

TO-263-2L Plastic-Encapsulate Diode

SBDB10200CT SCHOTTKY BARRIER RECTIFIER

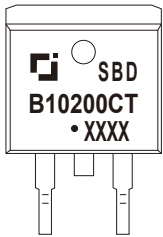
MAIN CHARACTERISTICS

I_o	10 (2×5) A
V_{RRM}	200 V
T_j	150 °C
$V_{F(typ)}$	0.72V (@Ta=125°C)

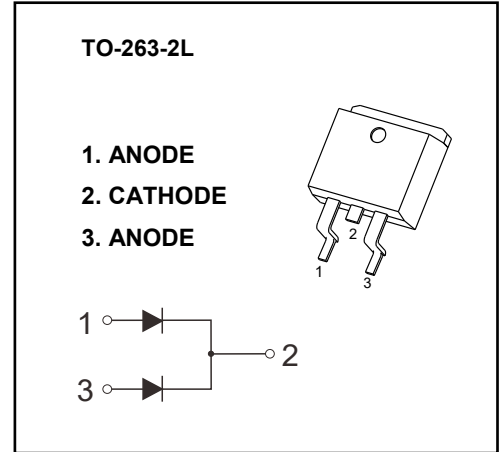
FEATURES

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

MARKING



SBDB10200CT = Device code
 Solid dot = Green molding compound device
 if none, the normal device
 XXXX = Code



MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ 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	10	A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	120	A
$R_{\theta JC}$	Thermal resistance from junction to case , $T_c=25^\circ\text{C}$	2.0	$^\circ\text{C}/\text{W}$
$R_{\theta JA}$	Thermal resistance from junction to ambient	62.5	$^\circ\text{C}/\text{W}$
T_j	Junction temperature	150	$^\circ\text{C}$
T_{stg}	Storage temperature	-55~+150	$^\circ\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=0.1\text{mA}$	200			V
Reverse current	I_R	$V_R=200\text{V}$	$T_j=25^\circ\text{C}$	1.0	100	μA
			$T_j=125^\circ\text{C}$	1.0		mA
Forward voltage	V_F	$I_F=3\text{A}$	$T_j=25^\circ\text{C}$	0.80		V
			$T_j=125^\circ\text{C}$	0.66		V
		$I_F=5\text{A}$	$T_j=25^\circ\text{C}$	0.84	0.89	V
			$T_j=125^\circ\text{C}$	0.72		V

