



TO-220-2L Plastic-Encapsulate Diode

SBD10100 SCHOTTKY BARRIER RECTIFIER

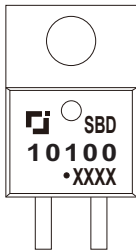
MAIN CHARACTERISTICS

I_o	10 A
V_{RRM}	100 V
T_j	150°C
$V_{F(typ)}$	0.78V (@$T_j=125^\circ\text{C}$)

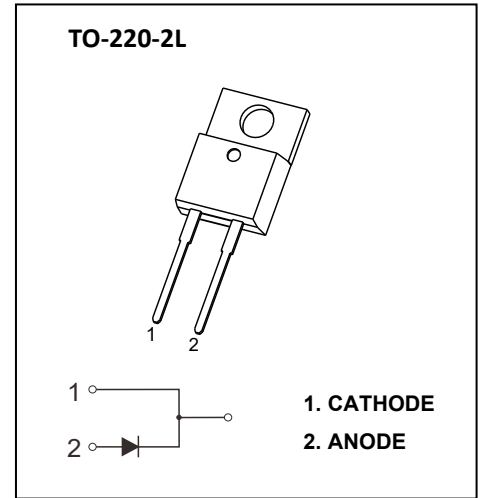
FEATURES

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

MARKING



SBD10100= 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	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)	260	A
$R_{\theta JC}$	Thermal resistance from junction to case	1.5	$^\circ\text{C}/\text{W}$
$R_{\theta JA}$	Thermal resistance from junction to ambient	82	$^\circ\text{C}/\text{W}$
T_j	Junction temperature	150	$^\circ\text{C}$
T_{stg}	Storage temperature	-55~+150	$^\circ\text{C}$

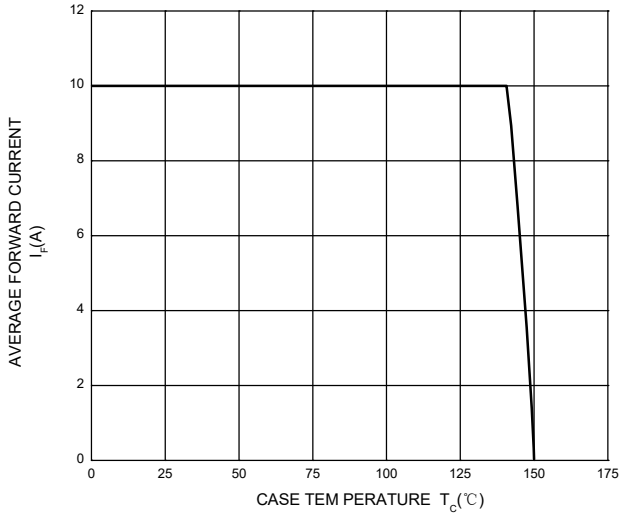
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=1\text{mA}$	100			V
Reverse current	I_R	$V_R=100\text{V}$	$T_j=25^\circ\text{C}$	1.6	10	μA
			$T_j=125^\circ\text{C}$	83		μA
Forward voltage	V_F	$I_F=10\text{A}$	$T_j=25^\circ\text{C}$	0.78	0.85	V
			$T_j=125^\circ\text{C}$	0.64		V

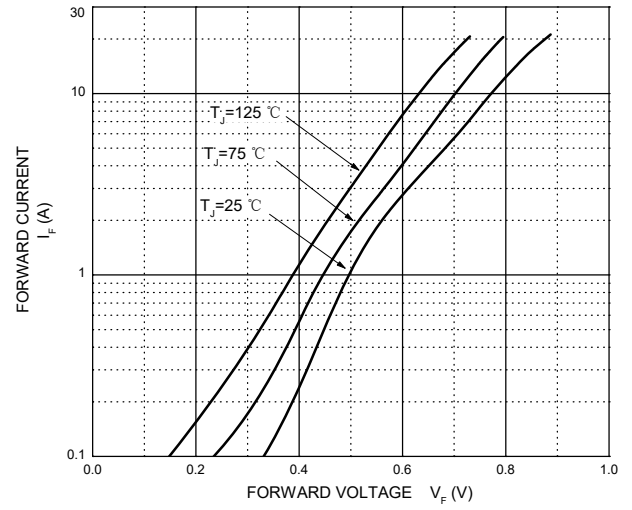
*Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycles $\leq 2.0\%$.

