SB620CT – SB660CT

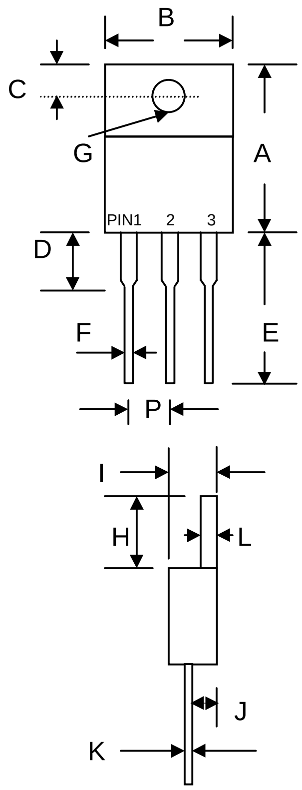
WTE
POWER SEMICONDUCTORS

RoHS Pb

6.0A DUAL SCHOTTKY BARRIER RECTIFIER

Features

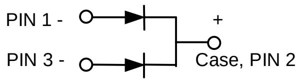
- Schottky Barrier Chip
- Guard Ring for Transient Protection
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O



TO-220		
Dim	**Min**	**Max**
A	13.90	15.90
B	9.80	10.70
C	2.54	3.43
D	3.56	4.56
E	12.70	14.73
F	0.51	0.96
G	3.55 Ø	4.09 Ø
H	5.75	6.85
I	4.16	5.00
J	2.03	2.92
K	0.30	0.65
L	1.14	1.40
P	2.29	2.79
All Dimensions in mm		

Mechanical Data

- Case: TO-220, Molded 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, See Page 4**



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	SB620CT	SB630CT	SB640CT	SB650CT	SB660CT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	V
Average Rectified Output Current @T_C = 75°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 = 3.0A	V_{FM}	0.55			0.70		V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°C	I_{RM}	0.2 15					mA
Typical Junction Capacitance (Note 1)	C_j	400					pF
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150					°C

