

# GSDB1020 Series

## Surface Mount Schottky Barrier Rectifiers

### Product Description

Reverse Voltage 20V TO 200V Forward Current 10A

### Features

- Low profile package
- Ideal for automated place
- Guard Ring for over voltage protection
- Low forward voltage drop
- Component in accordance to RoHS 2002/95/EC

### 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 : 0.231 grams (approximate)

### Packages



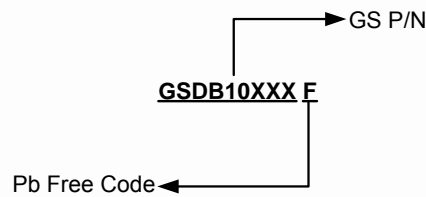
SMC(DO-214AB)

### Marking Information

Part Number	Package	Marking
GSDB1020F	SMC(DO-214AB)	WTYYWW B1020.
GSDB1030F	SMC(DO-214AB)	WTYYWW B1030.
GSDB1040F	SMC(DO-214AB)	WTYYWW B1040.
GSDB1050F	SMC(DO-214AB)	WTYYWW B1050.
GSDB1060F	SMC(DO-214AB)	WTYYWW B1060.
GSDB1080F	SMC(DO-214AB)	WTYYWW B1080.
GSDB10100F	SMC(DO-214AB)	WTYYWW B10100.
GSDB10150F	SMC(DO-214AB)	WTYYWW B10150.
GSDB10200F	SMC(DO-214AB)	WTYYWW B10200.

※ "WT" GS Code & "YYWW" Date Code  
※ "B10XXX" GS P/N & "." Halogen Free

## Ordering Information



Part Number	Package	Quantity
GSDB1020F Series	SMC(DO-214AB)	3000 PCS

## Electrical Characteristics

Symbol	Conditions	B1020	B1030	B1040	B1050	B1060	Unit
$V_{RRM}$	Maximum Repetitive Peak Reverse Voltage	20	30	40	50	60	V
$V_{RMS}$	Maximum RMS Voltage	14	21	28	35	42	V
$V_{DC}$	Maximum DC Blocking Voltage	20	30	40	50	60	V
$V_F$	Maximum Instantaneous Forward Voltage $I_F=10A @ T_A=25^{\circ}C$	0.57		0.75			V
$I_R$	Maximum DC Reverse Current At Rated DC Blocking Voltage	$T_C=25^{\circ}C$	0.5				mA
		$T_C=100^{\circ}C$	10				
$C_J$	Typical Junction Capacitance (Note 1)	450		310			pF
Symbol	Conditions	B1080	B10100	B10150	B10200	Unit	
$V_{RRM}$	Maximum Repetitive Peak Reverse Voltage	80	100	150	200	V	
$V_{RMS}$	Maximum RMS Voltage	56	70	105	140	V	
$V_{DC}$	Maximum DC Blocking Voltage	80	100	150	200	V	
$V_F$	Maximum Instantaneous Forward Voltage $I_F=10A @ T_A=25^{\circ}C$	0.85		0.92		V	
$I_R$	Maximum DC Reverse Current At Rated DC Blocking Voltage	$T_C=25^{\circ}C$	0.2			mA	
		$T_C=100^{\circ}C$	50				
$C_J$	Typical Junction Capacitance (Note 1)	300		200		pF	
$I_F$	Maximum Average Forward Rectified Current	10				A	
$I_{FSM}$	Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed On Rated Load	150				A	
$R_{\theta JA}$ $R_{\theta JC}$	Typical Thermal Resistance	70 50				$^{\circ}C/W$	
$T_J$	Junction Temperature Range	-55 to +125				$^{\circ}C$	
$T_{STG}$	Storage Temperature Range	-55 to +150				$^{\circ}C$	

