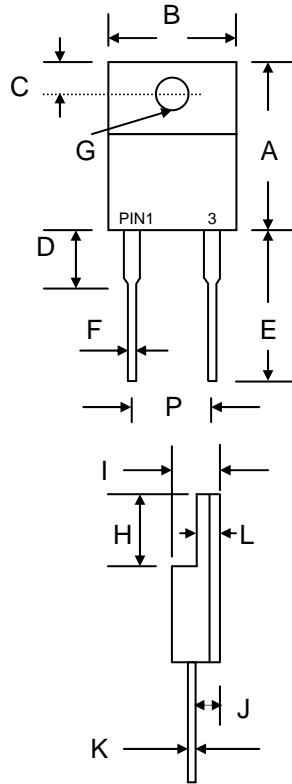


Features

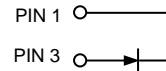
- Schottky Barrier Chip
- Guard Ring for Transient Protection
- Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- High Surge Current Capability
- Epoxy Meets UL 94V-0 Classification
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes

Mechanical Data

- Case: ITO-220A, Full Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 1.9 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 0.6 N.m Max.
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



ITO-220A		
Dim	Min	Max
A	14.60	15.40
B	9.70	10.30
C	2.55	2.85
D	—	4.16
E	13.00	13.80
F	0.30	0.90
G	3.00 Ø	3.50 Ø
H	6.30	6.90
I	4.20	4.80
J	2.50	2.90
K	0.36	0.80
L	2.60	3.30
P	4.83	5.33
All Dimensions in mm		



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%.

Characteristic	Symbol	SB 620F	SB 630F	SB 640F	SB 645F	SB 650F	SB 660F	SB 680F	SB 6100F	Unit	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	20	30	40	45	50	60	80	100	V	
RMS Reverse Voltage	V _{R(RMS)}	14	21	28	32	35	42	56	70	V	
Average Rectified Output Current @T _C = 100°C	I _O	6.0								A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	75								A	
Forward Voltage @I _F = 6.0A	V _{FM}	0.55			0.75		0.85			V	
Peak Reverse Current @T _J = 25°C At Rated DC Blocking Voltage @T _J = 100°C	I _{RM}	0.2				15					mA
Typical Junction Capacitance (Note 1)	C _J	300			200		150			pF	
Thermal Resistance Junction to Ambient Thermal Resistance Junction to Case	R _{JA} R _{JC}	75				5.0					°C/W
RMS Isolation Voltage, t = 1 min	V _{ISO}	1500								V	
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150								°C	

