

SINLOON®

肖特基二極管
Case: TO-220A

SB820 - SB8100
8.0A 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

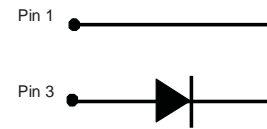
Figure



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.

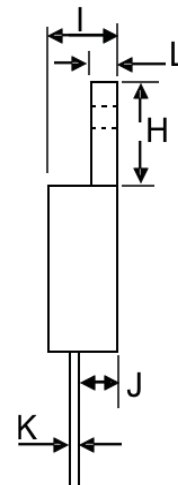
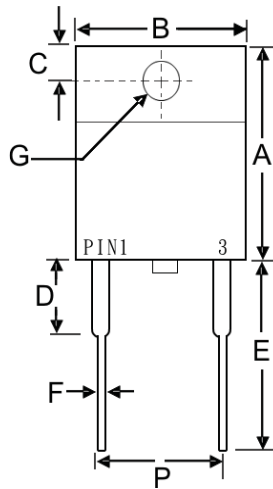
Electrical Sambol



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
- Polarity = As Marked Body



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Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

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

Characteristics	Symbol	SB 820	SB 830	SB 840	SB 845	SB 850	SB 860	SB 880	SB 8100	Unit	
Peak Repetitive Reverse Voltage	V _{RRM}									V	
Working Peak Reverse Voltage	V _{RWM}	20	30	40	45	50	60	80	100	V	
DC Blocking Voltage	V _R									V	
RMS Reverse Voltage	V _{R(RMS)}	14	21	28	32	35	42	56	70	V	
Average Rectified Output Current @T _L =9	I _O	8.0		8.0		8.0				A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC)	I _{FSM}	150		150		150				A	
Forward Voltage @I _F =8.0A	V _{FM}	0.55		0.75		0.85				V	
Peak Reverse Current @T _A = 25°C	I _{RM}	0.5									mA
At Rated DC Blocking Vol. @T _A =100°C		50									
Typical Junction Capacitance (Note 1)	C _j	700									pF
Typical Thermal Resistance (Note 2)	R _{θJC}	3.0									°C/W
Operating and Storage Temperature Range	T _i , T _{STG}	-65 to +150								°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.

