

TO-263-2L Plastic-Encapsulate Diodes

SBDB10150CT SCHOTTKY BARRIER RECTIFIER

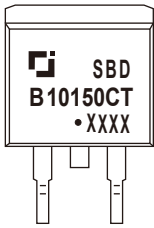
MAIN CHARACTERISTICS

I_O	10 (2×5) A
V_{RRM}	150 V
T_j	150 °C
$V_{F(typ)}$	0.69V (@Ta=125°C)

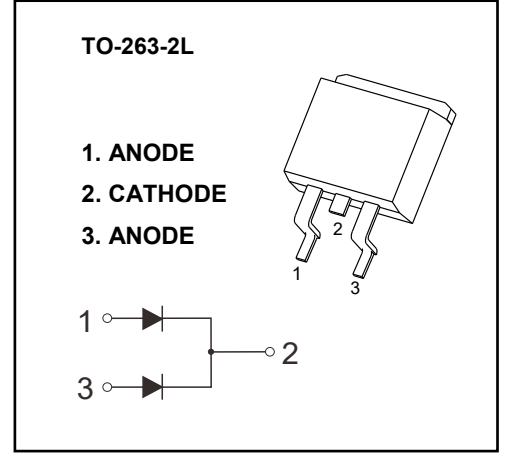
FEATURES

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

MARKING



SBDB10150CT = 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	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	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	$^\circ\text{C/W}$
$R_{\theta JA}$	Thermal resistance from junction to ambient	62.5	$^\circ\text{C/W}$
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	$V_{(BR)}$	$I_R=0.1\text{mA}$	150			V
Reverse current	I_R	$V_R=150\text{V}$	$T_j=25^\circ\text{C}$	1.0	100	μA
			$T_j=125^\circ\text{C}$	1.0		mA
Forward voltage	V_F	$I_F=3\text{A}$	$T_j=25^\circ\text{C}$	0.78		V
			$T_j=125^\circ\text{C}$	0.64		V
		$I_F=5\text{A}$	$T_j=25^\circ\text{C}$	0.80	0.87	V
			$T_j=125^\circ\text{C}$	0.69		V

