SZCJ

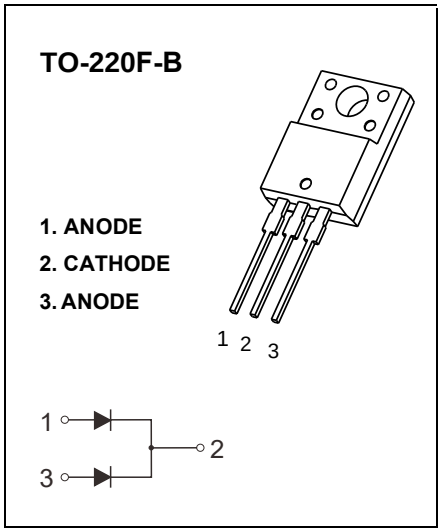
Shenzhen Changji Semiconductor Co., LTD.

TO-220F-B Plastic-Encapsulate Diode

SBDF20H300CTB SCHOTTKY BARRIER RECTIFIER

MAIN CHARACTERISTICS

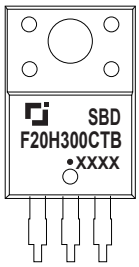
I_O	20（10×2）A
V_{RRM}	300 V
T_j	175 ℃
$V_{F(typ)}$	0.7V（@Tj=150℃）



FEATURES

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

MARKING



SBDF20H300CTB = Device code
Solid dot = Green molding compound device
if none, the normal device
XXXX = Code

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	SBDF20H300CTB	Unit
V_{RRM}	Peak repetitive reverse voltage	300	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	210	V
I_O	Average rectified output current	20	A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	220	A
$R_{\Theta Jc}$	Thermal resistance from junction to case ,Tc=25℃	4.8	℃/W
$R_{\Theta JA}$	Thermal resistance from junction to ambient	89	℃/W
T_j	Junction temperature	175	℃
T_{stg}	Storage temperature	-55~+175	℃

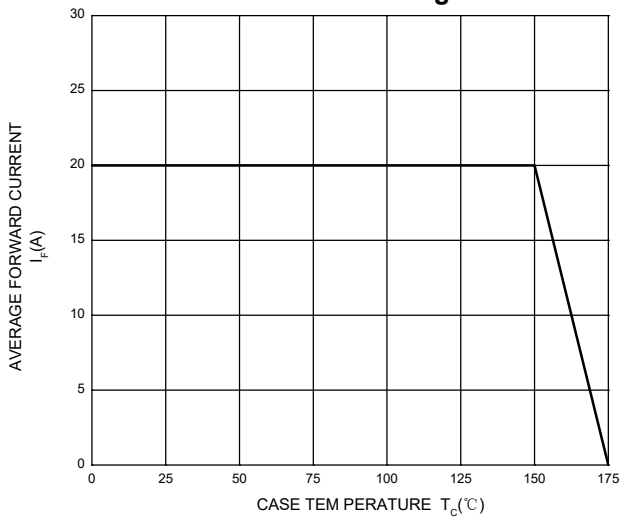
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	I_R=1mA		300			V
Reverse current	I_R	V_R=300V	Tj =25℃		30	500	nA
			Tj =150℃		0.7		mA
Forward voltage	V_F	I_F=10A	Tj =25℃		0.88	0.95	V
			Tj =150℃		0.7		V
		I_F=20A	Tj =25℃		0.95		V
			Tj =150℃		0.8		V

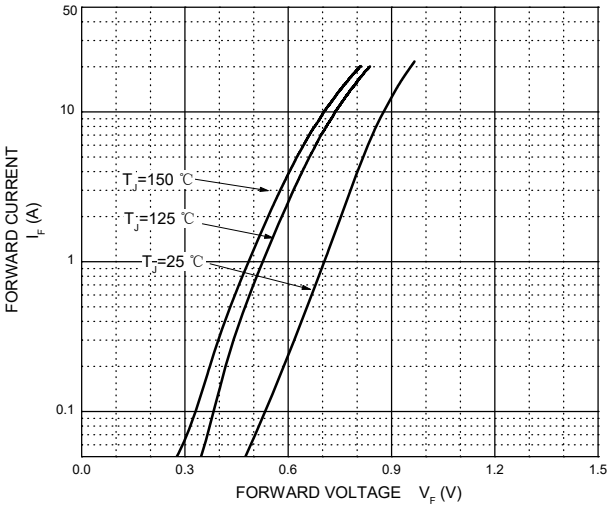
*Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.

