

SINLOON®

肖特基二極管

Case: TO-220

SB20150CT - SB20200CT

20A High Voltage Dual Schottky Barrier Rectifier

Feature

- ◆ Schottky Barrier Chip
- ◆ Guard Ring for Transient Protection
- ◆ Low Forward Voltage Drop
- ◆ Low Reverse leakage Current
- ◆ High Surge Current Capability
- ◆ Plastic Material has UL Flammability Classification 94V-0

Figure



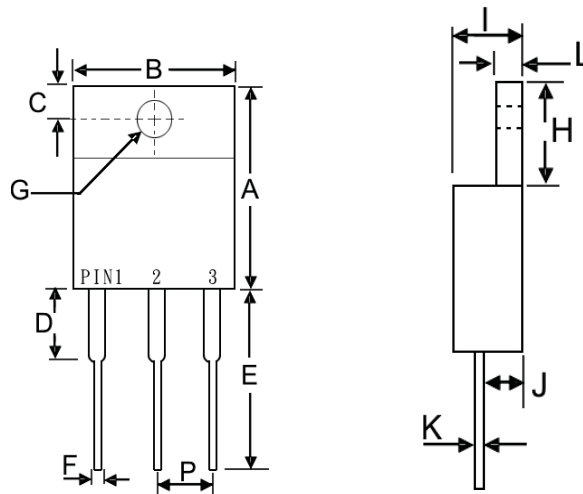
Mechanical Data

- ◆ Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- ◆ Polarity: See Diagram
- ◆ Weight: 2.24 grams (approx)
- ◆ Mounting Position: Any
- ◆ Mounting Torque: 11.5 cm·kg (10 in·lbs) max.
- ◆ Lead Free: For **RoHS** / Lead Free Version Add "-LF" Suffix to part Number.

Dimension

Case: TO-220 (mm)

Dim.	Min.	Max.
A	13.9	15.9
B	9.8	10.7
C	2.54	3.43
D	3.56	4.56
E	12.7	14.73
F	0.51	0.96
G (Φ)	3.55	4.09
H	5.75	6.85
I	4.16	5.0
J	2.03	2.92
K	0.3	0.65
L	1.14	1.4
P	2.29	2.79



Marking Information

SB20xxCT = Device Number
 xx = See Page 2 SB Part
 SB20150CT, SB20200CT.
 Polarity = As Marked Body



Electrical Symbol



Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load For capacitive load, derate current by 20%.

Characteristics	Symbol	SB20150CT	SB20200CT	Unit
Peak Repetitive Reverse Voltage	V_{RRM}			
Working Peak Reverse Voltage	V_{RWM}	150	200	V
DC Blocking Voltage	V_R			
RMS Reverse Voltage	$V_{R(RMS)}$	105	140	V
Average Rectified Output Current @ $T_c=95^\circ\text{C}$	I_O	20.0	20.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC)	I_{FSM}	200	200	A
Forward Voltage @ $I_F=10\text{A}$	V_{FM}	0.92	0.92	V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$	I_{RM}	0.5	0.5	mA
At Rated DC Blocking Vol. @ $T_A=100^\circ\text{C}$		100	100	
Typical Junction Capacitance (Note 1)	C_j	1100	1100	pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	-65 to +150	$^\circ\text{C}$

