

# GSDB520B Series

## Surface Mount Schottky Barrier Rectifiers

### Product Description

Reverse Voltage 20V to 200V Forward Current 5.0A

### Features

- Low Profile Package
- Ideal for Automated Placement
- Guard Ring for Over Voltage Protection
- Low Forward Voltage Drop
- Component in accordance to RoHS 2002/95/EC
- AEC-Q101 Qualified

### Mechanical Data

- Case : Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals : Lead Free Plating (Tin Finish). Solder able per MIL-STD-202, Method 208
- Polarity : Cathode Band
- Weight : 0.095 grams

### Packages



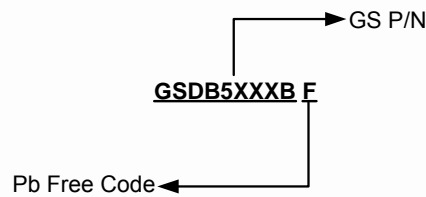
SMB (DO-214AA)

### Marking Information

Part Number	Package	Marking
GSDB520BF	SMB (DO-214AA)	WTYYWW B520B.
GSDB530BF	SMB (DO-214AA)	WTYYWW B530B.
GSDB540BF	SMB (DO-214AA)	WTYYWW B540B.
GSDB550BF	SMB (DO-214AA)	WTYYWW B550B.
GSDB560BF	SMB (DO-214AA)	WTYYWW B560B.
GSDB580BF	SMB (DO-214AA)	WTYYWW B580B.
GSDB5100BF	SMB (DO-214AA)	WTYYWW B5100B.
GSDB5150BF	SMB (DO-214AA)	WTYYWW B5150B.
GSDB5200BF	SMB (DO-214AA)	WTYYWW B5200B.

※ "WT" GS Code & "YYWW" Date Code  
※ "B5XXXB" GS P/N & "." Halogen Free

## Ordering Information



Part Number	Package	Quantity
GSD520BF Series	SMB (DO-214AA)	3000 PCS

## Electrical Characteristics

(T<sub>A</sub>= 25°C unless otherwise noted)

Symbol	Conditions	B520B	B530B	B540B	B550B	B560B	Unit
V <sub>RRM</sub>	Maximum Repetitive Peak Reverse Voltage	20	30	40	50	60	V
V <sub>RMS</sub>	Maximum RMS Voltage	14	21	28	35	42	V
V <sub>DC</sub>	Maximum DC Blocking Voltage	20	30	40	50	60	V
V <sub>F</sub>	Maximum Instantaneous Forward Voltage (I <sub>F</sub> =5.0A)	0.55		0.7			V
I <sub>R</sub>	Maximum DC Reverse Current At Rated DC Blocking Voltage	T <sub>C</sub> =25°C	0.5				mA
		T <sub>C</sub> =100°C	10				
C <sub>J</sub>	Typical Junction Capacitance (Note 1)	300			210		pF
Symbol	Conditions	B580B	B5100B	B5150B	B5200B	Unit	
V <sub>RRM</sub>	Maximum Repetitive Peak Reverse Voltage	80	100	150	200	V	
V <sub>RMS</sub>	Maximum RMS Voltage	56	70	105	140	V	
V <sub>DC</sub>	Maximum DC Blocking Voltage	80	100	150	200	V	
V <sub>F</sub>	Maximum Instantaneous Forward Voltage (I <sub>F</sub> =5.0A)	0.85		0.87	0.90	V	
I <sub>R</sub>	Maximum DC Reverse Current At Rated DC Blocking Voltage	T <sub>C</sub> =25°C	0.2			mA	
		T <sub>C</sub> =100°C	5.0				
C <sub>J</sub>	Typical Junction Capacitance (Note 1)	170		150	110	pF	
I <sub>F</sub>	Maximum Average Forward Rectified Current	5.0				A	
I <sub>FSM</sub>	Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	100				A	
R <sub>θJA</sub> R <sub>θJC</sub>	Typical Thermal Resistance (Note 2)	80 50				°C/W	
T <sub>J</sub>	Junction Temperature Range	-55 to +125				°C	
T <sub>STG</sub>	Storage Temperature Range	-55 to +150				°C	

