# GSDB220A Series

## Surface Mount Schottky Barrier Rectifiers

### Product Description

Reverse Voltage 20V to 100V Forward Current 2.0A

### Features

- For Surface Mount Application
- Metal-Semiconductor Junction With Guarding
- Epitaxial Construction
- Very Low Forward Voltage Drop
- High Current Capability
- Plastic Material Has UL Flammability Classification 94V-0
- For Use In Low, And Polarity Protection Applications
- Lead(Pb)-Free

### Mechanical Data

- Case : Molded Plastic
- Polarity : Indicated by cathode band
- Weight : 0.002 Ounce, 0.064 grams

### Packages

**SMA(DO-214AC)**

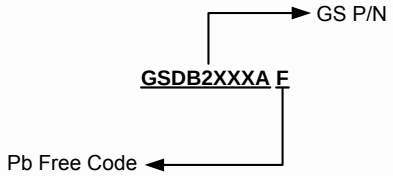
### Marking Information

| P/N | Package | Part Marking |
|---|---|---|
| GSDB220AF | SMA(DO-214AC) | WTYYWW<br>B220A. |
| GSDB230AF | SMA(DO-214AC) | WTYYWW<br>B230A. |
| GSDB240AF | SMA(DO-214AC) | WTYYWW<br>B240A. |
| GSDB250AF | SMA(DO-214AC) | WTYYWW<br>B250A. |
| GSDB260AF | SMA(DO-214AC) | WTYYWW<br>B260A. |
| GSDB280AF | SMA(DO-214AC) | WTYYWW<br>B280A. |
| GSDB290AF | SMA(DO-214AC) | WTYYWW<br>B290A. |
| GSDB2100AF | SMA(DO-214AC) | WTYYWW<br>B2100A. |

※ “WT” GS Code & “YYWW” Date Code

※ “B2XXXA” GS P/N & “.” Halogen Free

## Ordering Information




| Part Number | Package | Quantity |
|---|---|---|
| GSDB220AF Series | SMA(DO-214AC) | 5000 PCS |

## Electrical Characteristics

Rating 25°C Ambient Temperature Unless Otherwise Specified.
Single Phase Half Wave, 60Hz, Resistive or Inductive Load. For Capacitive Load, Derate Current by 20%.

| Symbol | Conditions | | B220A | B230A | B240A | B250A | B260A | Unit |
|---|---|---|---|---|---|---|---|---|
| $V_{RRM}$ | Maximum Recurrent 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 At 2.0A DC | | 0.5 | | | 0.7 | | V |
| **Symbol** | **Conditions** | | **B280A** | **B290A** | | **B2100A** | | **Unit** |
| $V_{RRM}$ | Maximum Recurrent Peak Reverse Voltage | | 80 | 90 | | 100 | | V |
| $V_{RMS}$ | Maximum RMS Voltage | | 56 | 63 | | 70 | | V |
| $V_{DC}$ | Maximum DC Blocking Voltage | | 80 | 90 | | 100 | | V |
| $V_F$ | Maximum Instantaneous At 2.0A DC | | 0.85 | | | | | V |
| $I_{F(AV)}$ | Maximum Average Forward Rectified Current .375”(9.5mm) Lead Length (See Fig.1) | | 2.0 | | | | | A |
| $I_{FSM}$ | Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load(JEDEC ) | | 50 | | | | | A |
| $I_R$ | Maximum DC Reverse Current At Rated DC Blocking Voltage | $T_A$ = 25°C | 0.5 | | | | | mA |
| | | $T_A$ = 100°C | 20 | | | | | |
| $C_J$ | Typical Junction Capacitance (1) | | 170 | | | | | pF |
| $R_{\theta JA}$ | Typical Thermal Resistance (2) | | 75 | | | | | °C/W |
| $T_J$ | Operating Temperature Range | | -50 to +125 | | | | | °C |
| $T_{STG}$ | Storage Temperature Range | | -65 to +150 | | | | | °C |

Notes: 1. Measured at 1.0MHz applied reverse voltage of 4.0V D.C
2. Thermal Resistance Junction to Ambient

