

GSDB120B Series

Surface Mount Schottky Barrier Rectifiers

Product Description

Reverse Voltage 20V To 100V Forward Current 1.0A

Features

- For Surface Mount Application
- Metal-Semiconductor Junction With Guard Ring
- 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 : 0.003 Ounce ,0.093 grams

Packages



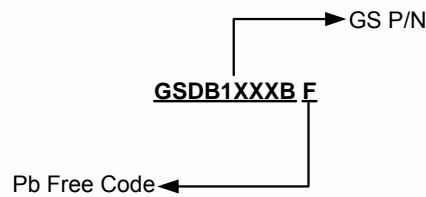
SMB (DO-214AA)

Marking Information

P/N	Package	Part Marking
GSDB120BF	SMB (DO-214AA)	WTYYWW B120B.
GSDB130BF	SMB (DO-214AA)	WTYYWW B130B.
GSDB140BF	SMB (DO-214AA)	WTYYWW B140B.
GSDB150BF	SMB (DO-214AA)	WTYYWW B150B.
GSDB160BF	SMB (DO-214AA)	WTYYWW B160B.
GSDB170BF	SMB (DO-214AA)	WTYYWW B170B.
GSDB180BF	SMB (DO-214AA)	WTYYWW B180B.
GSDB190BF	SMB (DO-214AA)	WTYYWW B190B.
GSDB1100BF	SMB (DO-214AA)	WTYYWW B1100B.

※ "WT" GS Code & "YYWW" Date Code
※ "B1XXXB" GS P/N & "." Halogen Free

Ordering Information



Part Number	Package	Quantity
GSD120BF Series	SMB (DO-214AA)	3000 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	B120B	B130B	B140B	B150B	B160B	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 1.0A	0.5		0.7			V
Symbol	Conditions	B170B	B180B	B190B	B1100B	Unit	
V_{RRM}	Maximum Recurrent Peak Reverse Voltage	70	80	90	100	V	
V_{RMS}	Maximum RMS Voltage	49	56	63	70	V	
V_{DC}	Maximum DC Blocking Voltage	70	80	90	100	V	
V_F	Maximum Instantaneous At 1.0A	0.79				V	
I_R	Maximum DC Reverse Current At Rated DC Blocking Voltage	$T_J=25^\circ\text{C}$	0.5				mA
		$T_J=100^\circ\text{C}$	10				
$I_{F(AV)}$	Maximum Average Forward Rectified Current	1.0				A	
I_{FSM}	Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	30				A	
C_J	Typical Junction Capacitance (Note1)	110				pF	
$R_{\theta JL}$	Typical Thermal Resistance (Note2)	20				°C/W	
T_J	Junction Temperature Range	-55 to +125				°C	
T_{STG}	Storage Temperature Range	-55 to +150				°C	

Notes: 1. Measured at 1.0MHz applied reverse voltage of 4.0V DC
 2. Thermal Resistance Junction to case