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC

2. Device mounted on FR-4 substrate, 1"×1", 2oz, single-sided, PC boards with 0.1"×0.15" copper pad

## Typical Characteristics

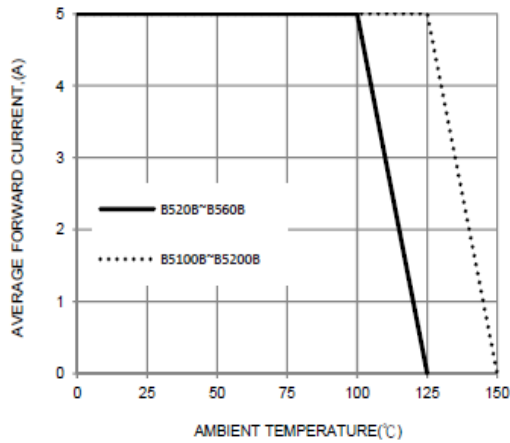


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

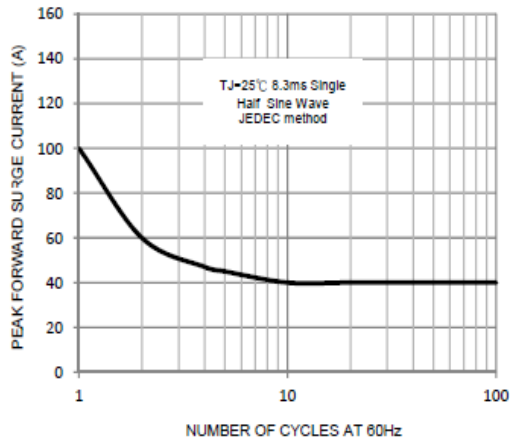


FIG. 5-TYPICAL JUNCTION CAPACITANCE

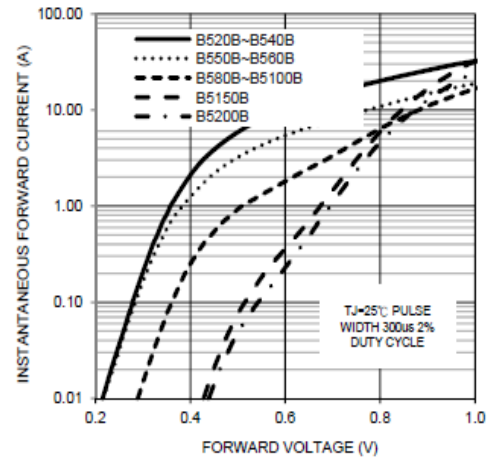
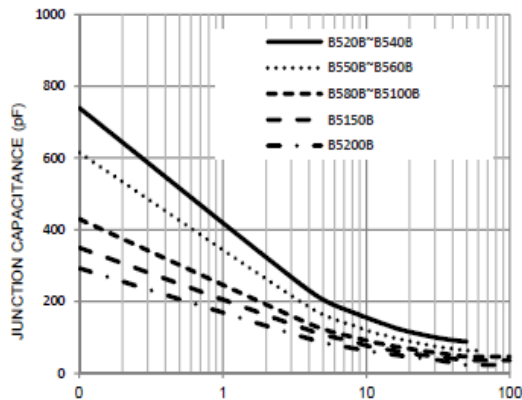
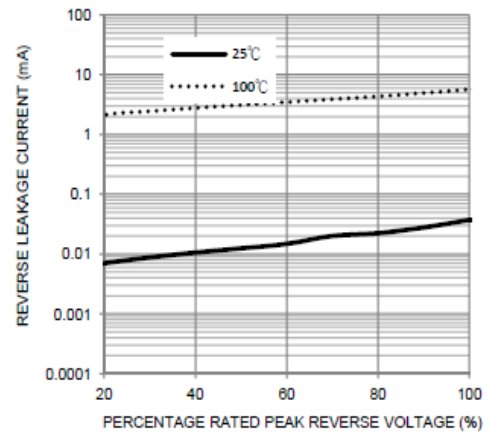
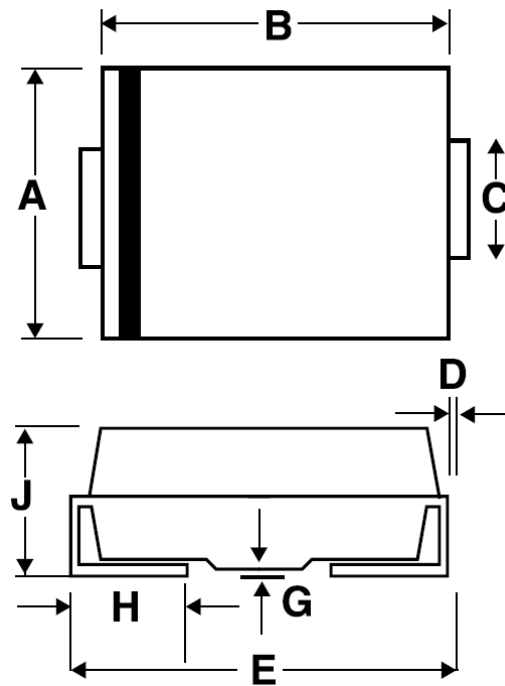


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



## Package Dimension

### SMB (DO-214AA)







### Dimensions

Symbol	Millimeters		Inches	
	Min	Max	Min	Max
<b>A</b>	3.30	3.94	0.129	0.155
<b>B</b>	4.06	4.80	0.159	0.188
<b>C</b>	1.96	2.21	0.077	0.087
<b>D</b>	0.15	0.31	0.005	0.012
<b>E</b>	5.00	5.59	0.196	0.220
<b>G</b>	0.10	0.20	0.003	0.007
<b>H</b>	0.76	1.52	0.029	0.059
<b>J</b>	2.00	2.62	0.078	0.103





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