



# TO-220-3L/TO-220F-B Plastic-Encapsulate Diode

## SBD30H150CTB、SBDF30H150CTB

SCHOTTKY BARRIER RECTIFIER

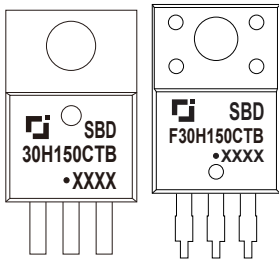
### MAIN CHARACTERISTICS

$I_o$	30(15×2)A
$V_{RRM}$	150 V
$T_j$	175 °C
$V_{F(typ)}$	0.67V (@ $T_j=150^{\circ}C$ )

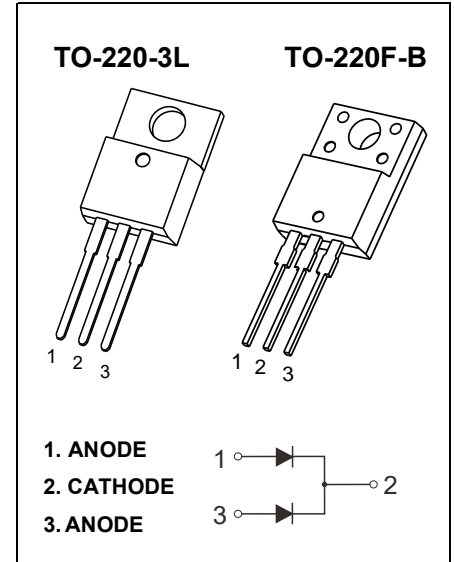
### FEATURES

- Low Power Loss, High Efficiency
- Guard Ring Die Construction for Transient Protection
- High Current Capability and Low Forward Voltage Drop

### MARKING



SBD(F)30H150CTB = Device code  
 Solid dot = Green molding compound device  
 if none, the normal device  
 XXXX = Code



### MAXIMUM RATINGS ( $T_a=25^{\circ}C$ unless otherwise noted )

Symbol	Parameter	SBD		Unit
		30H150CTB	F30H150CTB	
$V_{RRM}$	Peak repetitive reverse voltage	150		V
$V_{RWM}$	Working peak reverse voltage			
$V_R$	DC blocking voltage			
$V_{R(RMS)}$	RMS reverse voltage	106		V
$I_o$	Average rectified output current	30		A
$I_{FSM}$	Non-Repetitive peak forward surge current (8.3ms half sine wave)	300		A
$R_{\theta Jc}$	Thermal resistance from junction to case , $T_c=25^{\circ}C$	2.0	3.0	$^{\circ}C/W$
$R_{\theta JA}$	Thermal resistance from junction to ambient	75		$^{\circ}C/W$
$T_j$	Junction temperature	175		$^{\circ}C$
$T_{stg}$	Storage temperature	-55~+175		$^{\circ}C$

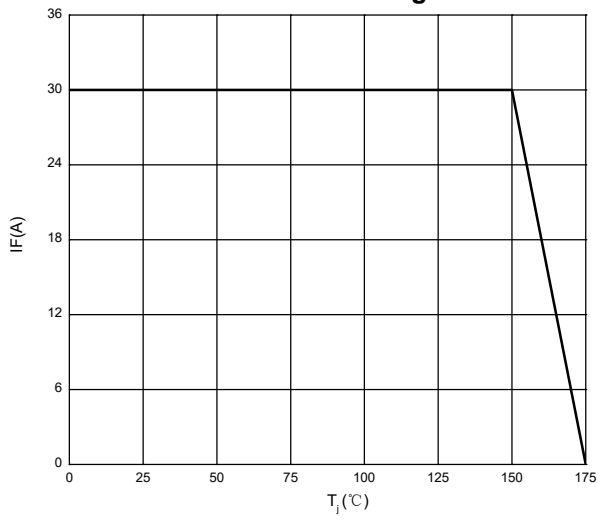
### ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}C$ unless otherwise specified )

