

SINLOON®

肖特基二極管
Case: TO-220A

SB8150 - SB8200
8.0A High Voltage 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

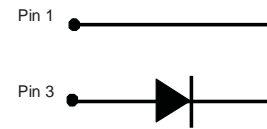
Figure



Mechanical Data

- ◆ Case: TO-220A, Full Moldes Plastic
- ◆ 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.

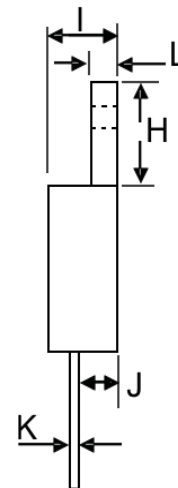
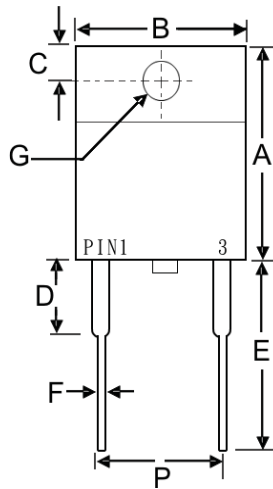
Electrical Sambol



Dimension

Case: TO-220A (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	4.83	5.33



Marking Information

- SB8xx = Device Number
- xx = See Page 2 SB Part 150, 200.
- Polarity = As Marked Body



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	SB8150	SB8200	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	8.0	8.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150	150	A
Forward Voltage @ $I_F=8.0\text{A}$	V_{FM}	0.92	0.92	V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$	I_{RM}		0.5	mA
At Rated DC Blocking Vol. @ $T_A=100^\circ\text{C}$			50	
Typical Junction Capacitance (Note 1)	C_j		700	pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$		3.0	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150		$^\circ\text{C}$

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

Note 2: Thermal resistance junction to case mounted on heatsink.

