



TO-220F-B Plastic-Encapsulate Diodes

SBDF20200CT SCHOTTKY BARRIER RECTIFIER

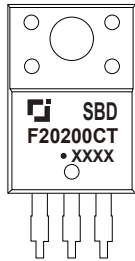
MAIN CHARACTERISTICS

I_o	20 (2×10) A
V_{RRM}	200 V
T_j	150 °C
$V_{F(typ)}$	0.76V (@T_j=125°C)

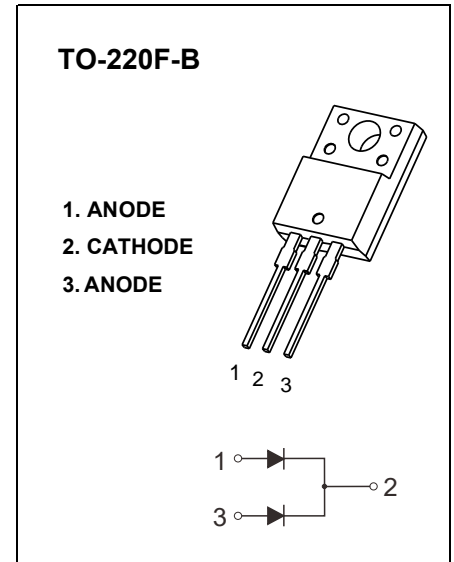
FEATURES

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

MARKING



SBDF20200CT = Device code
 Solid dot = Green molding compound device
 if none, the normal device
 XXXX = Code



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{RRM}	Peak repetitive reverse voltage	200	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	140	V
I_o	Average rectified output current	20	A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	150	A
$R_{\theta Jc}$	Thermal resistance from junction to case , T _c =25°C	3.0	°C/W
$R_{\theta JA}$	Thermal resistance from junction to ambient	62.5	°C/W
T_j	Junction temperature	150	°C
T_{stg}	Storage temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=0.1mA$	200			V
Reverse current	I_R	$V_R=200V$	T _j =25°C	2.0	100	uA
			T _j =125°C	2.0		mA
Forward voltage	V_F	$I_F=5A$	T _j =25°C	0.8		V
			T _j =125°C	0.68		V
		$I_F=10A$	T _j =25°C	0.86	0.95	V
			T _j =125°C	0.76		V