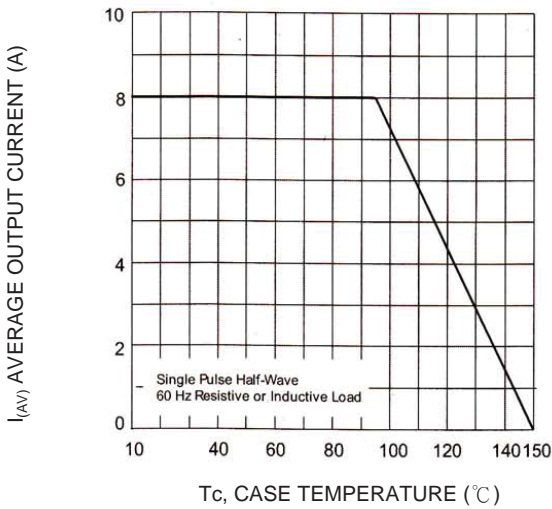


Fig-1 Forward and Current Derating Curve

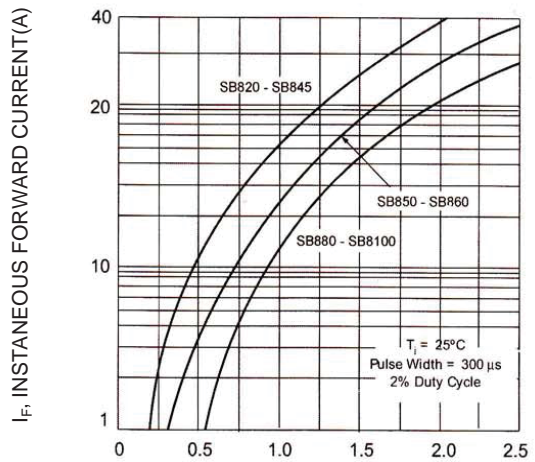


Fig-2 Typical Forward Characteristics

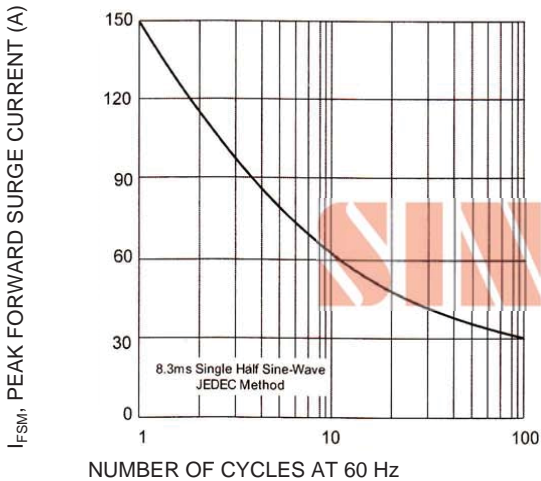


Fig-3 Maximum Non-Repetitive Peak FWD Surge Current

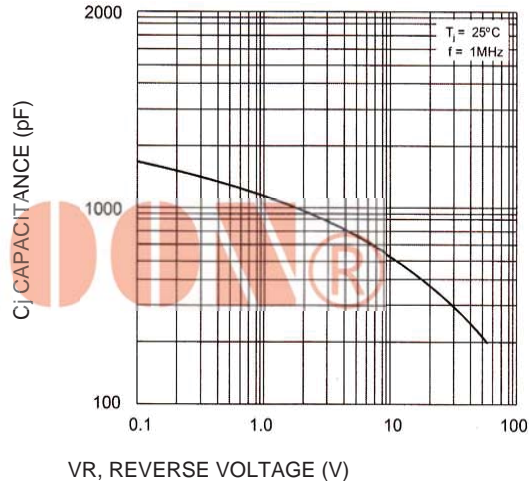


Fig-4 Typical Junction Capacitance



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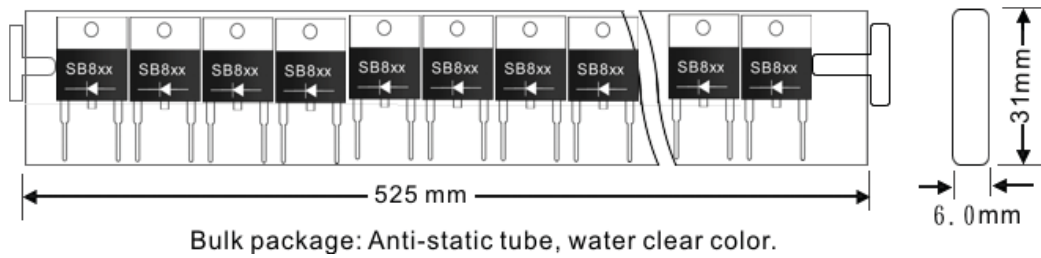
□ Packaging Information

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

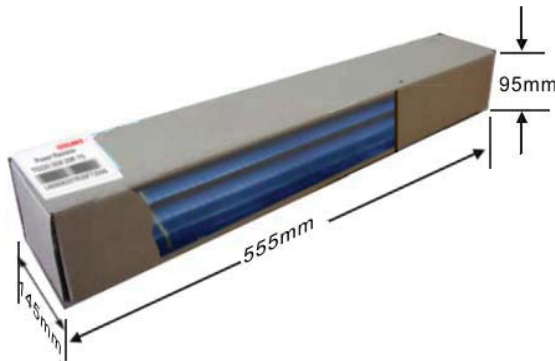
Note: Anti-static tube. Water clear color.