Typical Characteristics

FIG.1 FORWARD CURRENT DERATING CURVE

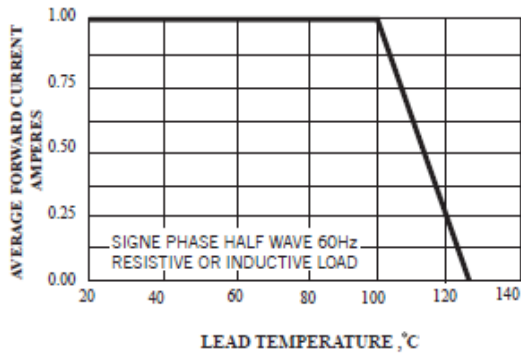


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

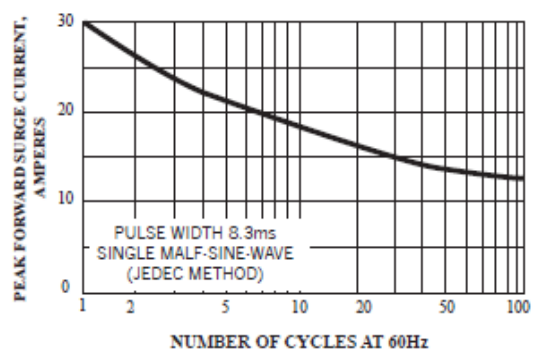


FIG.3 TYPICAL FORWARD CHARACTERISTICS

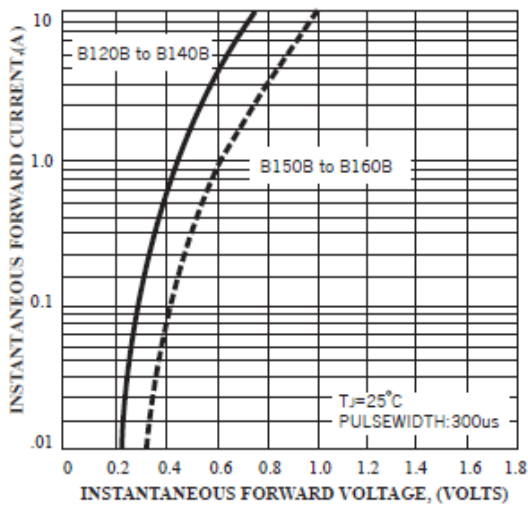


FIG.4 TYPICAL JUNCTION CAPACITANCE

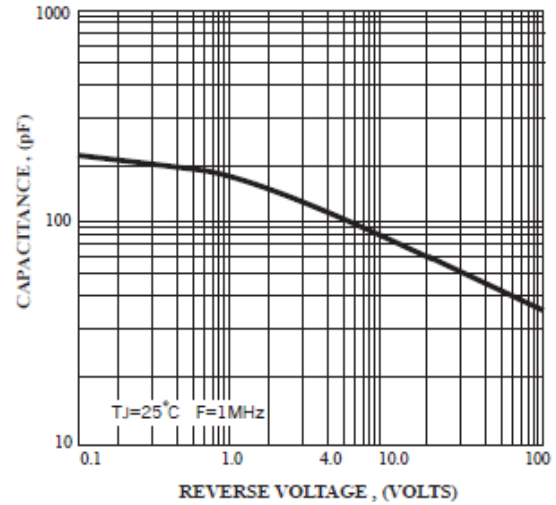
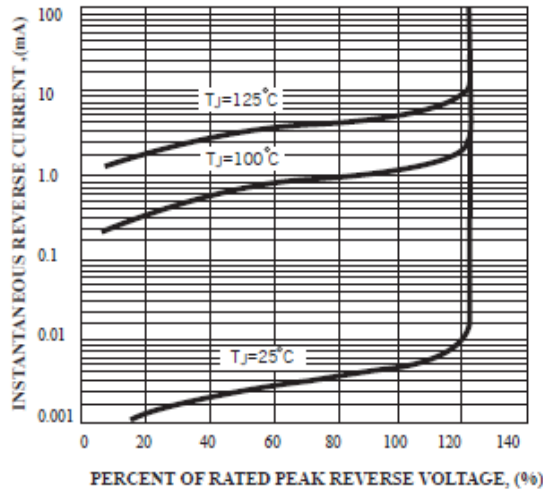
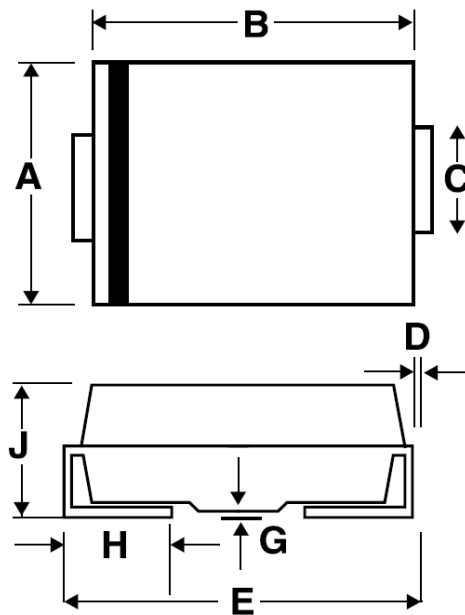


FIG.5 TYPICAL REVERSE CHARACTERISTICS



Package Dimension

SMB (DO-214AA)







Dimensions





Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	3.30	3.94	0.129	0.155
B	4.06	4.80	0.159	0.188
C	1.96	2.21	0.077	0.087
D	0.15	0.31	0.005	0.012
E	5.00	5.59	0.196	0.220
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



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