



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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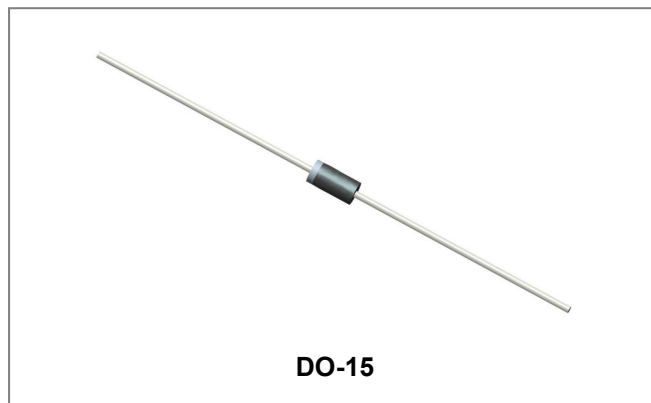
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## SB220 THRU SB260 SCHOTTKY RECTIFIER



### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Green Products in Compliance with the RoHS Directive
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Case: JEDEC DO-15 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.014 ounce, 0.40 grams

### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Characteristics	Symbol	SB220	SB230	SB240	SB250	SB260	Units
Maximum repetitive peak reverse voltage Maximum DC blocking voltage	V <sub>RRM</sub> V <sub>DC</sub>	20	30	40	50	60	V
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	V
Maximum average forward rectified current 0.375"( 9.5mm ) lead length at T <sub>L</sub> =100℃	I <sub>(AV)</sub>	2.0					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load ( JEDEC Method)	I <sub>FSM</sub>	50					A
Maximum instantaneous forward voltage at 2.0A	V <sub>F</sub>	0.5			0.70		V
Maximum DC reverse current T <sub>A</sub> =25℃ at rated DC blocking voltage T <sub>A</sub> =100℃	I <sub>R</sub>	5.0 10					mA
Typical junction capacitance ( Note 1)	C <sub>J</sub>	170			140		pF
Typical thermal resistance junction to lead	R <sub>θJL</sub>	15					℃/W
Typical thermal resistance junction to ambient( Note 2)	R <sub>θJA</sub>	50.0					℃/W
Operating junction and storage temperature range	T <sub>J</sub> ,T <sub>STG</sub>	-65 to +150					℃

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

3. Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length, P.C.B mounted.



