

TO-263-2L Plastic-Encapsulate Diodes

SBDB10100CT SCHOTTKY BARRIER RECTIFIER

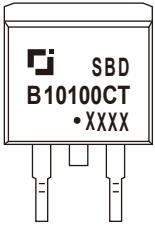
MAIN CHARACTERISTICS

I_O	10 (2×5) A
V_{RRM}	100 V
T_j	150 °C
$V_{F(typ)}$	0.62V (@ $T_a=125^{\circ}C$)

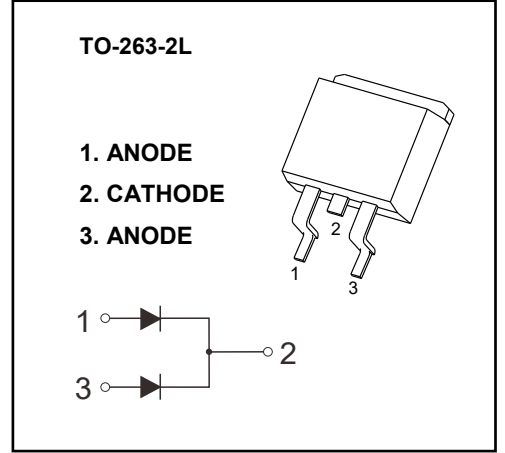
FEATURES

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

MARKING



SBDB10100CT = Device code
Solid dot = Green molding compound device
if none, the normal device
XXXX = Code



MAXIMUM RATINGS ($T_a=25^{\circ}C$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{RRM}	Peak repetitive reverse voltage	100	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	70	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 , $T_c=25^{\circ}C$	2.0	$^{\circ}C/W$
$R_{\theta JA}$	Thermal resistance from junction to ambient	62.5	$^{\circ}C/W$
T_j	Junction temperature	150	$^{\circ}C$
T_{stg}	Storage temperature	-55~+150	$^{\circ}C$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=0.1mA$	100			V
Reverse current	I_R	$V_R=100V$	$T_j=25^{\circ}C$	2.0	100	μA
			$T_j=125^{\circ}C$	2.0		mA
Forward voltage	V_F	$I_F=3A$	$T_j=25^{\circ}C$	0.71		V
			$T_j=125^{\circ}C$	0.57		V
		$I_F=5A$	$T_j=25^{\circ}C$	0.77	0.85	V
			$T_j=125^{\circ}C$	0.63		V