Typical Characteristics

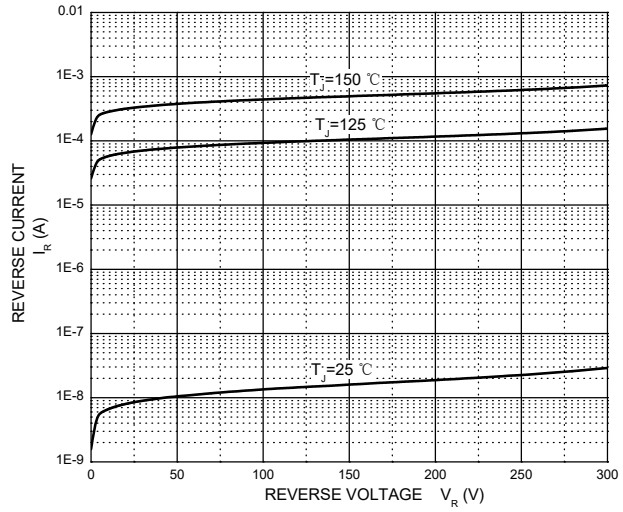
Forward Current Derating Curve



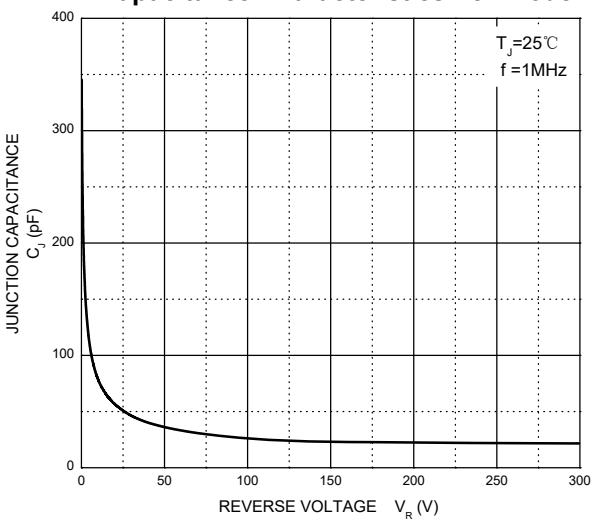
Forward Characteristics



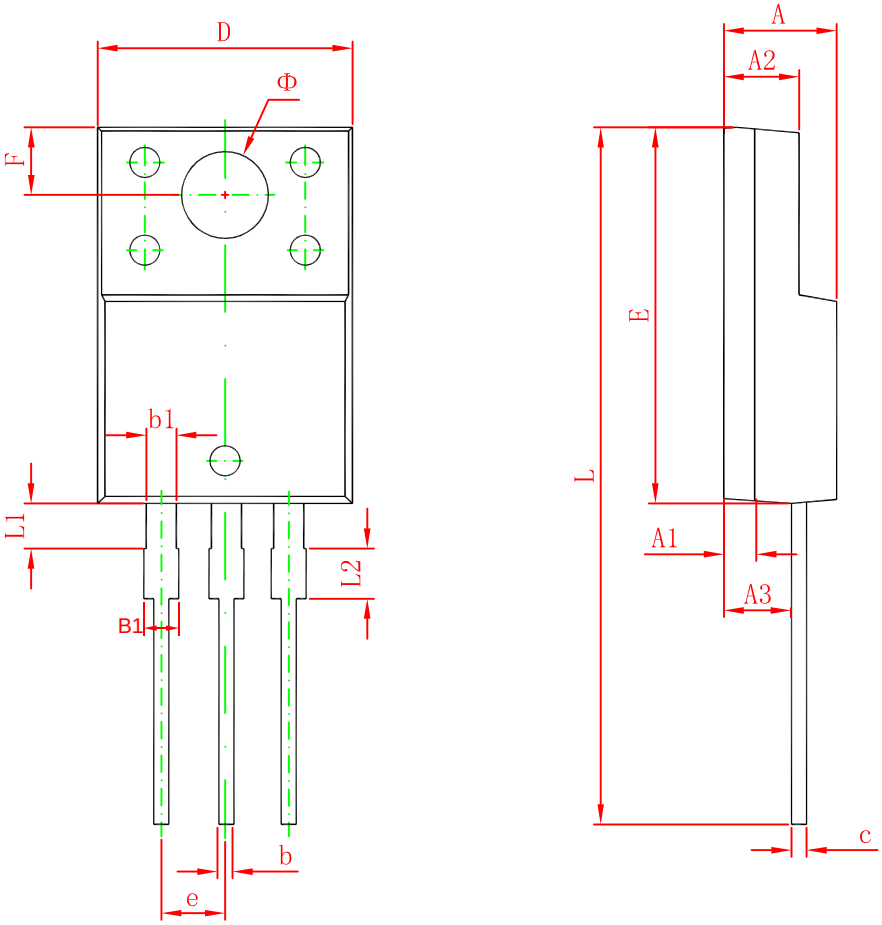
Reverse Characteristics



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.	
Φ	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