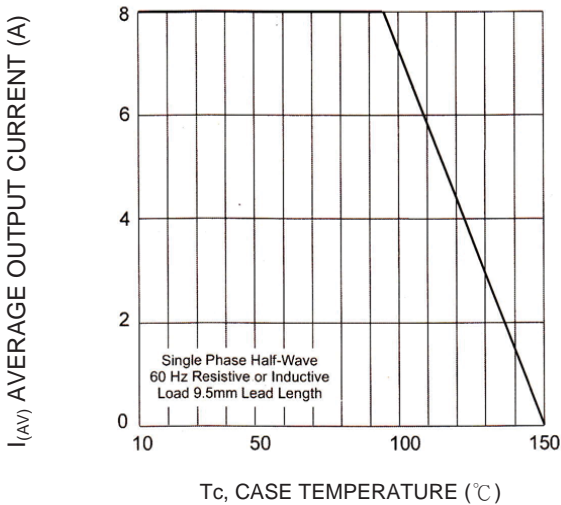


Fig-1 Forward and Current Derating Curve

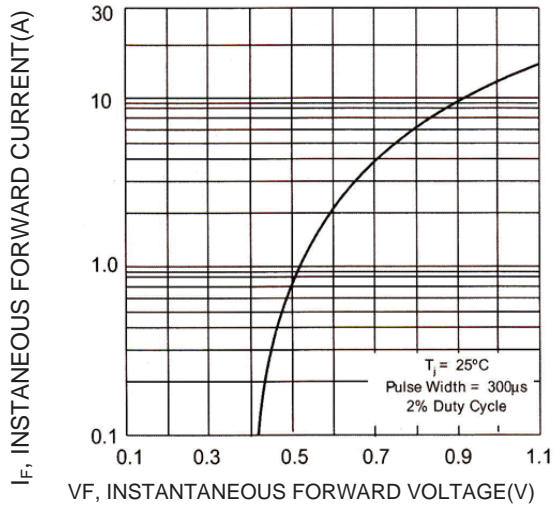


Fig-2 Typical Forward Characteristics

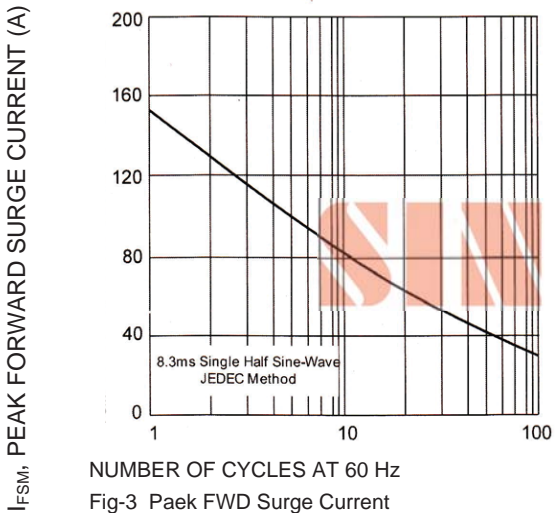


Fig-3 Peak FWD Surge Current

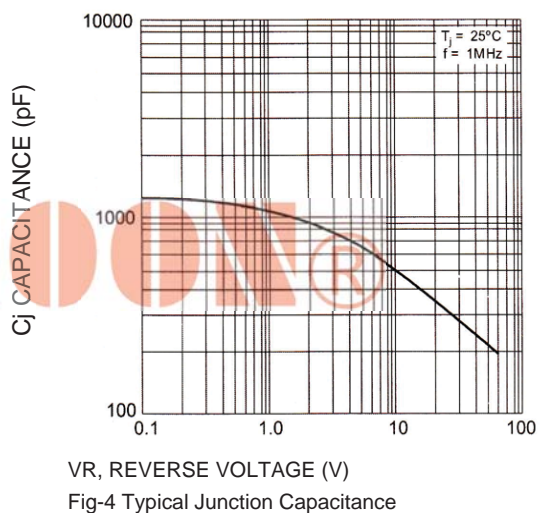


Fig-4 Typical Junction Capacitance

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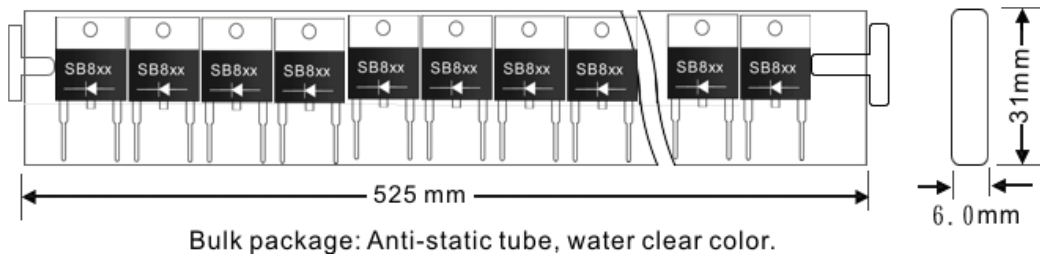
□ Packaging Information

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

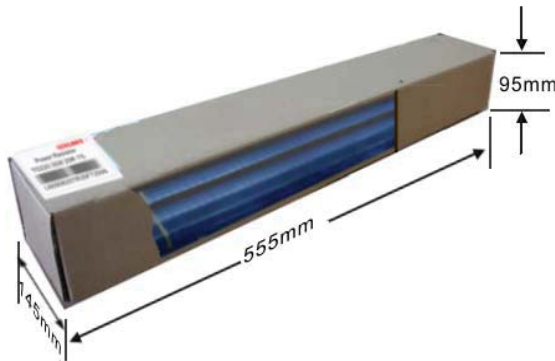
Note: Anti-static tube. Water clear color.