## Ratings and Characteristics Curves

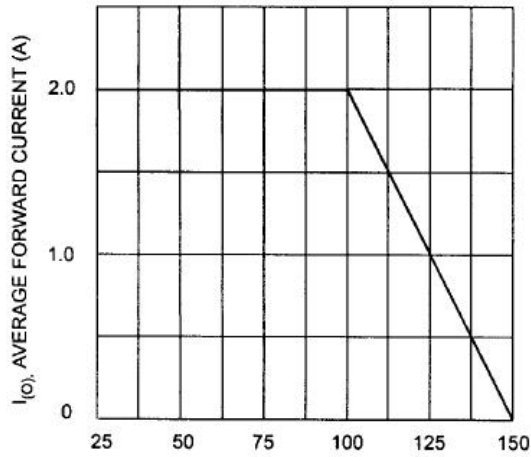


Fig. 1 Forward Current Derating Curve

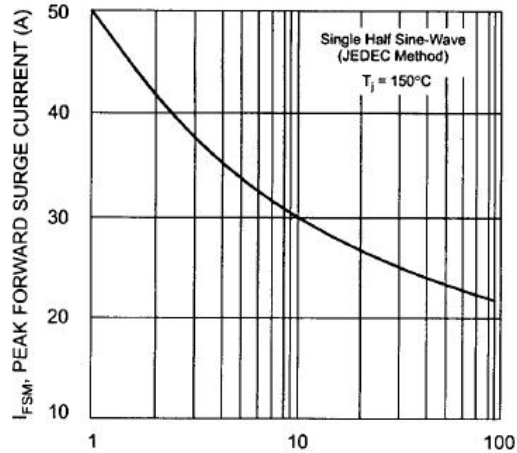


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

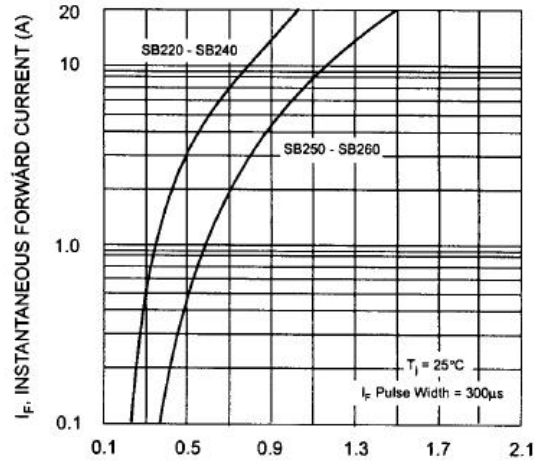


Fig. 2 Typical Forward Characteristics

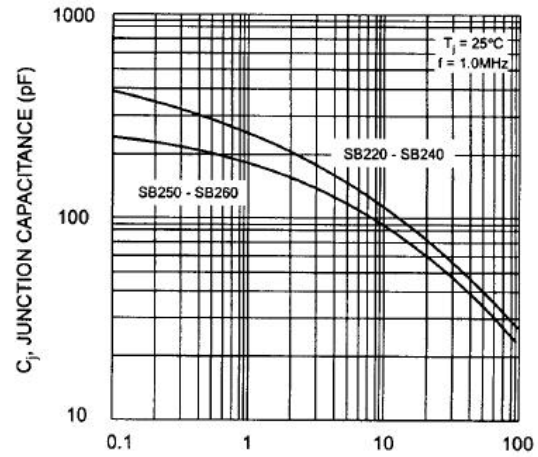


Fig. 4 Typical Junction Capacitance

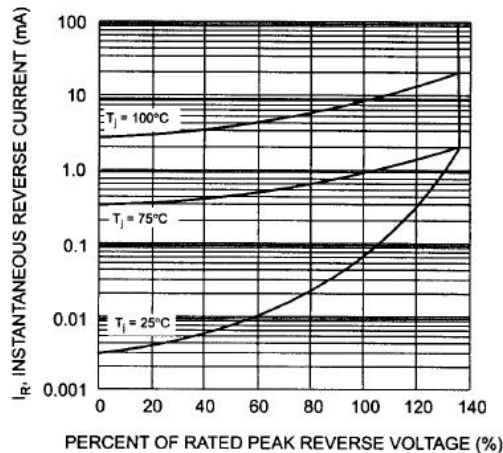
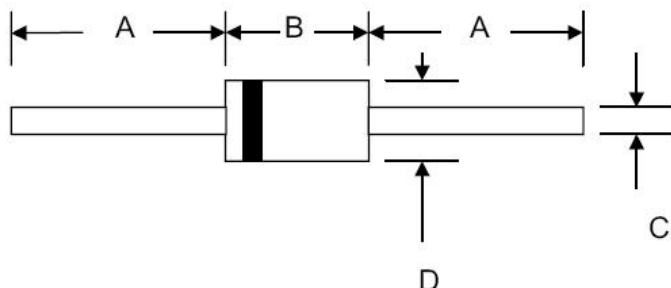


Fig. 5 Typical Reverse Characteristics

## Mechanical Dimensions DO-15



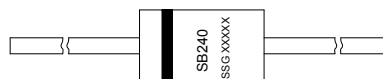
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	5.5	7.62	0.217	0.300
C	0.7	0.9	0.028	0.034
D	2.6	3.6	0.104	0.140

## Ordering Information

Device	Package	Shipping
SB220 THRU SB260	DO-15(Pb-Free)	3000pcs / tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram

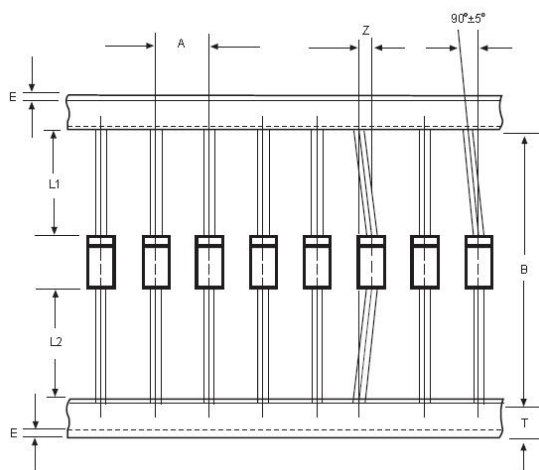


Where XXXXX is YYWWL

SB = Device Type  
2 = Forward Current (2A)  
40 = Reverse Voltage (40V)  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

Cautions: Molding resin  
Epoxy resin UL:94V-0

## Carrier Tape Specification DO-15



SYMBOL	Millimeters	
	Min.	Max.
A	4.50	5.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

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