Typical Characteristics

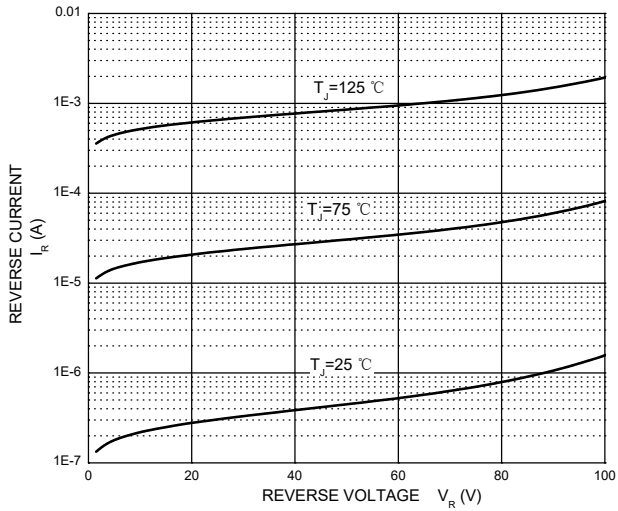
Forward Current Derating Curve



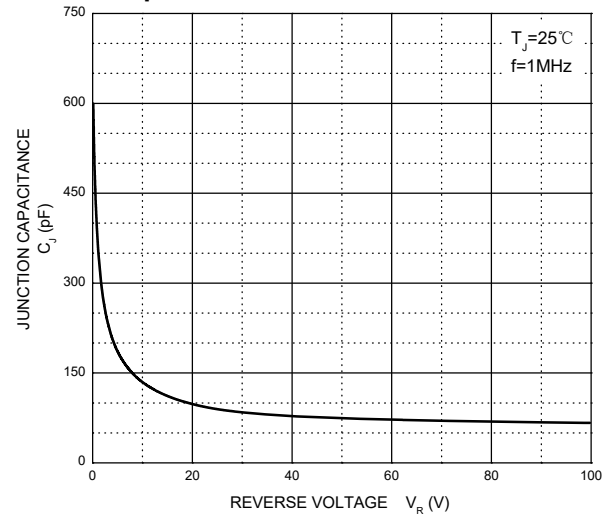
Forward Characteristics



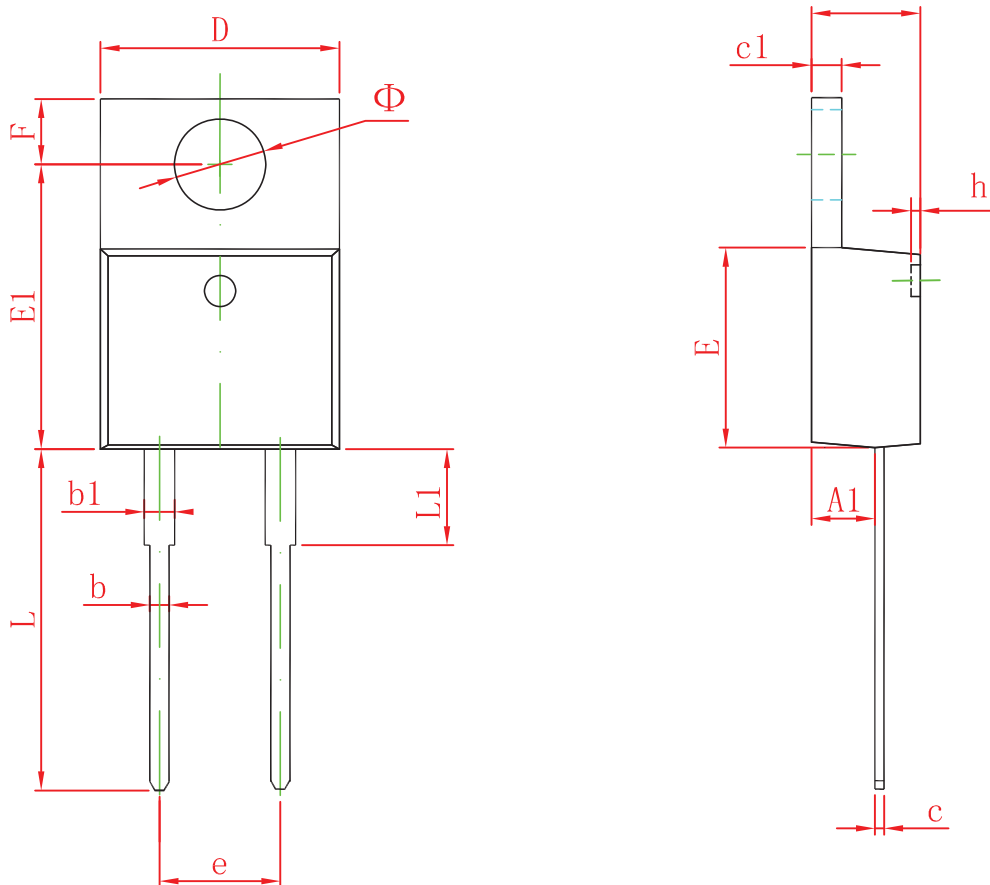
Reverse Characteristics



Capacitance Characteristics Per Diode



TO-220-2L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.450	4.750	0.175	0.187
b	2.520	2.820	0.099	0.111
b1	0.710	0.910	0.028	0.036
c	1.170	1.370	0.046	0.054
c1	0.300	0.500	0.012	0.020
D	9.830	10.330	0.387	0.407
E	8.500	8.900	0.335	0.350
E1	12.050	12.650	0.474	0.498
e	5.080 TYP		0.200 TYP	
F	2.540	2.940	0.100	0.116
h	0.100 TYP		0.004 TYP	
L	13.300	13.800	0.523	0.543
L1	3.540	3.940	0.139	0.155
Φ	3.735	3.935	0.147	0.155