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=0.1mA$	150			V
Reverse current	$I_R$	$V_R=150V$	$T_j=25^{\circ}C$	130	500	nA
			$T_j=150^{\circ}C$	1.0		mA
Forward voltage	$V_F$	$I_F=10A$	$T_j=25^{\circ}C$	0.76		V
			$T_j=150^{\circ}C$	0.62		V
		$I_F=15A$	$T_j=25^{\circ}C$	0.80	0.88	V
			$T_j=150^{\circ}C$	0.67		V

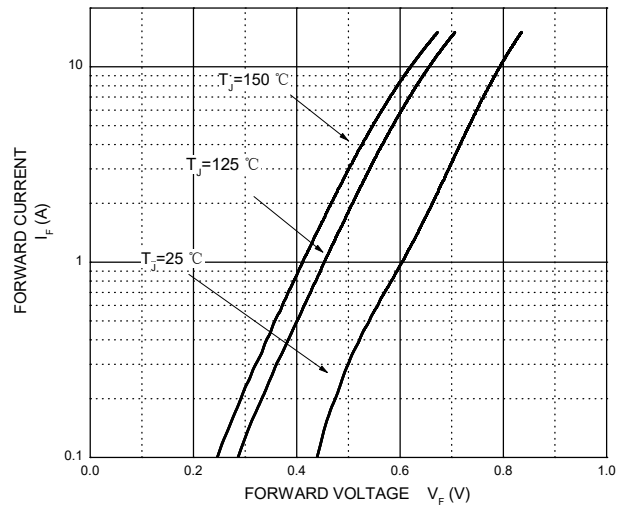
\*Pulse test: pulse width  $\leq 300\mu s$ , duty cycles  $\leq 2.0\%$ .