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

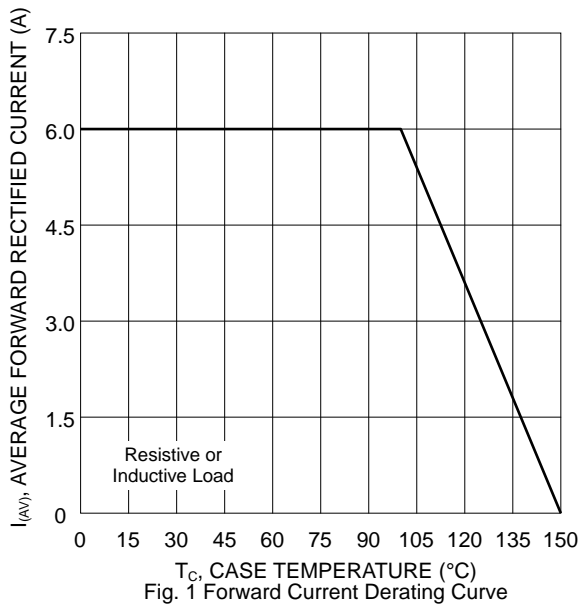


Fig. 1 Forward Current Derating Curve

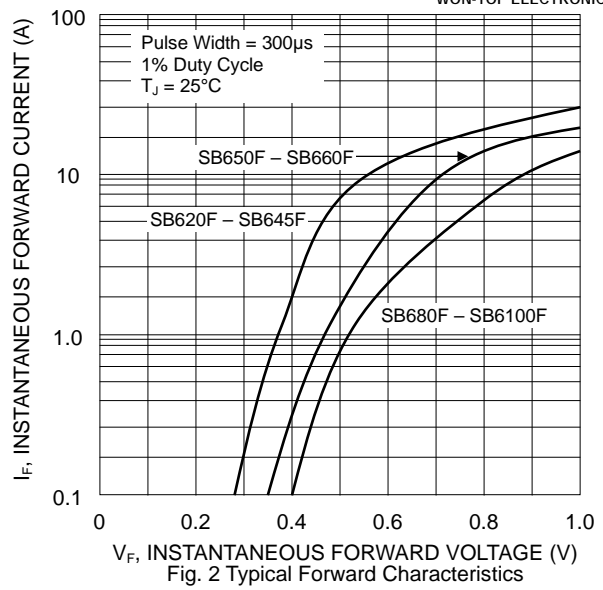


Fig. 2 Typical Forward Characteristics

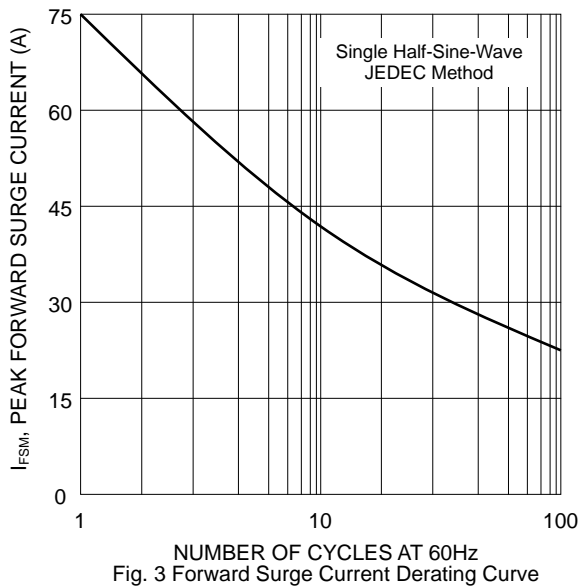


Fig. 3 Forward Surge Current Derating Curve

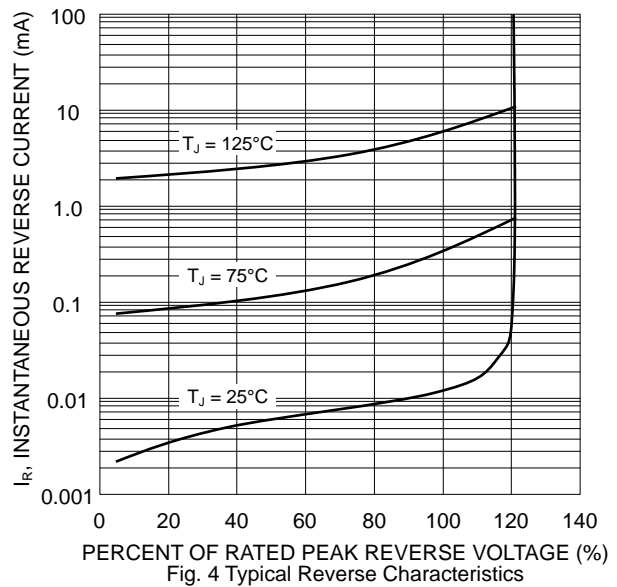


Fig. 4 Typical Reverse Characteristics

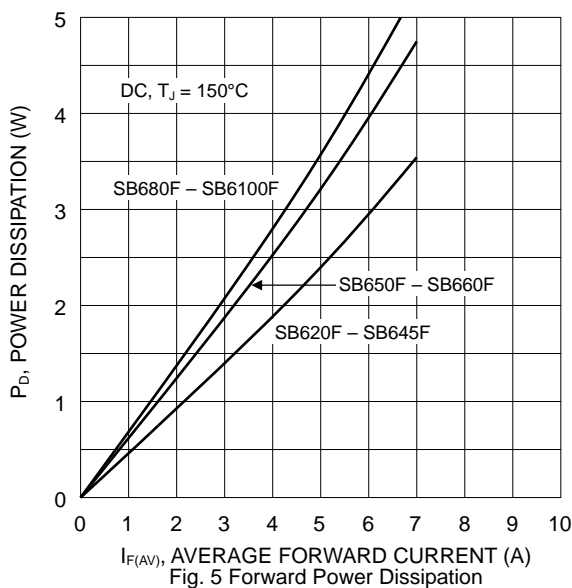


Fig. 5 Forward Power Dissipation

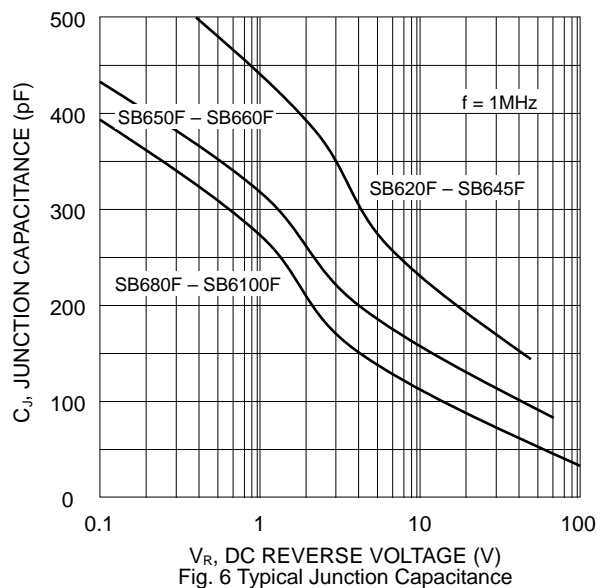


Fig. 6 Typical Junction Capacitance

MARKING INFORMATION



SB6xxF = Device Number
xx = 20, 30, 40, 45, 50, 60, 80 or 100
Polarity = As Marked on Body

PACKAGING INFORMATION

BULK

Tube Size L x W x H (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
525 x 31 x 6	50	555 x 145 x 95	2,000	572 x 306 x 218	8,000	19.0

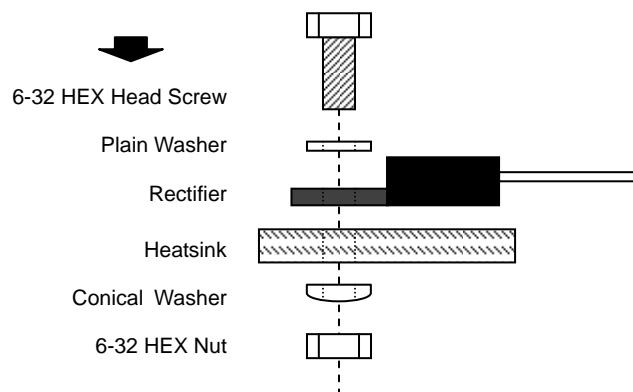
Note: 1. Anti-static tube, water clear color.

RECOMMENDED SCREW MOUNTING ARRANGEMENT

The full molded plastic package affords a major reduction of hardware as compared to a standard TO-220 package. However, precautions should be made in mounting procedure.

A conical washer should be used to apply proper force to the device. Screw should not be tightened with any type of air-forced torque or equipment that may cause crack on device package.

A layer of thermal grease or thermal pad in the interface will be considerably helpful for heat dissipation.



ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
SB620F	ITO-220A	50 Units/Tube
SB630F	ITO-220A	50 Units/Tube
SB640F	ITO-220A	50 Units/Tube
SB645F	ITO-220A	50 Units/Tube
SB650F	ITO-220A	50 Units/Tube
SB660F	ITO-220A	50 Units/Tube
SB680F	ITO-220A	50 Units/Tube
SB6100F	ITO-220A	50 Units/Tube

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, SB620F-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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