

GSDB120H Series

Surface Mount Schottky Barrier Rectifiers

Product Description

Reverse Voltage 20V to 200V Forward Current 1.0A

Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance
- Low profile surface mounted application in order to optimize board space
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- Guarding for over voltage protection
- Ultra high-speed switching
- Silicon epitaxial planar chip, metal silicon junction
- Lead-free parts meet environmental standards of MIL-STD-19500/228

Mechanical Data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, JEDEC SOD-123H
- Terminals : Plated terminals, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.011 gram

Packages

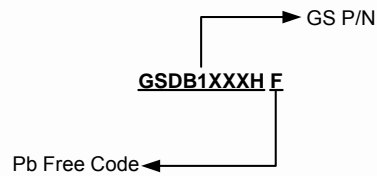


SOD-123H

Marking Information

P/N	Package	Part Marking
GSDB120HF	SOD-123H	12
GSDB130HF	SOD-123H	13
GSDB140HF	SOD-123H	14
GSDB150HF	SOD-123H	15
GSDB160HF	SOD-123H	16
GSDB180HF	SOD-123H	18
GSDB1100HF	SOD-123H	10
GSDB1150HF	SOD-123H	115
GSDB1200HF	SOD-123H	120

Ordering Information



Part Number	Package	Quantity
GSDB120HF Series	SOD-123H	3000 PCS

Electrical Characteristics

Symbol	Conditions	B120H	B130H	B140H	B150H	B160H	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_R	Continuous Reverse Voltage	20	30	40	50	60	V
V_F	Maximum Instantaneous @ $T_A=25^\circ\text{C}$	0.5		0.7			V
T_J	Junction Temperature Range	-55 to +125			-55 to +150		$^\circ\text{C}$
Symbol	Conditions	B180H	B1100H	B1150H	B1200H	Unit	
V_{RRM}	Maximum Recurrent Peak Reverse Voltage	80	100	150	200	V	
V_{RMS}	Maximum RMS Voltage	56	70	105	140	V	
V_R	Continuous Reverse Voltage	80	100	150	200	V	
V_F	Maximum Instantaneous @ $T_A=25^\circ\text{C}$	0.85		0.90	0.92	V	
T_J	Junction Temperature Range	-55 to +150				$^\circ\text{C}$	
I_o	Maximum Average Forward (Fig.1)	1.0				A	
I_{FSM}	Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load(JEDEC Method)	30				A	
I_R	Maximum DC Reverse Current At Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	0.5			mA	
		$T_A=125^\circ\text{C}$	10				
C_J	Diode Junction Capacitance $f=1\text{MHz}$ and Applied 4V DC Reverse Voltage	120(TYP)				pF	
$R_{\theta JC}$	Thermal Resistance Junction to Case	40				$^\circ\text{C/W}$	
T_{STG}	Storage Temperature Range	-65 to +175				$^\circ\text{C}$	