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

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

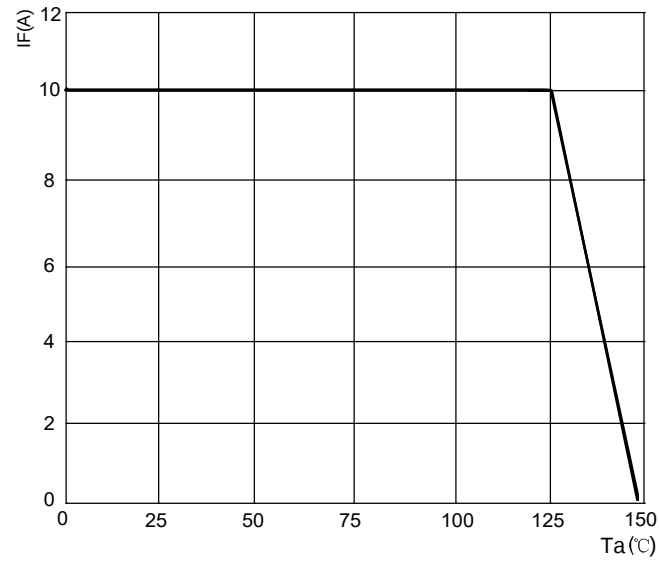


FIG.2: TYPICAL FORWARD CHARACTERISTICS

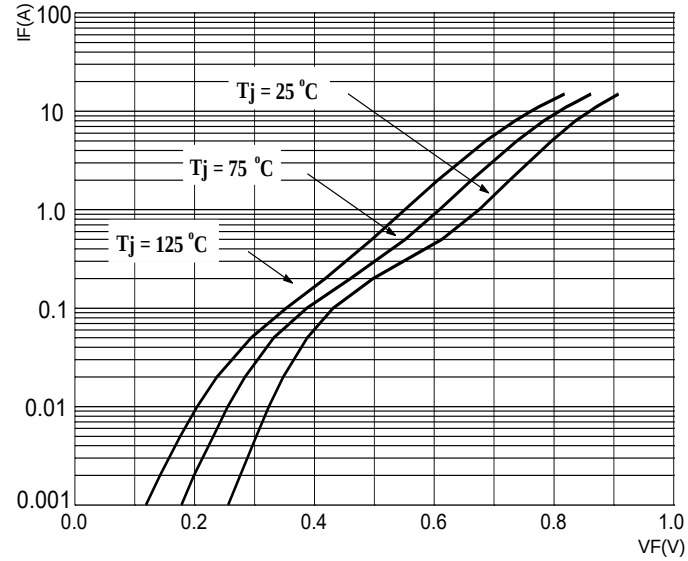


FIG.3: TOTAL CAPACITANCE DERATING CURVE

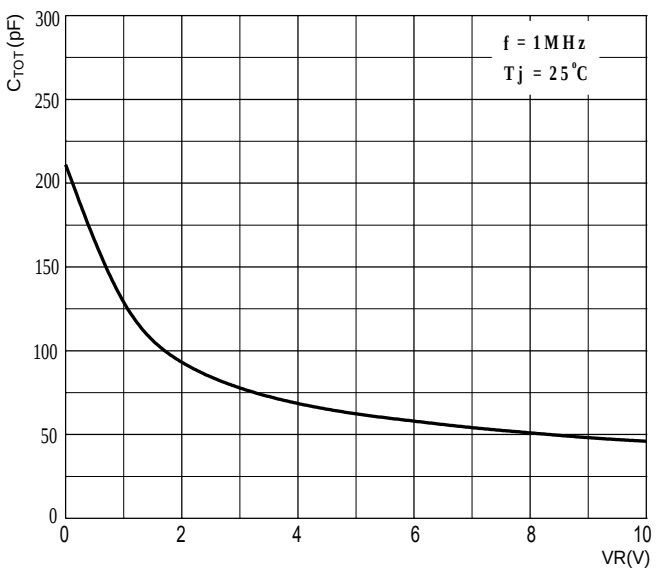
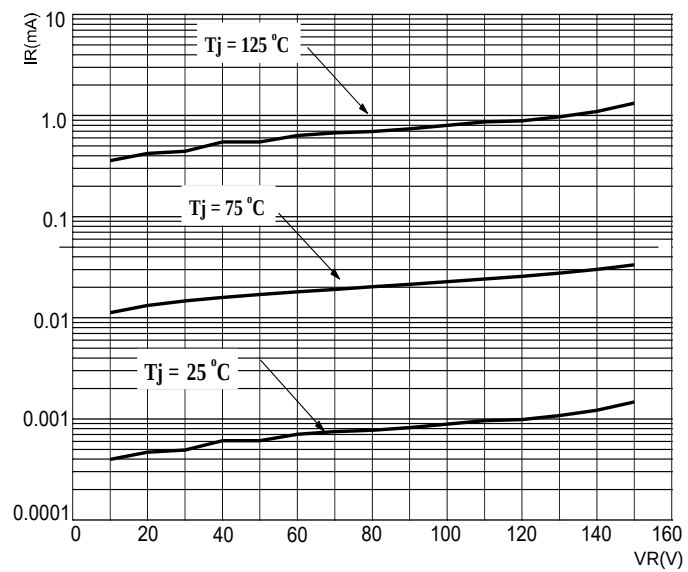
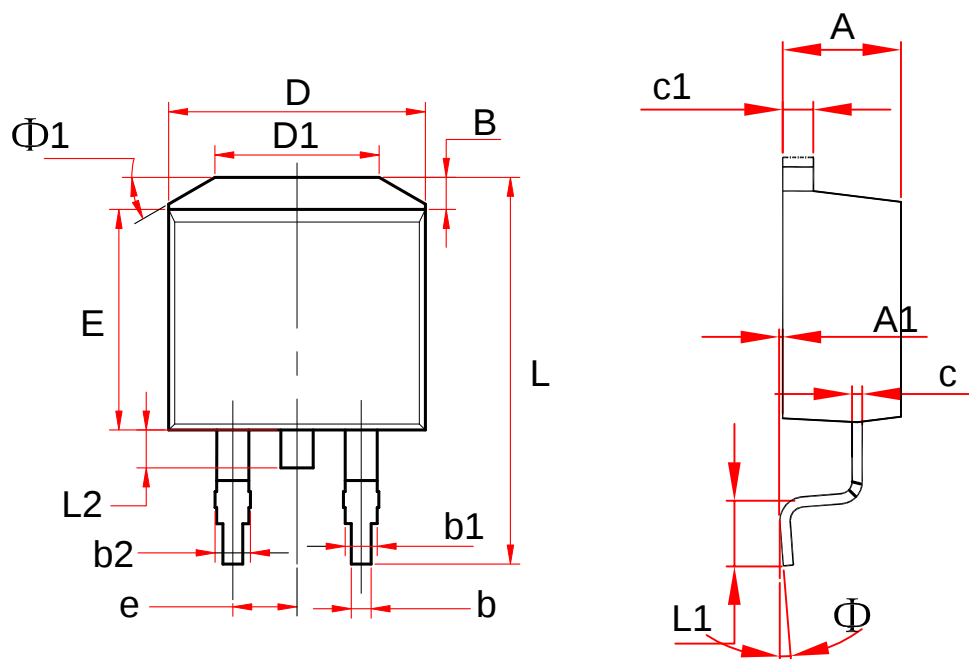


FIG.4: TYPICAL REVERSE CHARACTERISTICS



TO-263-2L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.500	4.700	0.177	0.185
A1	0.020	0.250	0.000	0.010
B	1.170	1.370	0.046	0.054
b	0.700	0.900	0.028	0.035
b1	1.170	1.370	0.046	0.054
c	0.350	0.450	0.014	0.018
c1	1.170	1.370	0.046	0.054
D	9.800	10.200	0.386	0.402
E	8.500	8.900	0.335	0.350
e	2.440	2.640	0.100	0.104
L	15.100	15.500	0.594	0.610
L1	2.440	2.640	0.096	0.104
L2	1.400	1.600	0.055	0.630
Φ	0°	8°	0°	8°
$\Phi 1$	30°		30°	