

# GSDB120 Series

## Surface Mount Schottky Barrier Rectifiers

### Product Description

Reverse Voltage 20V To 200V Forward Current  
1.0A

### 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
- Lead(Pb)-Free

### Mechanical Data

- Case Material : Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals : Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity : Cathode Band
- Weight : 0.062 grams (approximate)

### Packages



#### SMA (DO-214AC)

### Marking Information

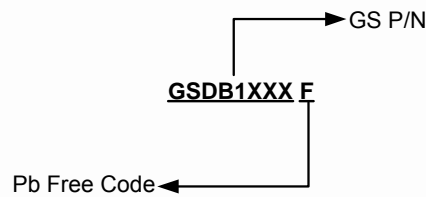
Part Number	Package	Marking
GSDB120F	SMA(DO-214AC)	WTYYWW B120.
GSDB130F	SMA(DO-214AC)	WTYYWW B130.
GSDB140F	SMA(DO-214AC)	WTYYWW B140.
		SK14
GSDB150F	SMA(DO-214AC)	WTYYWW B150.
GSDB160F	SMA(DO-214AC)	WTYYWW B160.
GSDB180F	SMA(DO-214AC)	WTYYWW B180.
GSDB1100F	SMA(DO-214AC)	WTYYWW B1100.
GSDB1150F	SMA(DO-214AC)	WTYYWW B1150.
GSDB1200F	SMA(DO-214AC)	WTYYWW B1200.

※ "WT" GS Code & "YYWW" Date Code

※ "B1XXX" GS P/N & "." Halogen Free

※ "SK14" GS P/N

## Ordering Information



Part Number	Package	Quantity
GSDB120F Series	SMA(DO-214AC)	5000 PCS

## Electrical Characteristics

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

Symbol	Conditions	B120	B130	B140	B150	B160	Unit
V <sub>RRM</sub>	Maximum Recurrent 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 At 1.0A @ T <sub>J</sub> =25°C	0.5		0.62			V
C <sub>J</sub>	Typical Junction Capacitance (1)	70		60			pF
I <sub>R</sub>	Maximum DC Reverse Current At Rated DC Blocking Voltage	T <sub>J</sub> =25°C	0.5				mA
		T <sub>J</sub> =100°C	10				
Symbol	Conditions	B180	B1100	B1150	B1200	Unit	
V <sub>RRM</sub>	Maximum Recurrent 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 At 1.0A @ T <sub>J</sub> =25°C	0.83		0.85	0.88	V	
C <sub>J</sub>	Typical Junction Capacitance (1)	50		35		pF	
I <sub>R</sub>	Maximum DC Reverse Current At Rated DC Blocking Voltage	T <sub>J</sub> =25°C	0.2			mA	
		T <sub>J</sub> =100°C	5				
I <sub>F</sub>	Maximum Average Forward Rectified Current	1.0				A	
I <sub>FSM</sub>	Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed On Rated Load (JEDEC Method)	30				A	
R <sub>θJA</sub>	Thermal Resistance Junction to Ambient	70				°C/W	
R <sub>θJC</sub>	Thermal Resistance Junction to Case	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 applied reverse voltage of 4.0V DC

