



**TO-220F-B Plastic-Encapsulate Diode**

**SBDF20150TCTB**

SCHOTTKY BARRIER RECTIFIER

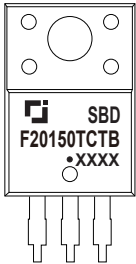
**MAIN CHARACTERISTICS**

$I_o$	<b>20 (2×10) A</b>
$V_{RRM}$	<b>150 V</b>
$T_j$	<b>150 °C</b>
$V_{F(typ)}$	<b>0.67V (@T<sub>j</sub>=125°C)</b>

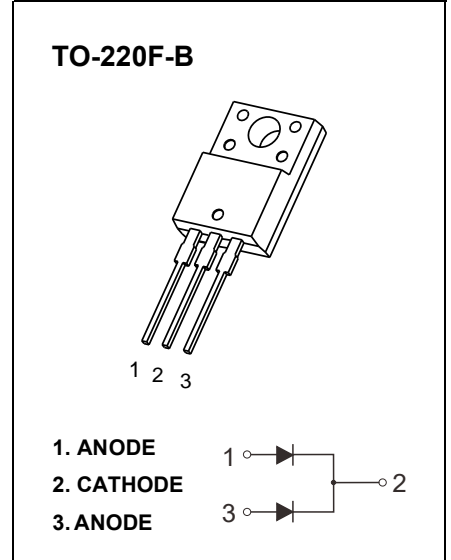
**FEATURES**

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

**MARKING**



SBDF20150TCTB= Device code  
 Solid dot = Green molding compound device  
 if none, the normal device  
 XXXX= Code



**MAXIMUM RATINGS ( T<sub>a</sub>=25°C unless otherwise noted )**

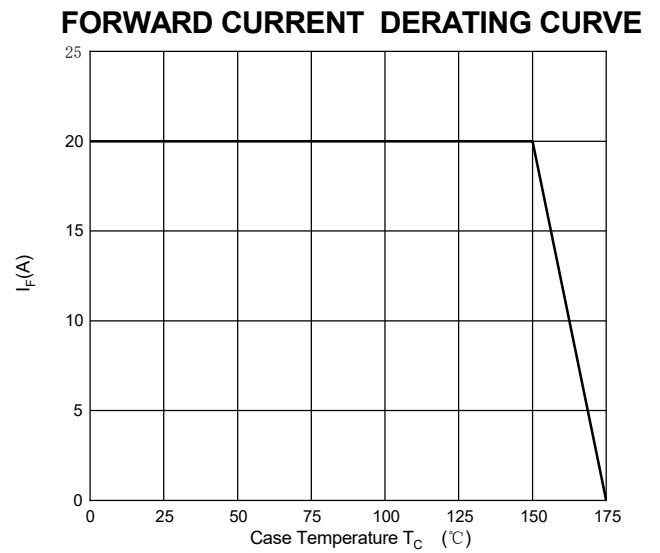
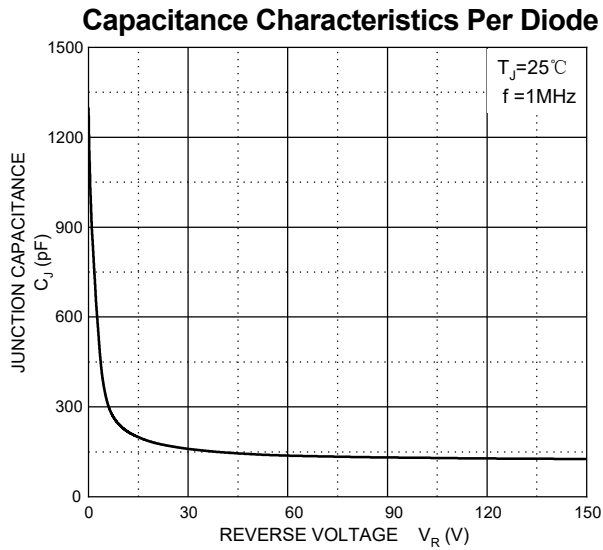
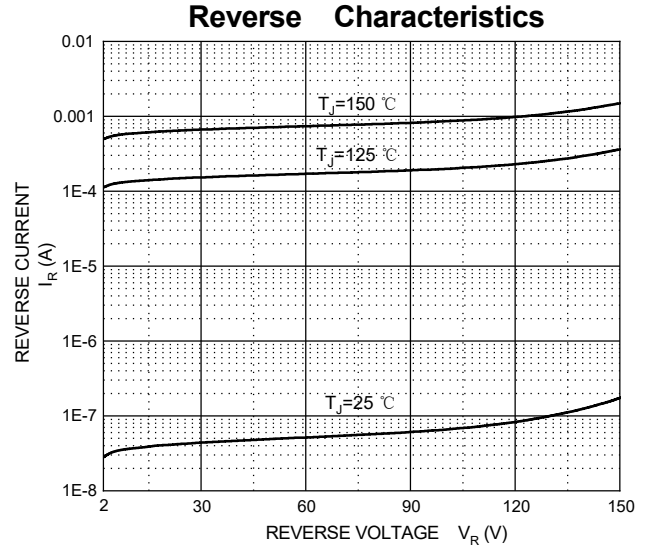
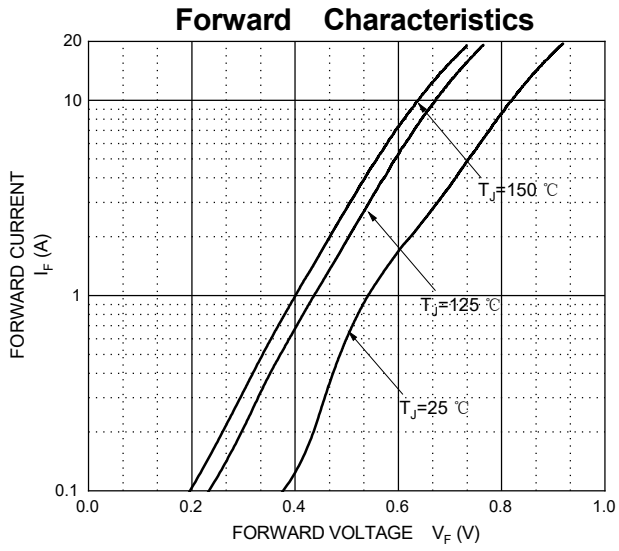
Symbol	Parameter	Value	Unit
$V_{RRM}$	Peak repetitive reverse voltage	150	V
$V_{RWM}$	Working peak reverse voltage		
$V_R$	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	105	V
$I_o$	Average rectified output current	20	A
$I_{FSM}$	Non-Repetitive peak forward surge current (8.3ms half sine wave)	200	A
$R_{\theta JC}$	Thermal resistance from junction to case	5.0	°C
$R_{\theta JA}$	Thermal resistance from junction to ambient	100	°C
$T_j$	Junction temperature	150	°C
$T_{stg}$	Storage temperature	-55~+150	°C

