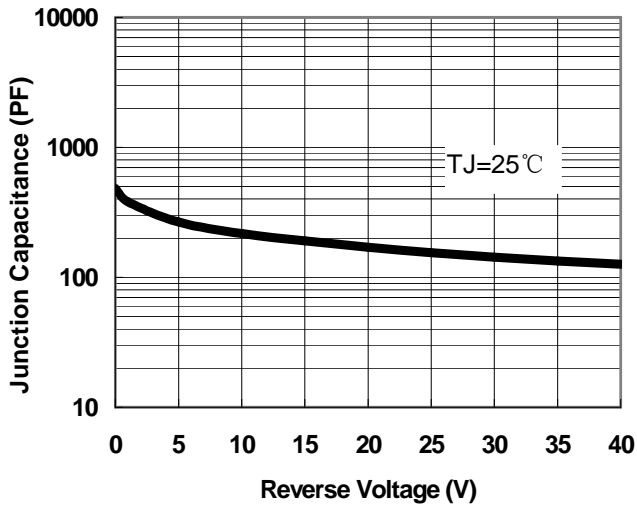


Fig.1-Typical Junction Capacitance

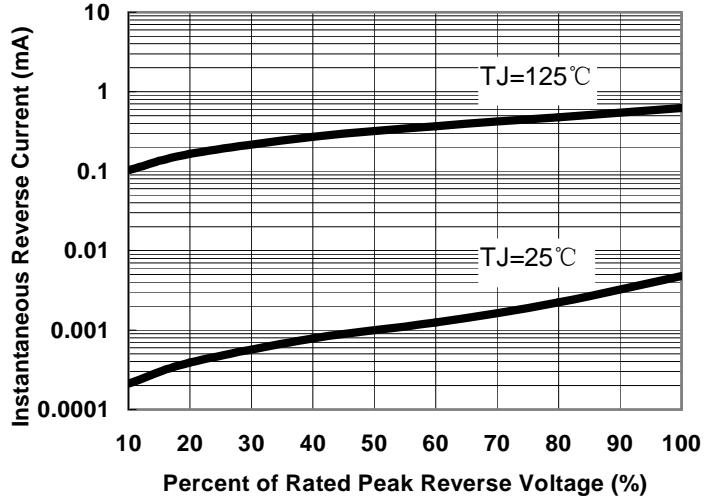


Fig.2-Typical Reverse Characteristics

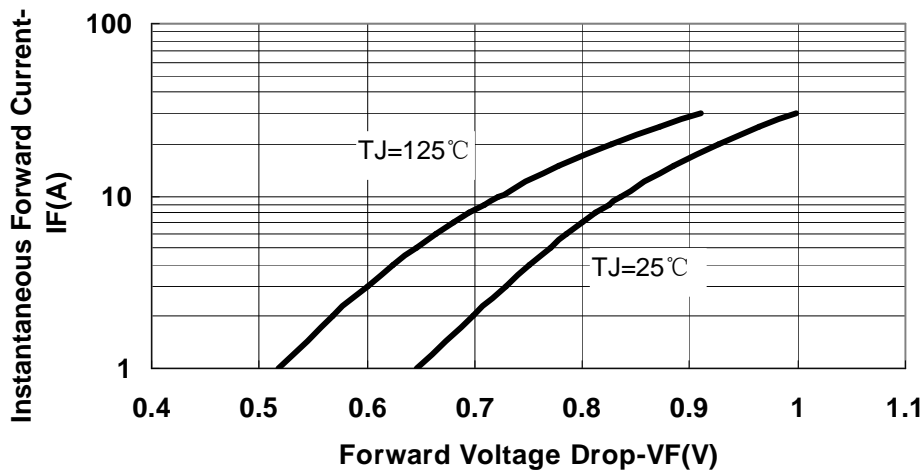


Fig.3-Typical Instantaneous Forward Voltage Characteristics

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