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

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

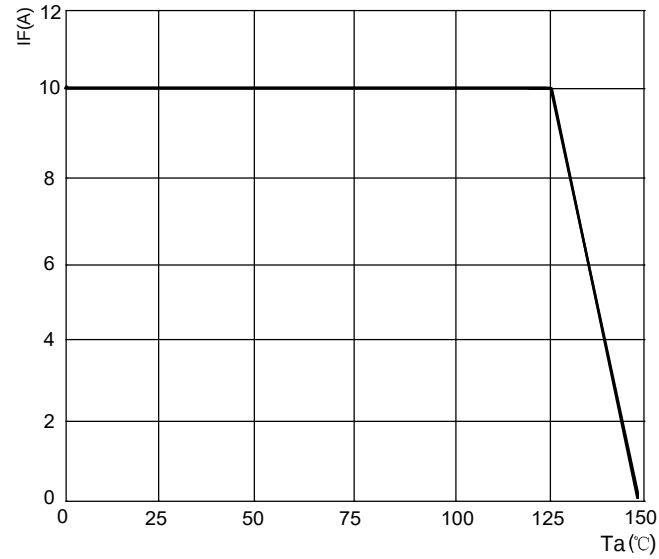


FIG.2: TYPICAL FORWARD CHARACTERISTICS

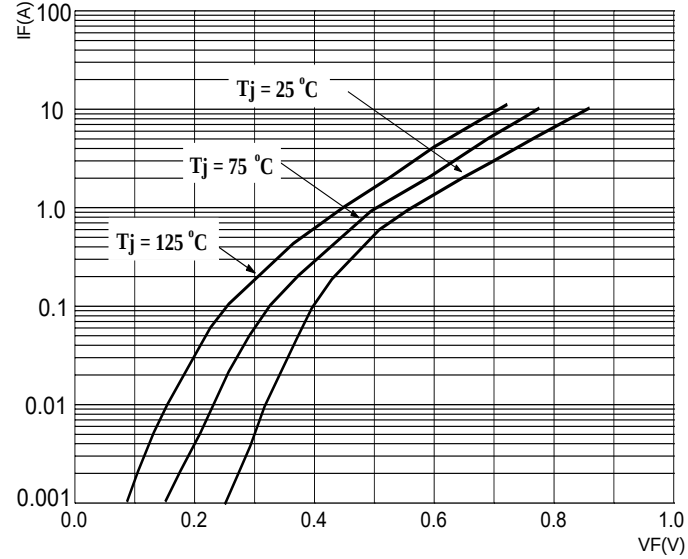


FIG.3: TOTAL CAPACITANCE DERATING CURVE

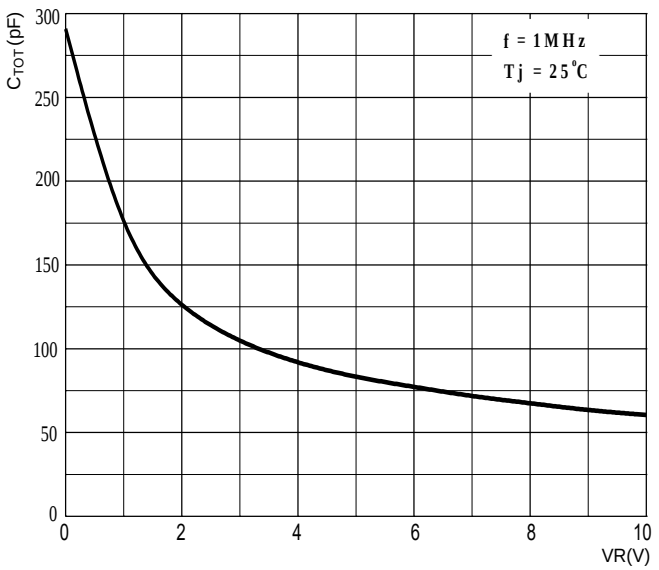
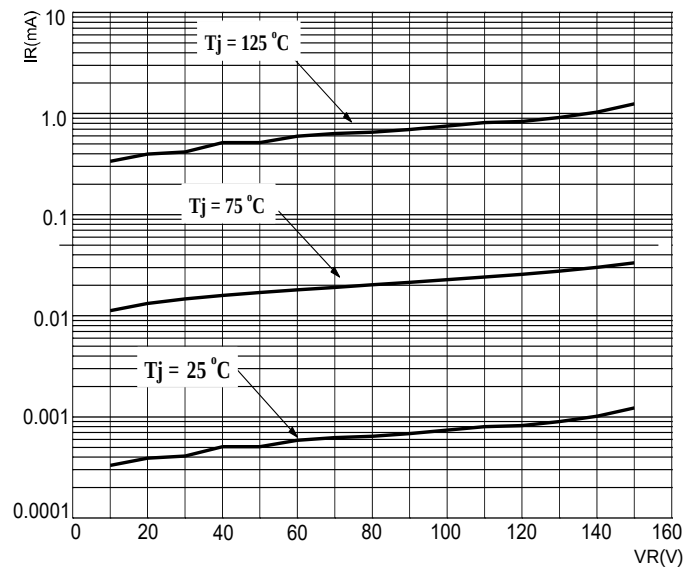
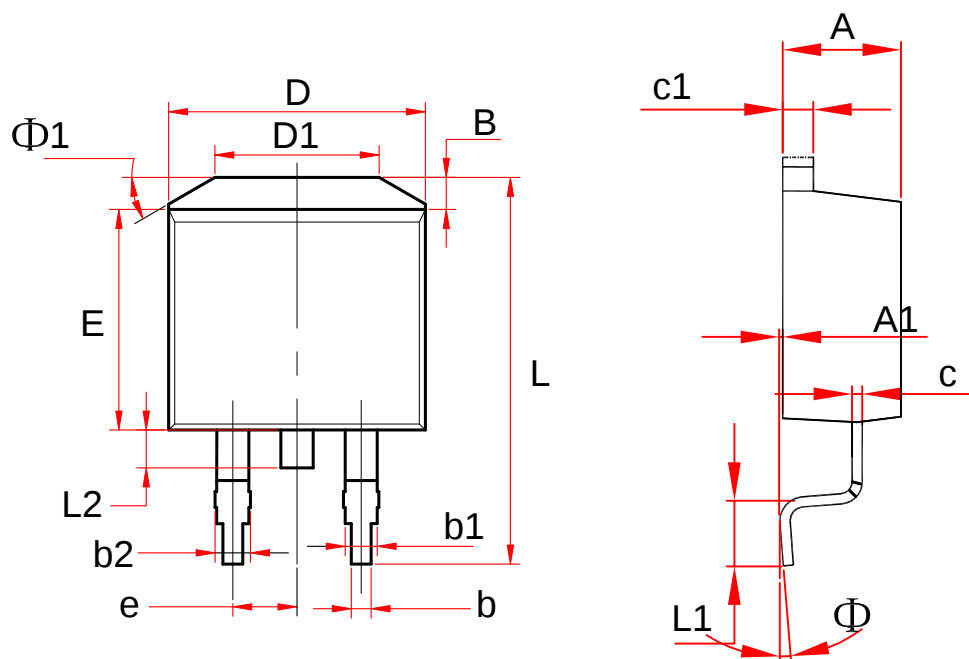


FIG.4: TYPICAL REVERSE CHARACTERISTICS



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°	