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

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

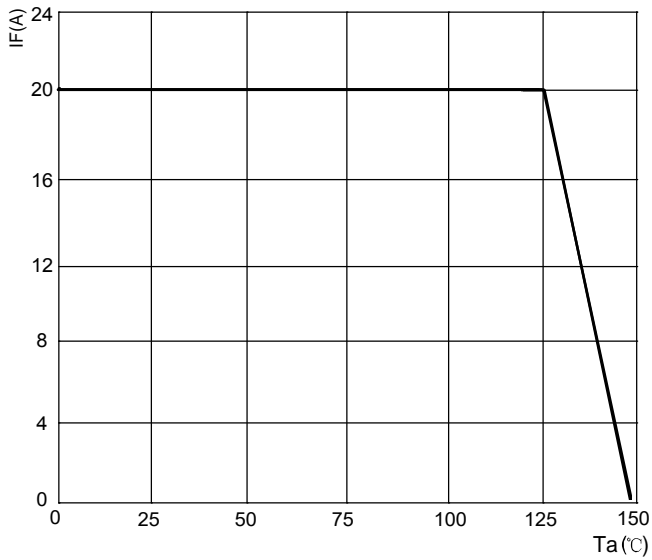


FIG.2: TYPICAL FORWARD CHARACTERISTICS

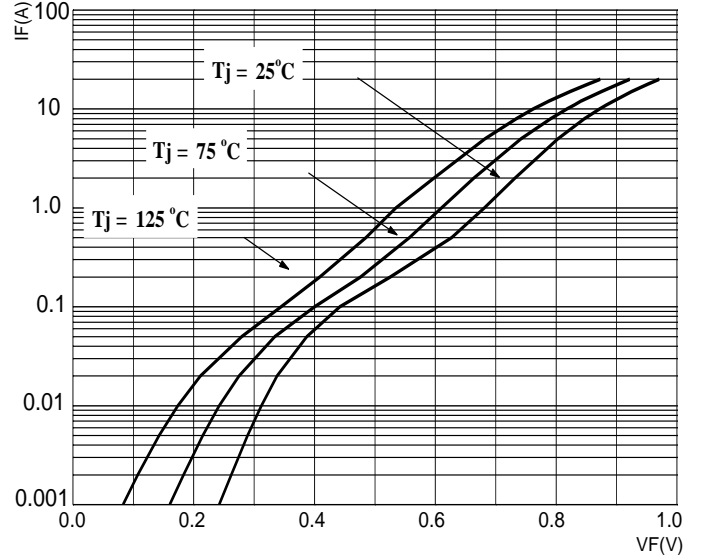


FIG.3: TOTAL CAPACITANCE DERATING CURVE

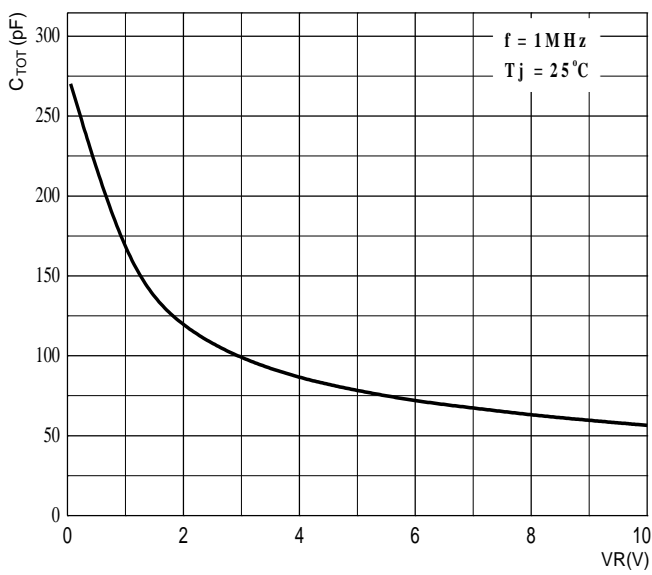
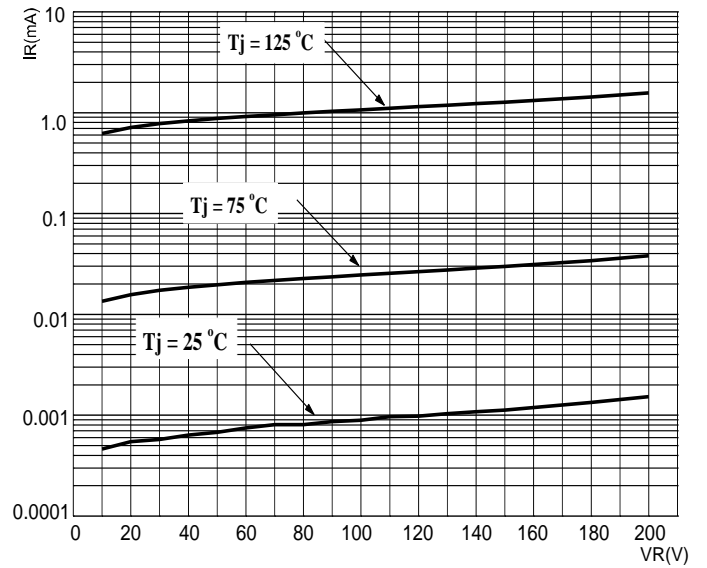
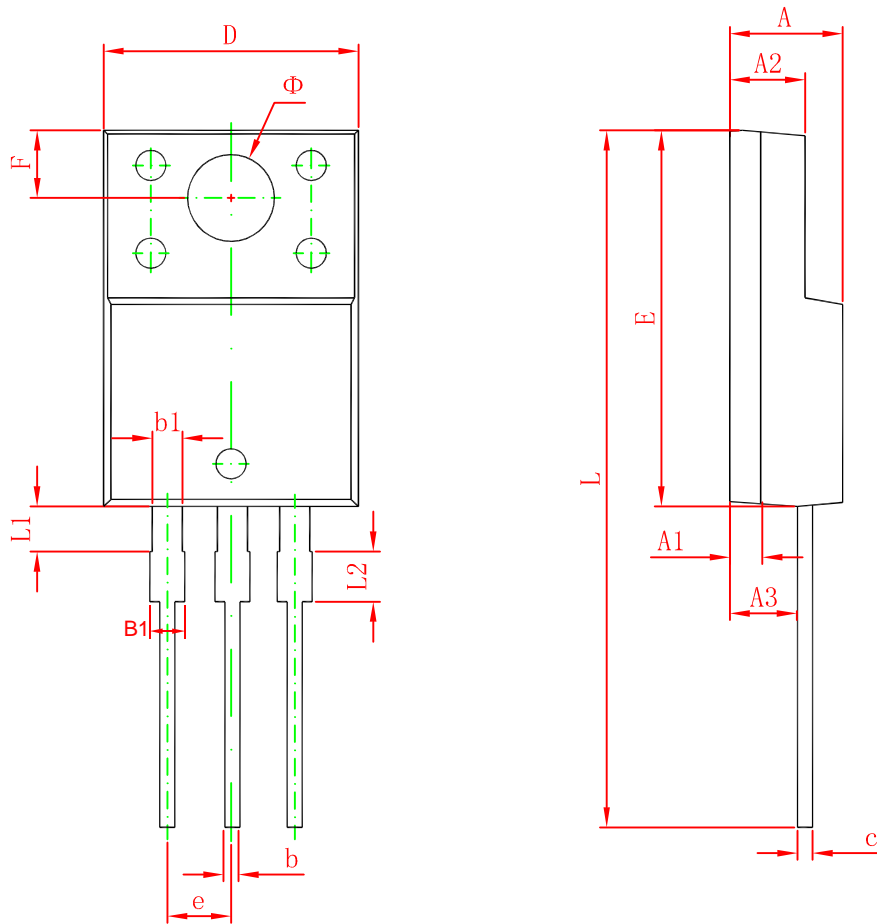


FIG.4: TYPICAL REVERSE CHARACTERISTICS



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.	
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