# Typical Characteristics

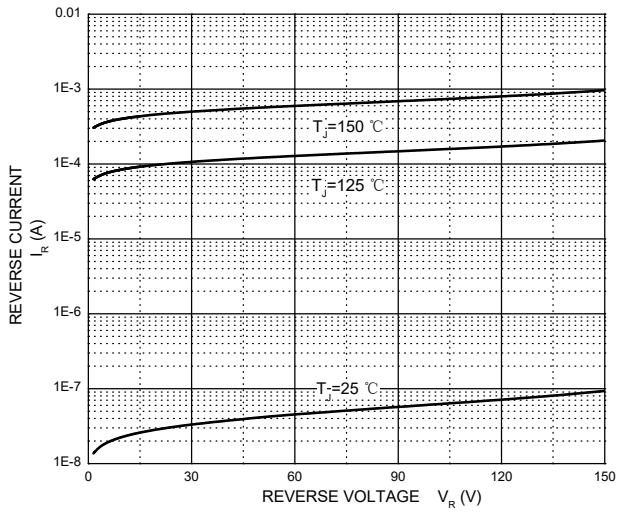
### Forward Current Derating Curve



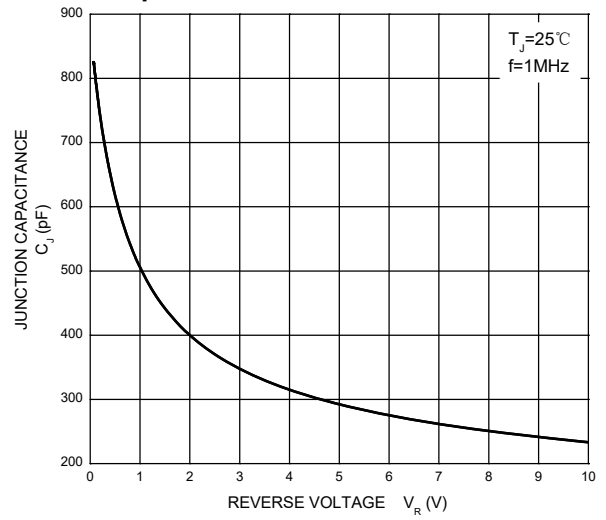
### Forward Characteristics



### Reverse Characteristics

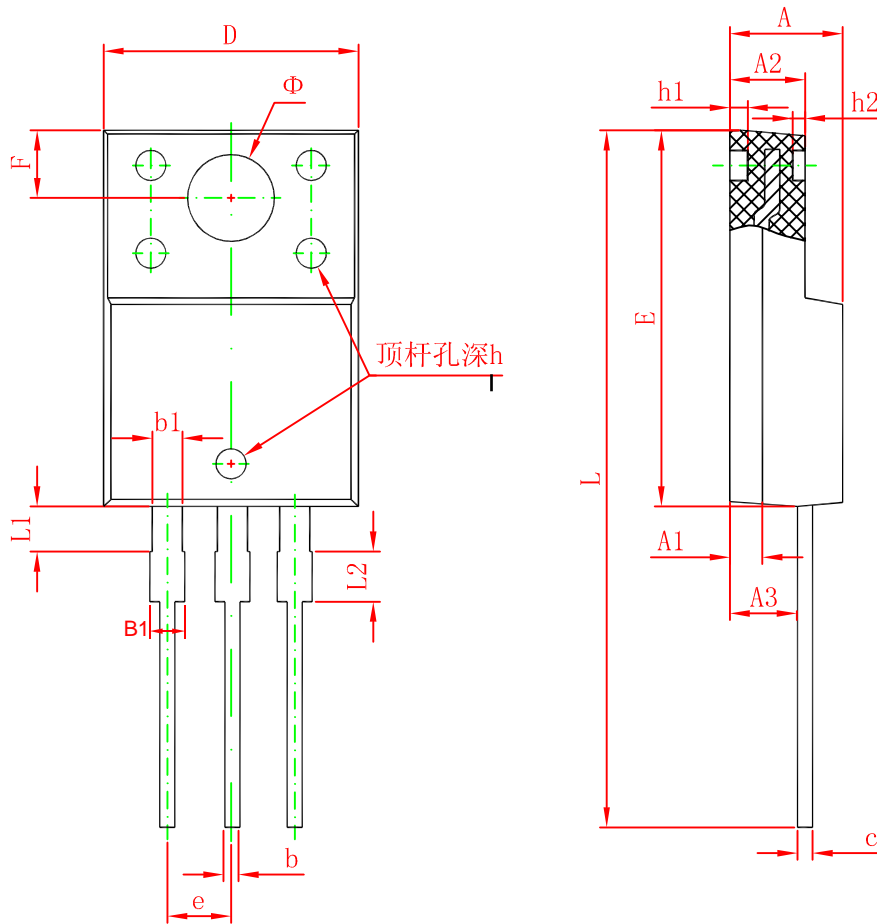


### Capacitance Characteristics Per Diode





# TO-220F-B Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.300	4.700	0.169	0.185
A1	1.200 REF.		0.047 REF.	
A2	2.800	3.200	0.110	0.126
A3	2.500	2.900	0.098	0.114
b	0.710	0.910	0.028	0.036
b1	1.100	1.350	0.043	0.053
B1	1.150	1.400	0.045	0.055
c	0.500	0.750	0.020	0.030
D	9.960	10.360	0.392	0.408
E	14.800	15.200	0.583	0.598
e	2.540 TYP.		0.100 TYP.	
F	2.700 REF.		0.106 REF.	
$\Phi$	3.300 REF.		0.130 REF.	
h	0.000	0.300	0.000	0.012
h1	0.800 REF.		0.031 REF.	
h2	0.500 REF.		0.020 REF.	
L	28.000	28.400	1.102	1.118
L1	2.100	2.400	0.082	0.094
L2	1.300	1.700	0.051	0.066