## Typical Characteristics

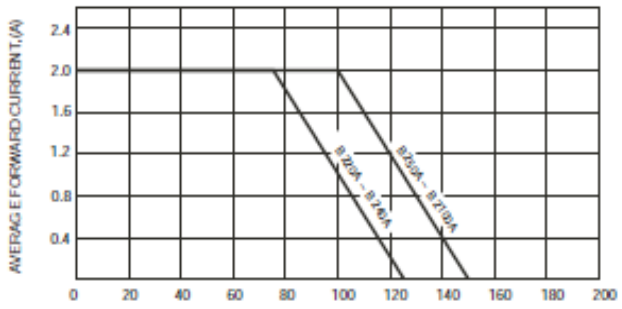



FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

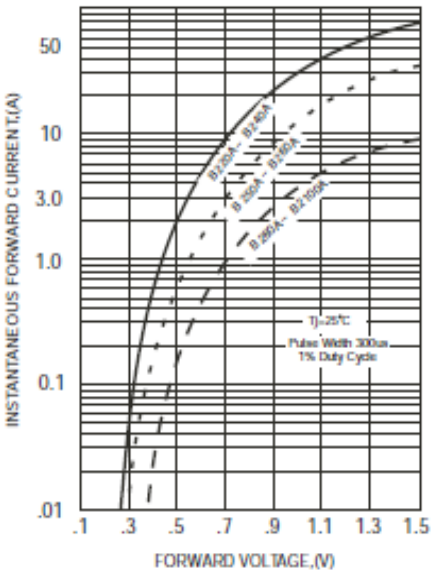



FIG.2-TYPICAL FORWARD CHARACTERISTICS

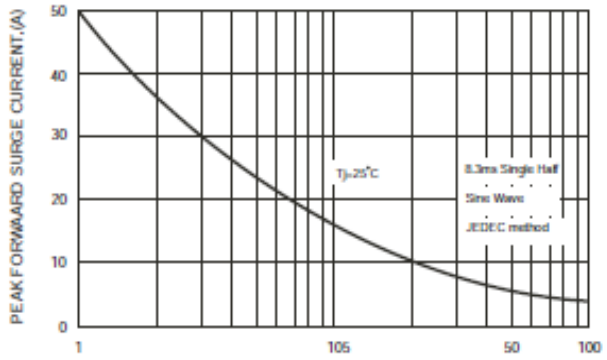



FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

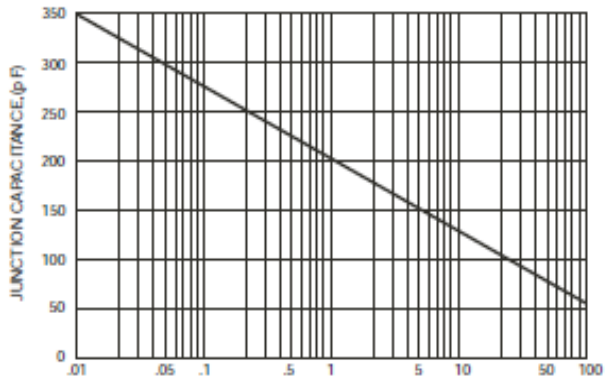



FIG.4-TYPICAL JUNCTION CAPACITANCE

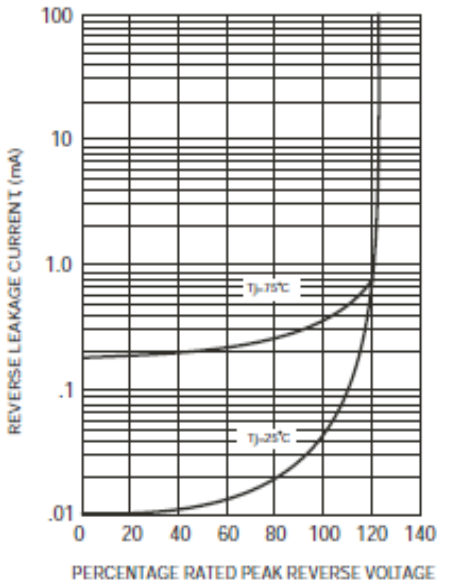
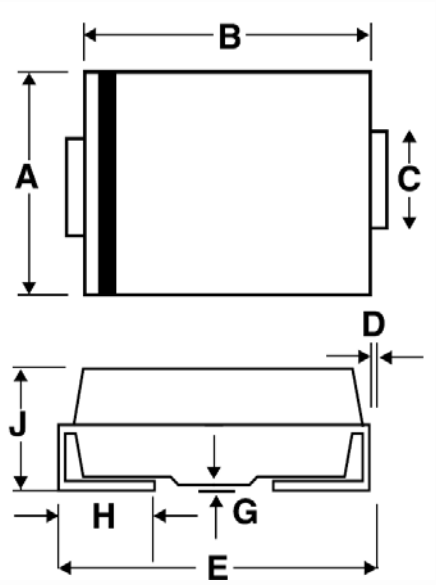



FIG.5 - TYPICAL REVERSE CHARACTERISTICS

## 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 |

# 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 |