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

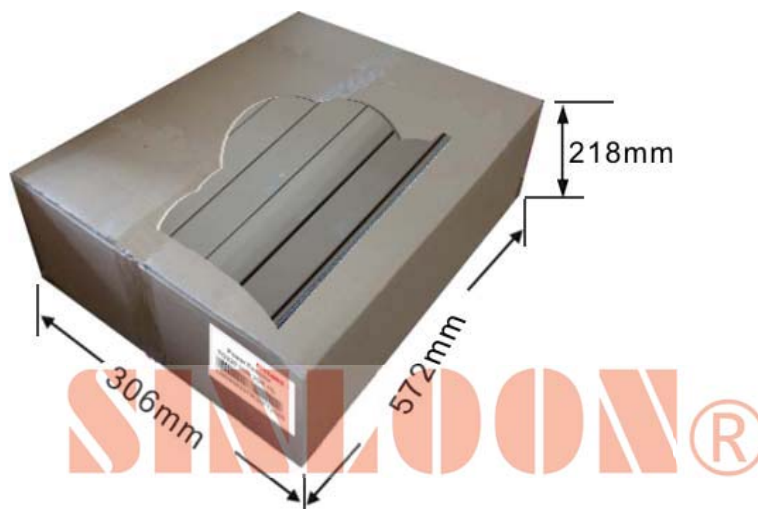
Anti-static tube:



Inner Box :



Carton Package:



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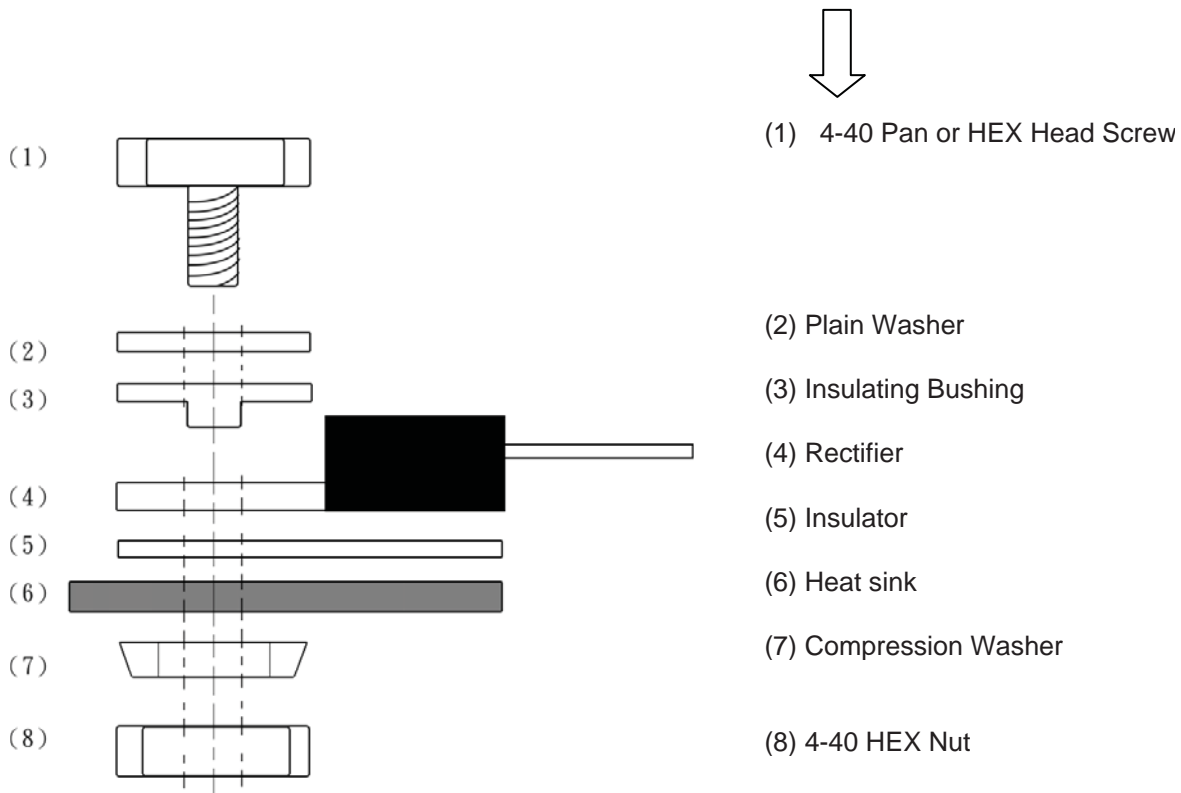
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□ Package Mounting Guide

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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