Note 1: Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

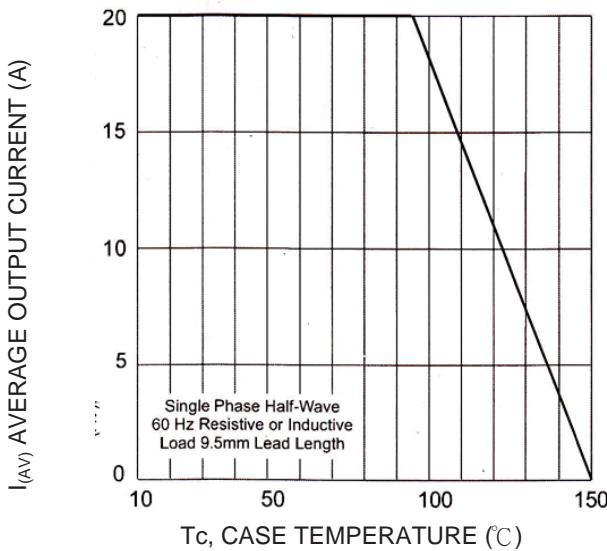


Fig-1 Forward and Current Derating Curve

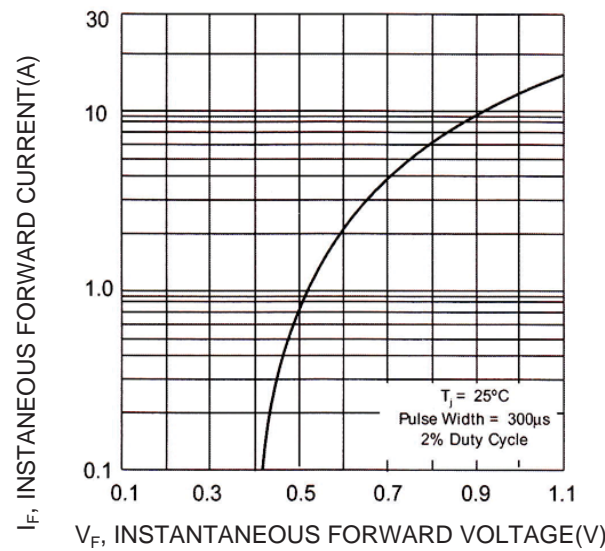


Fig-2 Typical Forward Characteristics

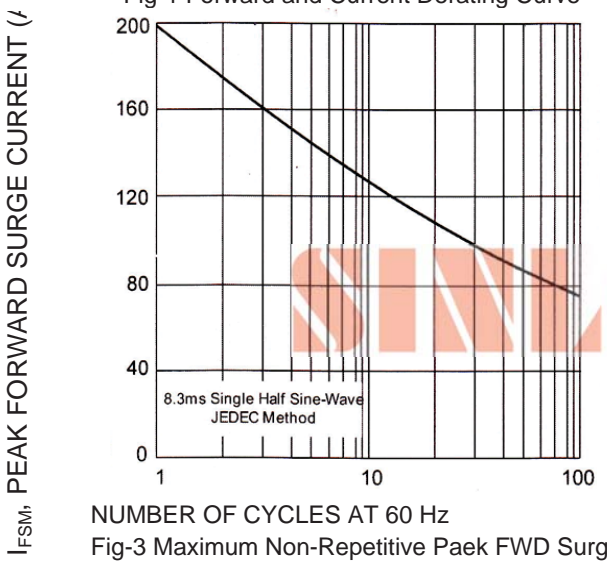


Fig-3 Maximum Non-Repetitive Peak FWD Surge Current

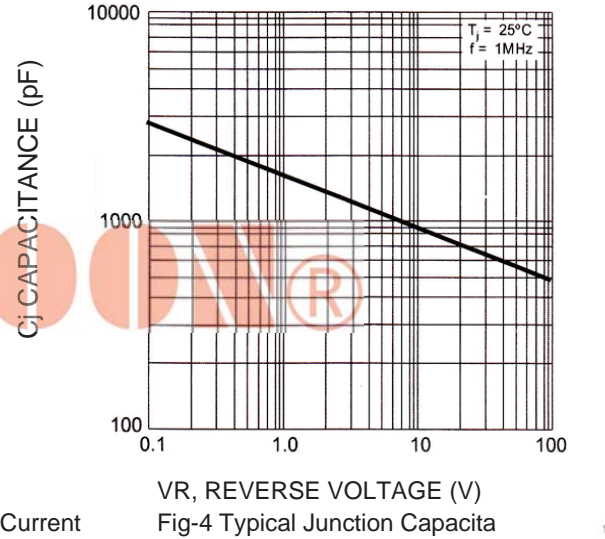


Fig-4 Typical Junction Capacitance



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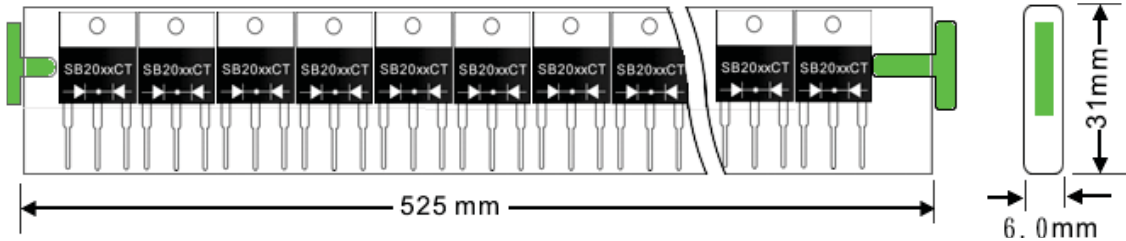
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Packaging Information

