

### General Description

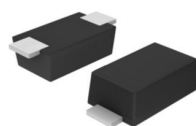
The **GS24VHS1DFBL** is designed to protect voltage sensitive components from damage or latch-up due to surge current. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to surge current protection for board level. Because of its small size and bi-directional design, it is ideal for use in cellular phones and portable applications that require audio line protection.

### Specification Features

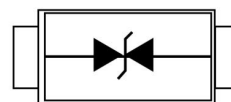
- Low incremental surge resistance
- Low Clamping Voltage:  $V_C=32V@I_{PP}=185A$
- Reverse Working (Stand-off) Voltage: 24.0 V
- Low Leakage
- Response Time is Typically < 1 ns
- IEC61000-4-2 Level 4 ESD Protection

### Application

- Mobile Internet Devices (MID) and portable devices
- Personal digital assistants (PDA's)
- Cellular handsets and accessories

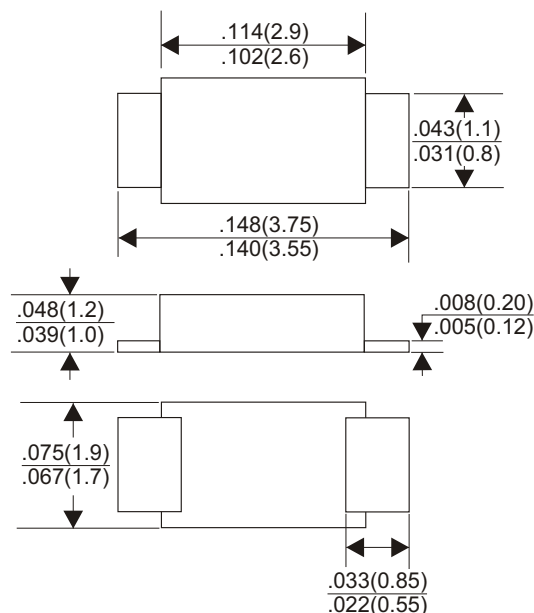


SOD-123FL(Pb-Free)



Schematic Diagram

### SOD123FL



Dimensions in inches and (millimeters)

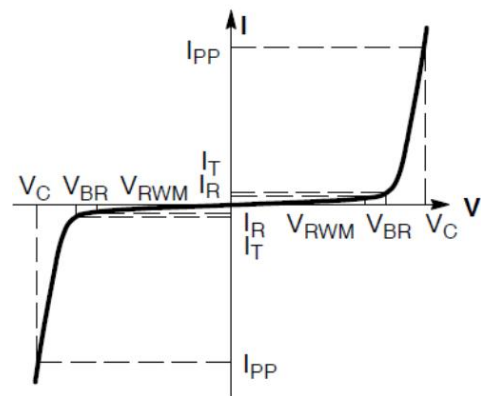
### Absolute Maximum Rating

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Contact		±30	kV
Peak Power Per 8 x 20μs Waveform	$P_{PK}$	5900	W
Junction Temperature Range	$T_J$	-55 to +125	°C
Storage Temperature Range	$T_{stg}$	-55 to +150	
Lead Solder Temperature – Maximum (10 Second Duration)	$T_L$	260	°C

# GS24VHS1DFBL

Characteristics( $T_J = 25^{\circ}\text{C}$  unless otherwise specified)

Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$I_T$	Test Current
$V_{BR}$	Breakdown Voltage @ $I_T$
$P_{PK}$	Peak Power Dissipation
$C$	Max. Capacitance @ $V_R = 0$ and freq.=1 MHz



Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	$V_{RWM}$				24.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$	25.5			V
Reverse Leakage Current	$I_R$	$V_{RWM}=24.0\text{V}$			1.0	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP}=90\text{A}$ $t_p=8/20\mu\text{s}$			28	V
		$I_{PP}=185\text{A}$ $t_p=8/20\mu\text{s}$			36	
Junction Capacitance	$C_J$	$V_R=0\text{V}$ , $f = 1\text{MHz}$		300	400	pF