## Typical Characteristics

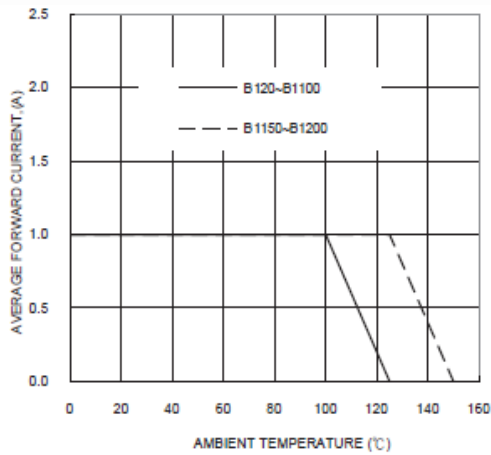


FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

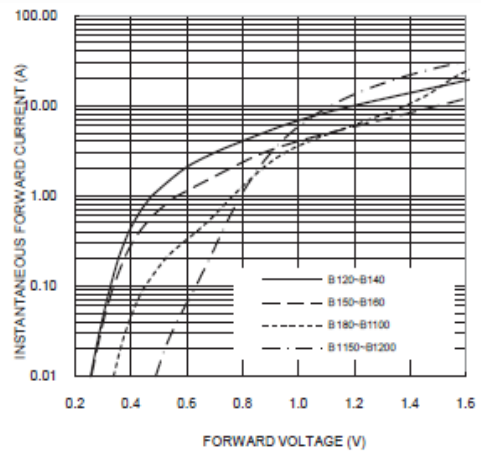


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

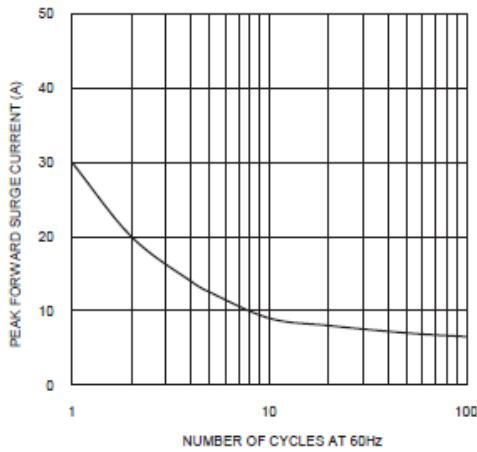


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

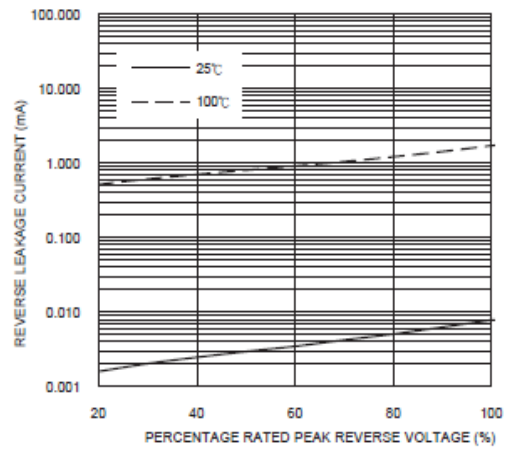


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

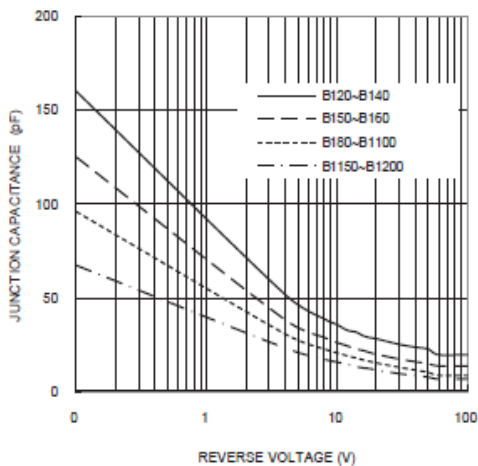
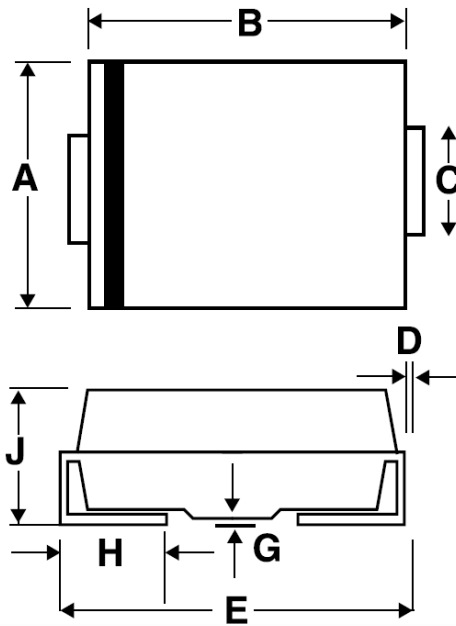


FIG. 5-TYPICAL JUNCTION CAPACITANCE

## Package Dimension

### SMA(DO-214AC)



#### Dimensions

Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	2.20	2.92	0.086	0.114
B	4.00	4.60	0.157	0.181
C	1.27	1.63	0.050	0.064
D	0.15	0.31	0.005	0.012
E	4.48	5.59	0.176	0.220
G	0.10	0.20	0.003	0.007
H	0.76	1.52	0.029	0.059
J	1.70	2.62	0.066	0.103

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