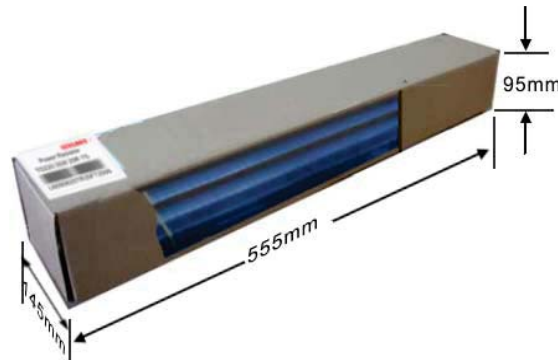
Tube Size LxWxH (mm)	Quantity (Pcs)	Inner Box Size LxWxH (mm)	Quantity (Pcs)	Carton Size LxWxH (mm)	Quantity (Pcs)	Gross Weight
525 x 31 x 6	50	555x145x95	2000	572x306x218	8000	19.0kg

Note: 1. Anti-static tube, water clear color.

Anti-static tube: Qty': 50 Pcs Units/Tube



Inner Box : Qty: 2,000 Pcs Box



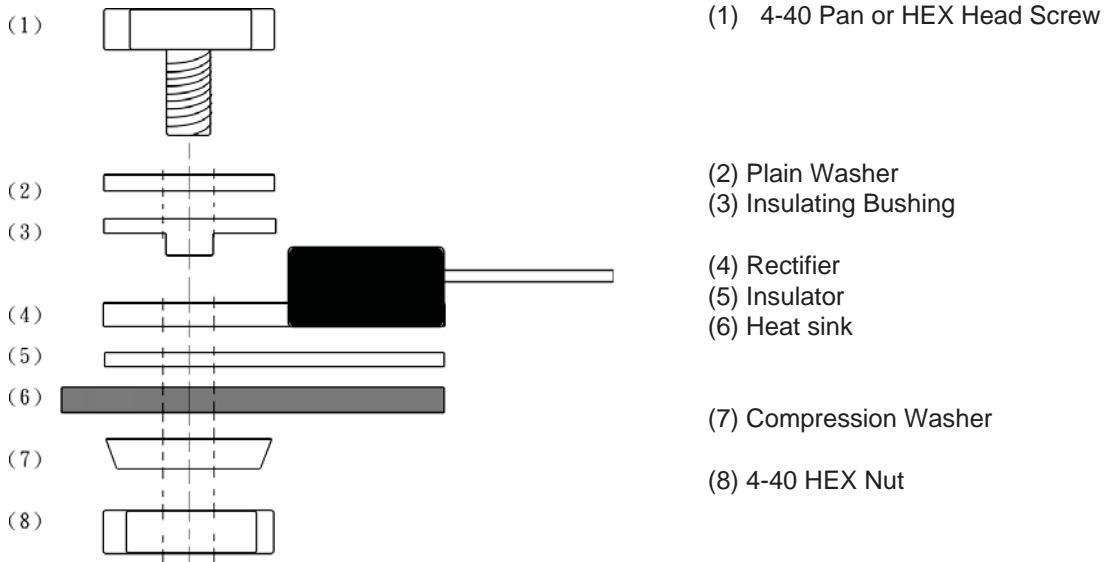
Carton Package: Qty: 8,000 Pcs / Carton



□ **Package Mounting Guide**

It is important that the packages are correctly mounted if full functionality is to be achieved. Mounting of the package to a heat sink must be done such that there is sufficient pressure from the mounting screws to insure good contact with the heat sink for efficient heat flow. Incorrect mounting may lead to both thermal and mechanical problems. Over tightening the mounting screws will cause the package to warp reducing the contact area with the heat sink and increasing the thermal resistance from the package case to the heat sink, resulting in higher operating die temperatures. Extreme over tightening of the mounting screws beyond the recommended torque force will cause severe physical stress resulting in cracked die and catastrophic IC failure. Though the reliability of the package is excellent, the use of inappropriate techniques or unsuitable tools during the mounting process can affect the long term reliability of the device and even damage it.

□ **Recommended Screw Mount Arrangement**



- ◆ Recommended isolated mounting when screw is at heat sink potential 4-40 hardware is used.
- ◆ Screw should not be tightened with any type of air-forced torque or equipment that may cause high impact on device package. The insulating bushing inside the mounting hole will insure the screw threads do not contact the metal base.
- ◆ The interface should apply a layer of thermal grease or a highly conductive thermal pad for better heat dissipation

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※Mayloon characteristic parameters of electronic product specification changes or updates without notice to improve