Typical Characteristics

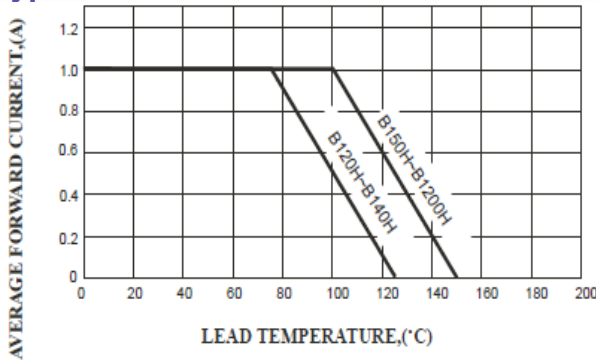


FIG.1 Typical Forward Current Derating Curve

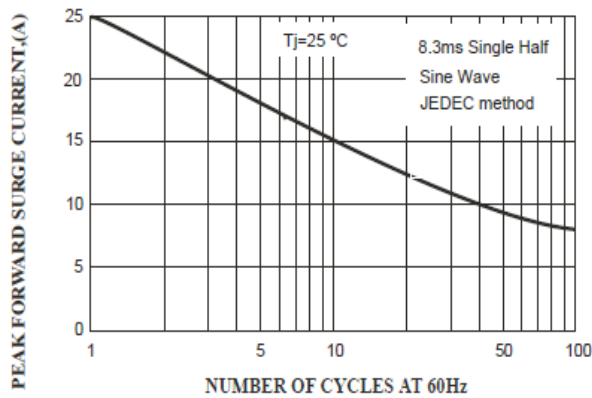


FIG.3 Maximum Non-Repetitive Forward Surge Current

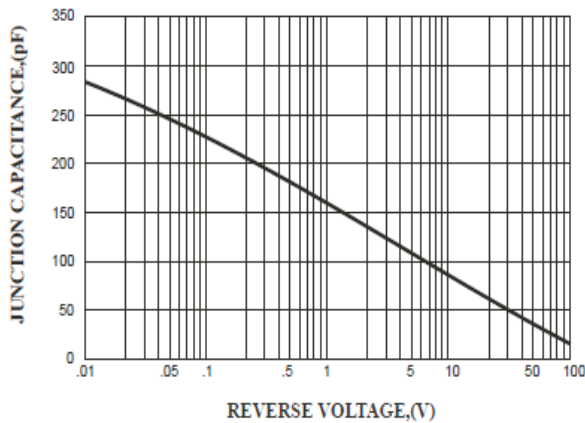


FIG.4 Typical Junction Capacitance

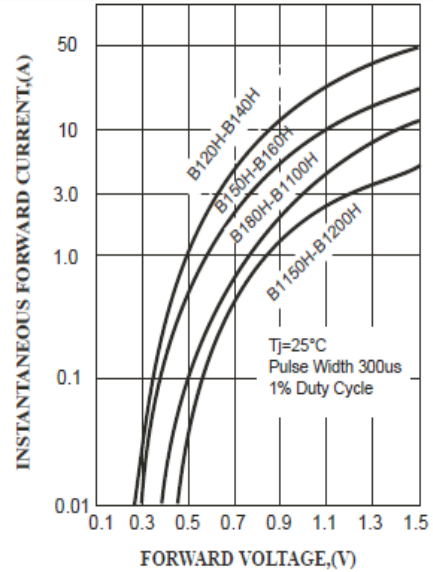


FIG.2 Typical Forward Characteristics

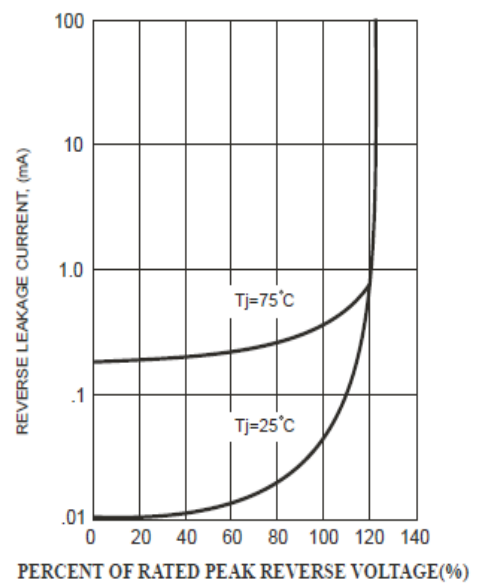
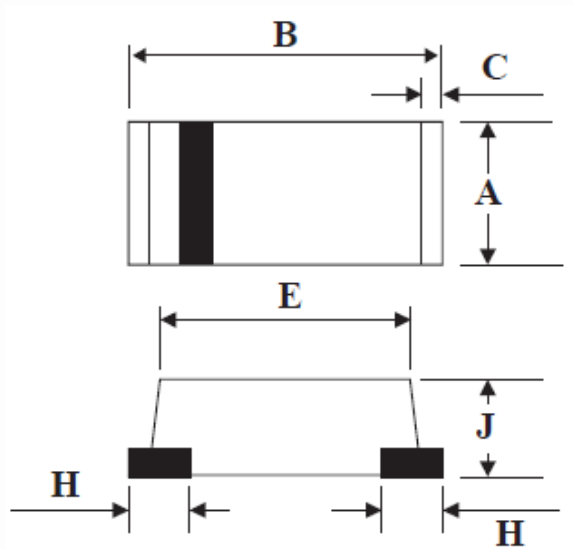


FIG.5 Typical Reverse Characteristics

Package Dimension

SOD-123H



Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	1.40	1.80	0.05	0.07
B	3.30	3.70	0.12	0.14
C	-	0.30(TYP)	-	0.01(TYP)
E	2.70	3.10	0.10	0.12
H	-	0.80(TYP)	-	0.03(TYP)
J	0.60	1.00	0.02	0.03

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