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

## Typical Characteristics

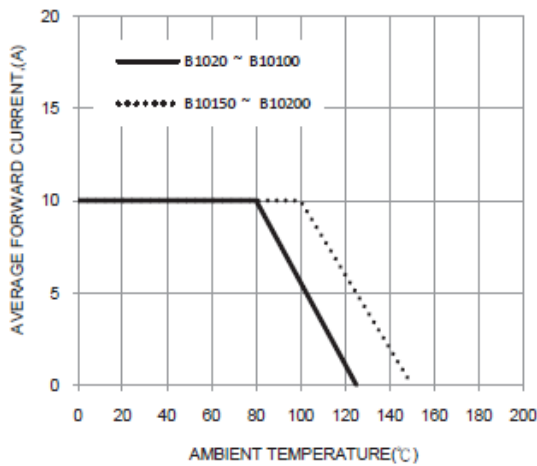


FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

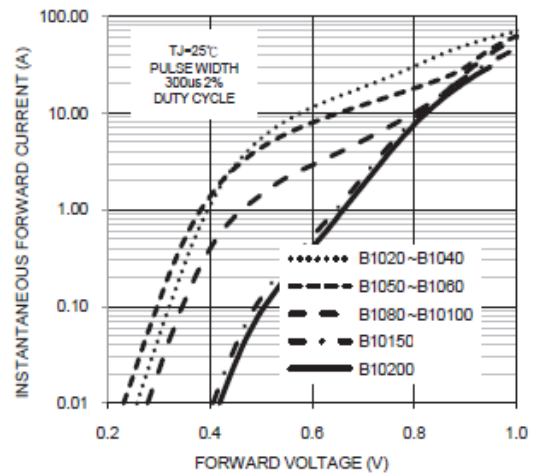


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

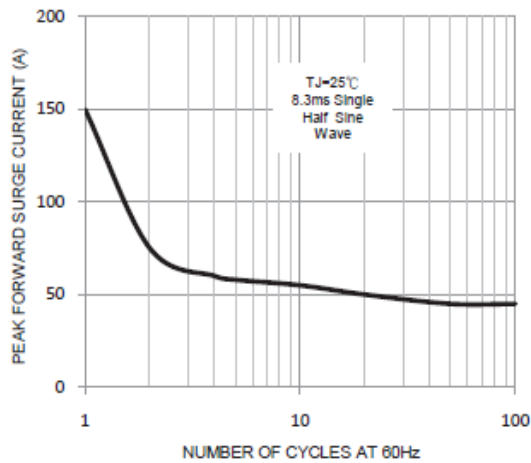


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

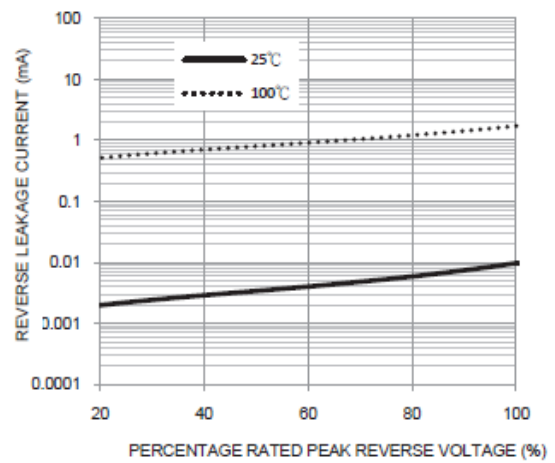


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

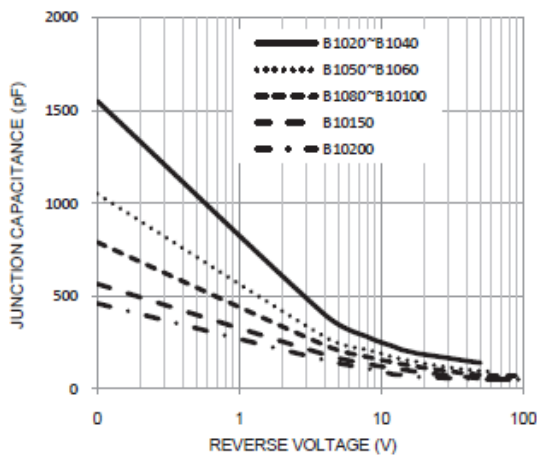
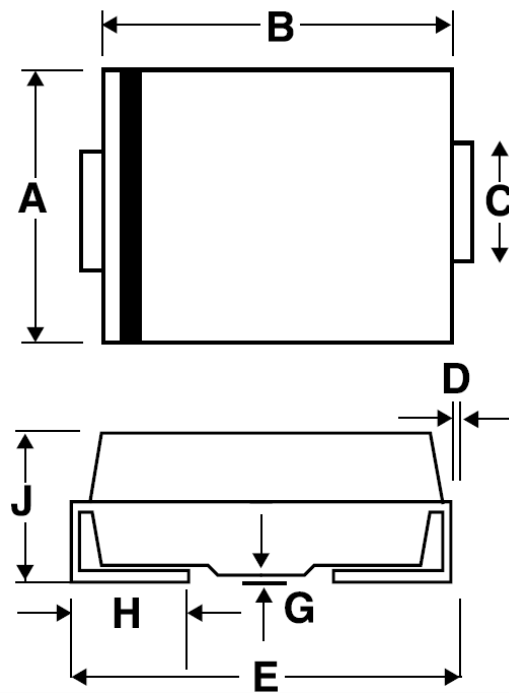


FIG. 5-TYPICAL JUNCTION CAPACITANCE

## Package Dimension

### SMC(DO-214AB)



### Dimensions

Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	5.59	6.22	0.220	0.244
B	6.60	7.11	0.259	0.279
C	2.75	3.18	0.108	0.125
D	0.15	0.31	0.005	0.012
E	7.75	8.13	0.305	0.320
G	0.10	0.20	0.003	0.007
H	0.76	1.52	0.029	0.059
J	2.00	2.62	0.078	0.103

## NOTICE

Information furnished is believed to be accurate and reliable. However Globaltech Semiconductor assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties, which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Globaltech Semiconductor. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information without express written approval of Globaltech Semiconductor.

## CONTACT US

GS Headquarter	
	4F.,No.43-1,Lane11,Sec.6,Minquan E.Rd Neihu District Taipei City 114, Taiwan (R.O.C)
	886-2-2657-9980
	886-2-2657-3630
	sales_twn@gs-power.com

Wu-Xi Branch	
	No.21 Changjiang Rd., WND, Wuxi, Jiangsu, China (INFO. & TECH. Science Park Building A 210 Room)
	86-510-85217051
	86-510-85211238
	sales_cn@gs-power.com

RD Division	
	824 Bolton Drive Milpitas. CA. 95035
	1-408-457-0587