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

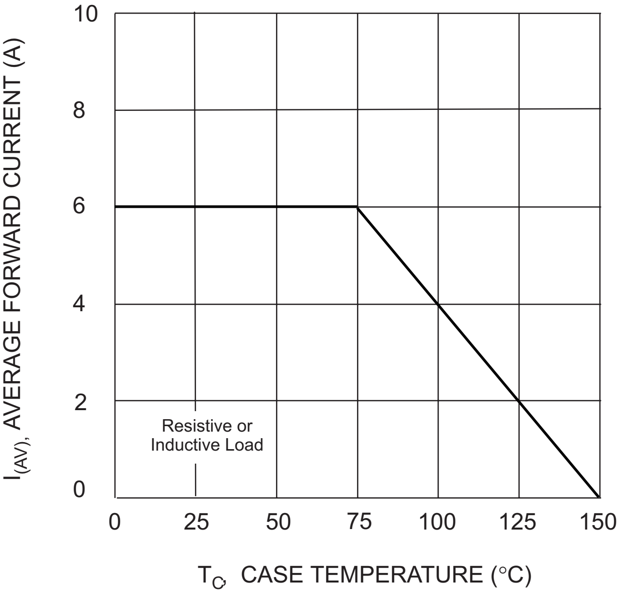


Fig. 1 Forward Current Derating Curve

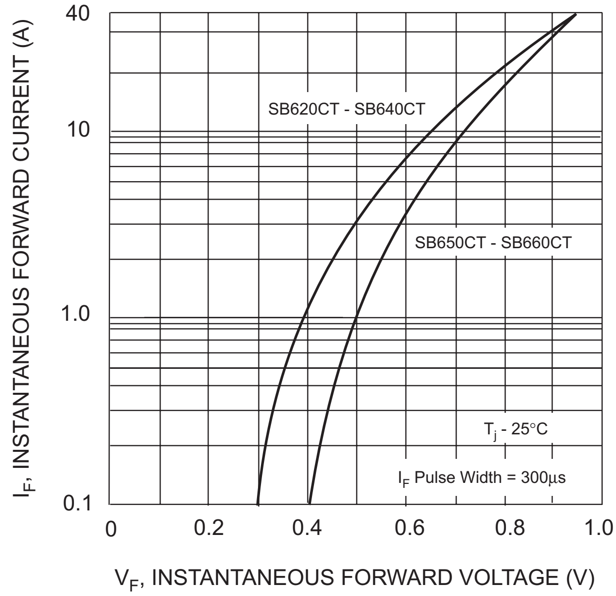


Fig. 2 Typical Forward Characteristics

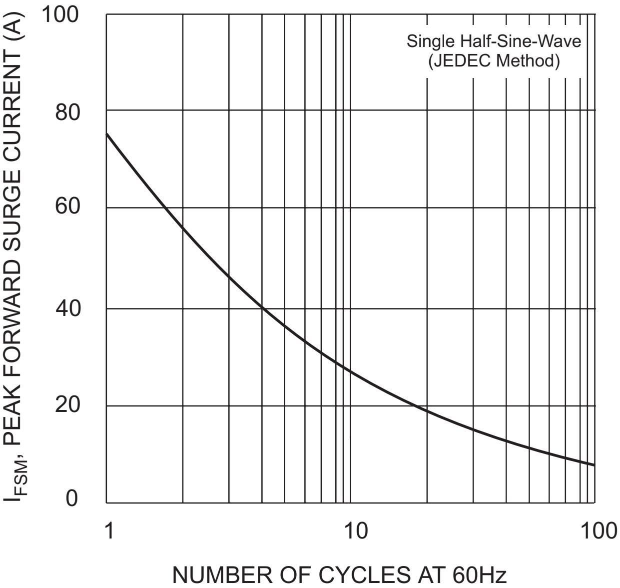


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

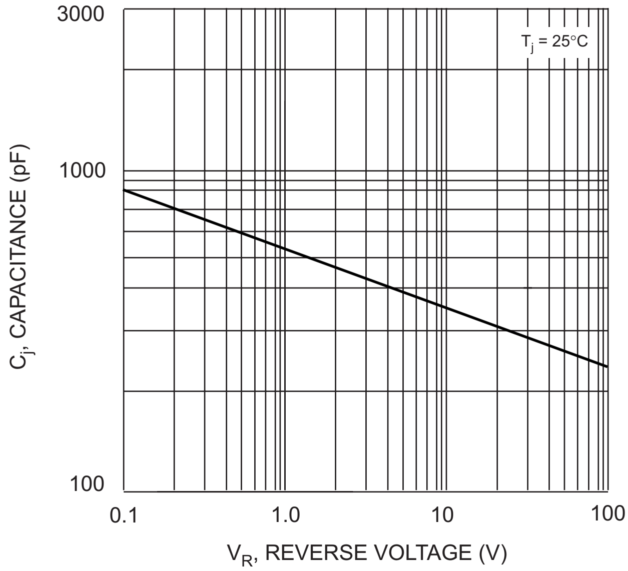


Fig. 4 Typical Junction Capacitance

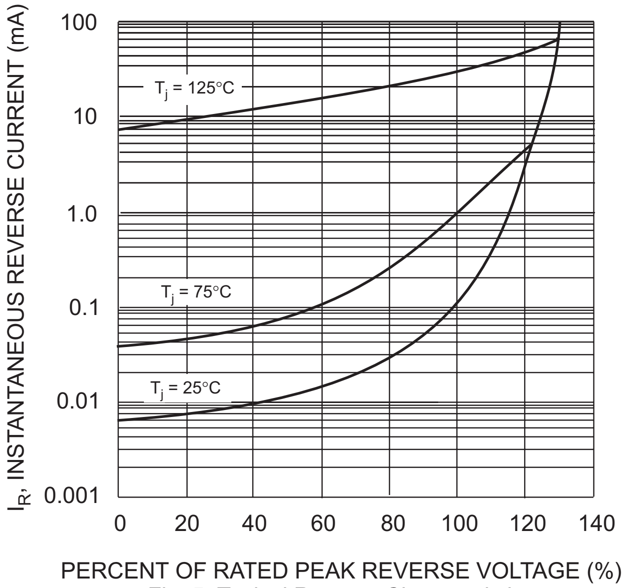
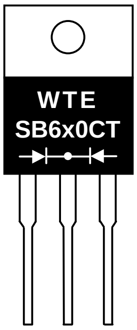


Fig. 5 Typical Reverse Characteristics

MARKING INFORMATION



WTE	= Manufacturer's Logo
SB6x0CT	= Device Number
x	= 2, 3, 4, 5 or 6
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

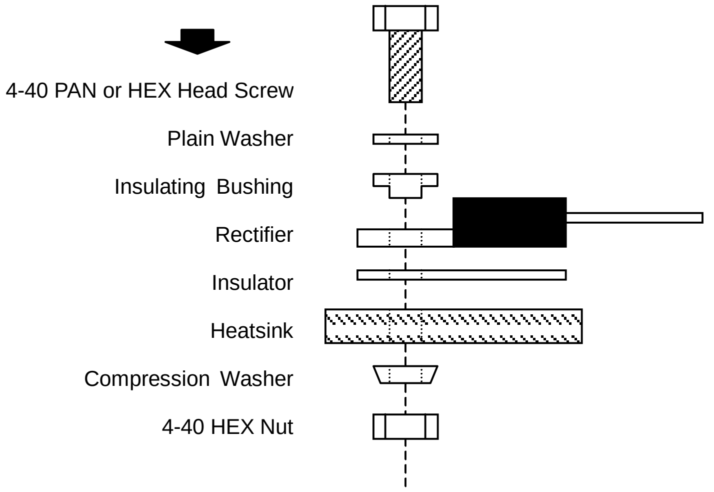
Note: 1. Anti-static tube, water clear color.

RECOMMENDED SCREW MOUNTING ARRANGEMENT

Recommended isolated mounting when screw is at heatsink 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.



ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
SB620CT	TO-220	50 Units/Tube
SB630CT	TO-220	50 Units/Tube
SB640CT	TO-220	50 Units/Tube
SB650CT	TO-220	50 Units/Tube
SB660CT	TO-220	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, SB620CT-LF**.

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