**ELECTRICAL CHARACTERISTICS ( T<sub>a</sub>=25°C unless otherwise specified)**

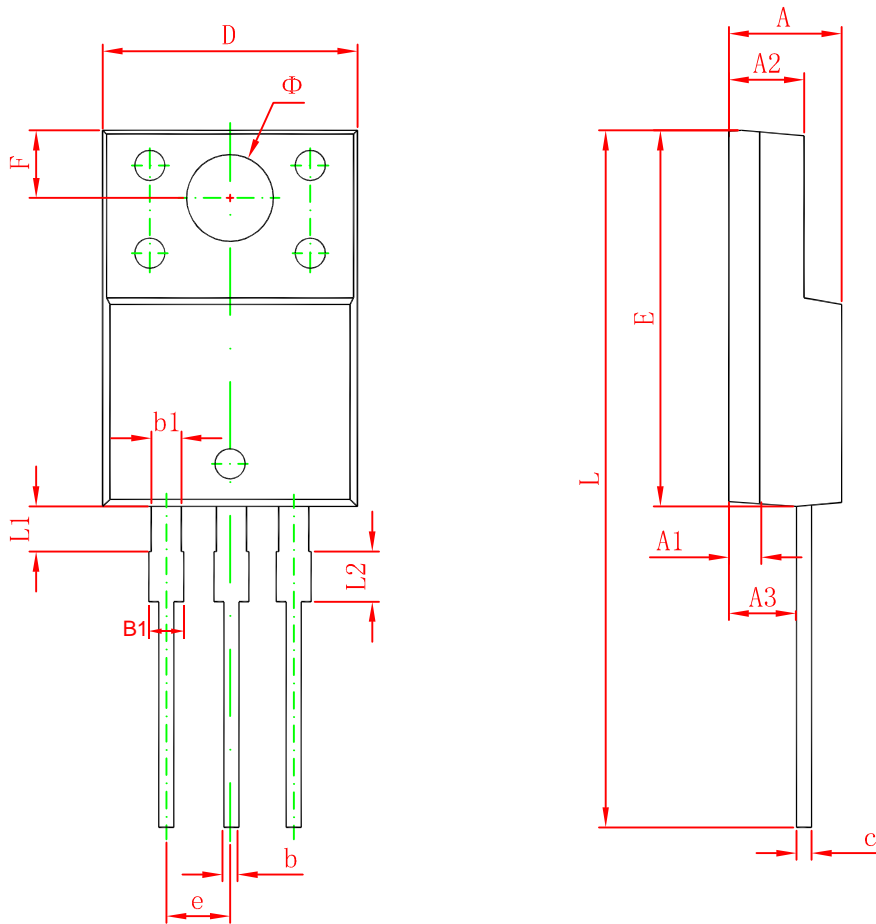
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=1mA$	150			V
Reverse current	$I_R$	$V_R=150V$	$T_j = 25^\circ C$	0.20	10	uA
			$T_j = 125^\circ C$	0.40		mA
Forward voltage	$V_F$	$I_F=5A$	$T_j = 25^\circ C$	0.73		V
			$T_j = 125^\circ C$	0.60		V
		$I_F=10A$	$T_j = 25^\circ C$	0.80	1.1	V
			$T_j = 125^\circ C$	0.67		V

\*Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.

# Typical Characteristics



# 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	3.700	0.130	0.146
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