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

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

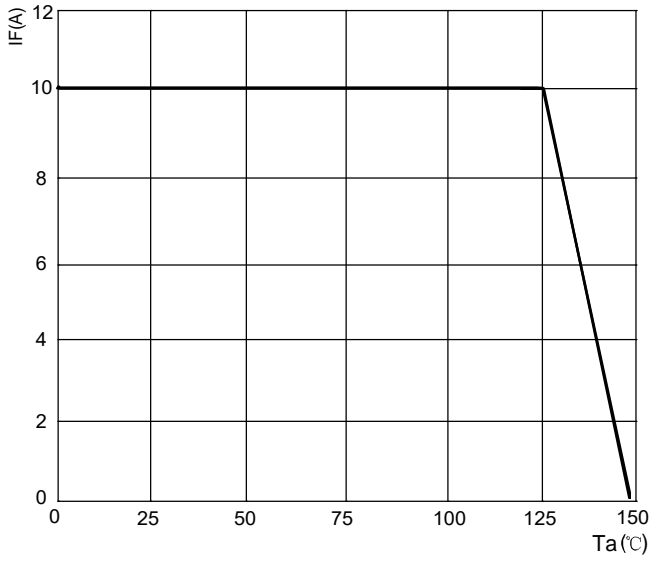


FIG.2: TYPICAL FORWARD CHARACTERISTICS

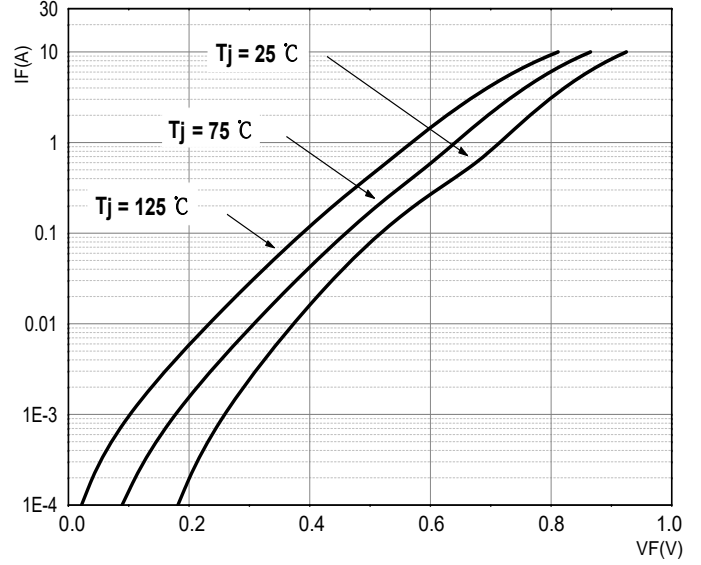


FIG.3: TOTAL CAPACITANCE DERATING CURVE

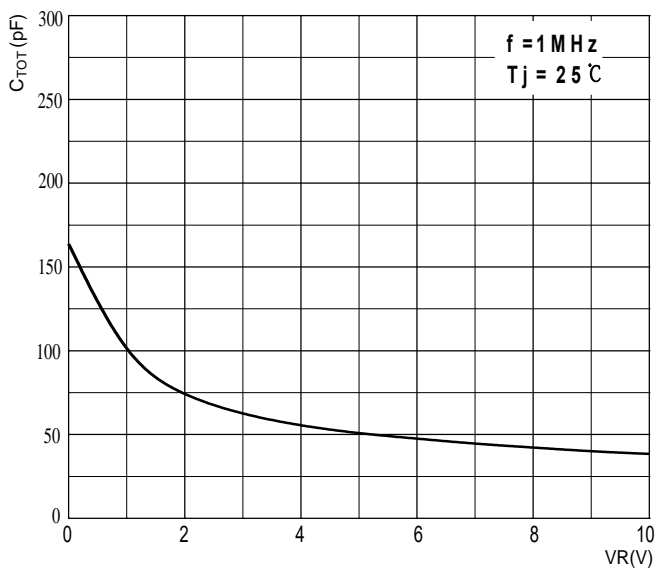
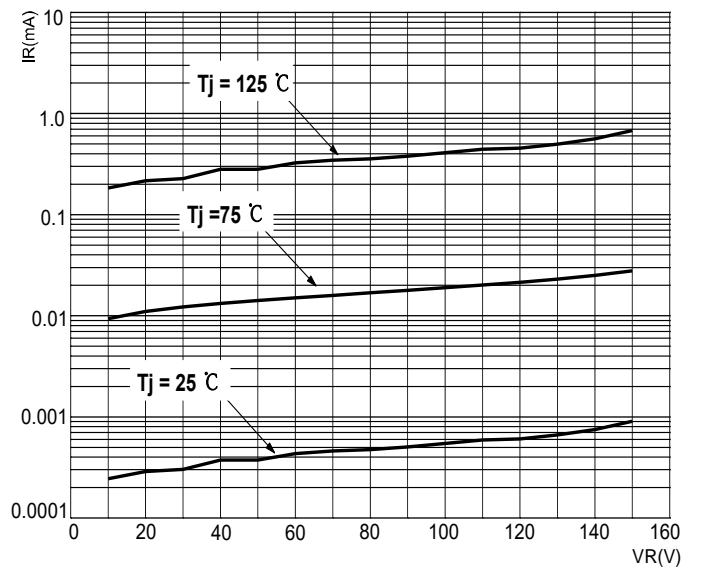
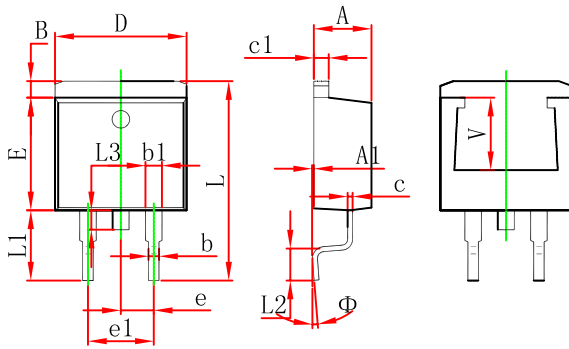


FIG.4: TYPICAL REVERSE CHARACTERISTICS

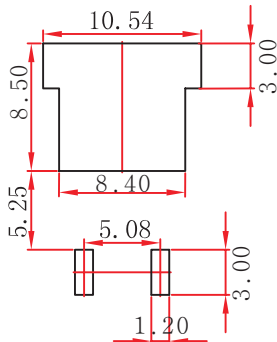


TO-263-2L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.470	4.670	0.176	0.184
A1	0.000	0.150	0.000	0.006
B	1.120	1.420	0.044	0.056
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
e	2.540 TYP.		0.100 TYP.	
e1	4.980	5.180	0.196	0.204
L	14.940	15.500	0.588	0.610
L1	4.950	5.450	0.195	0.215
L2	2.340	2.740	0.092	0.108
L3	1.300	1.700	0.051	0.067
Φ	0°	8°	0°	8°
V	5.600 REF.		0.220 REF.	

TO-263-2L Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

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