◆ Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

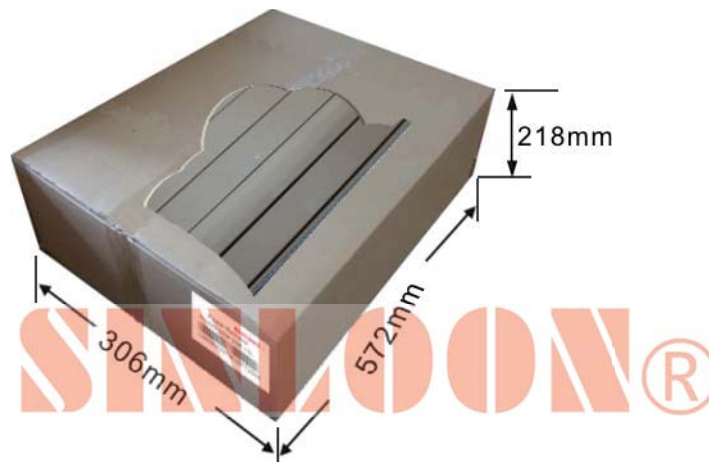
Anti-static tube: Quantity: 50 pcs



Inner Box : Quantity: 2000 pcs



Carton Package: Quantity: 8000 pcs



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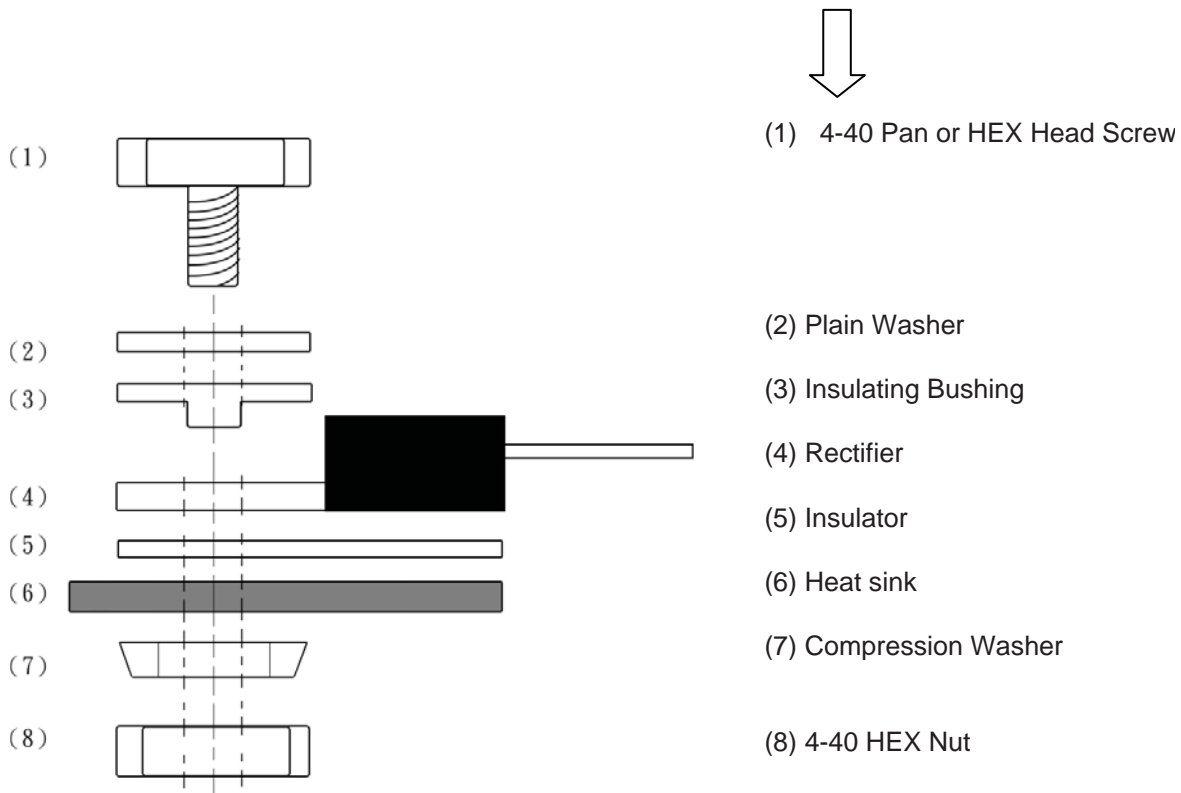
※Mayloon characteristic parameters of electronic product specification changes or updates without notice to improve。



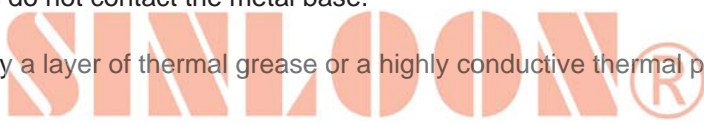
□ Package Mounting Guide

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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