

GSD1N4148WF

Switching Diode



Product Description

It is a fast switching diode for general switching applications.

Features

- 100V 150mA
- SOD-123 Package
- RoHS Compliant and Halogen Free
- Band Indicates Cathode

Package and Pin Assignment

| GSD1N4148WF (SOD-123) | Equivalent Circuit |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  <p>*Band indicates Cathode</p> |  |

Ordering and Marking Information

| Part Number | Package | Part Marking | Quantity/Reel |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------|---------------|
| GSD1N4148WF | SOD-123 | T4 or T4 | 3,000 PCS |
| <div><div>- Product Code: GSD1N4148</div><div>- Package Code: W for SOD-123</div><div>- Green Level: F for RoHS Compliant and Halogen Free</div></div> | | | |

GSD1N4148WF

Absolute Maximum Ratings (T_A=25°C Unless Otherwise specified)

| Symbol | Parameter | Value | Units |
|------------------|----------------------------------------------------------------|--------------|-------|
| V _{RM} | Non-Repetitive Peak Reverse Voltage | 100 | V |
| V _{RRM} | Repetitive Peak Reverse Voltage | 75 | V |
| I _{FM} | Forward Continuous Current | 300 | mA |
| I _O | Average Rectified Output Current | 150 | mA |
| I _{FSM} | Non-Repetitive Peak Forward Surge Current (Pulse width=1us) | 2 | A |
| P _D | Power Dissipation | 350 | mW |
| T _J | Max Junction Temperature | +150 | °C |
| R _{θJA} | Thermal Resistance from Junction to Ambient * | 357 | °C/W |
| T _{STG} | Storage Temperature Range °C | -55 to + 150 | °C |

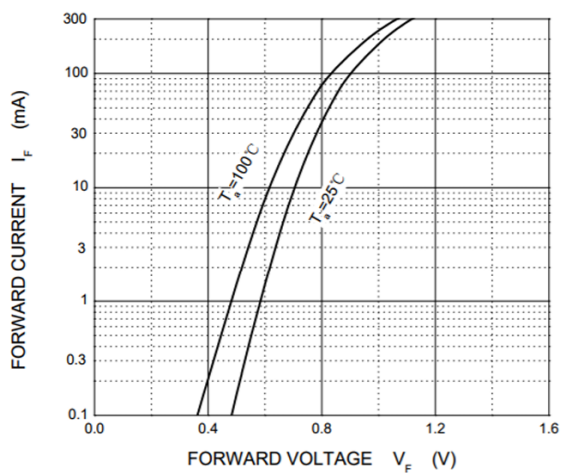
These ratings are limiting values above which the serviceability of the diode may be impaired.

*: Device mounted on 1"x1" FR4 PCB

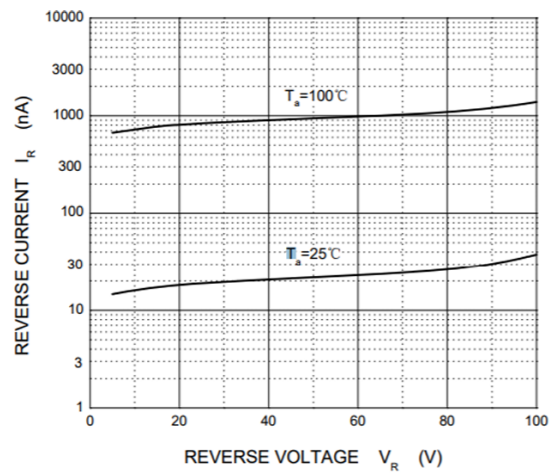
Electrical Characteristics (T_A=25°C Unless Otherwise specified)

| Symbol | Parameter | Test Condition | Min | Max | Units |
|--------------------|---------------------------|----------------------------------------------------------------------------------------------|------------------|-----------------------------|----------|
| V _{(BR)R} | Reverse Breakdown Voltage | I _R =100μA | 100 | - | V |
| I _R | Reverse Current | V _R =20V V _R =75V | - - | 25 5 | nA μA |
| V _F | Forward Voltage | I _F =1mA I _F =10mA I _F =50mA I _F =150mA | - - - - | 0.72 0.86 1.0 1.25 | V |
| C _T | Total Capacitance | V _R =0V, f = 1MHz | - | 4 | pF |
| t _{rr} | Reverse Recovery Time | I _F =10mA, V _R =6V R _L =100Ω, I _{RR} =1mA | - | 4 | ns |

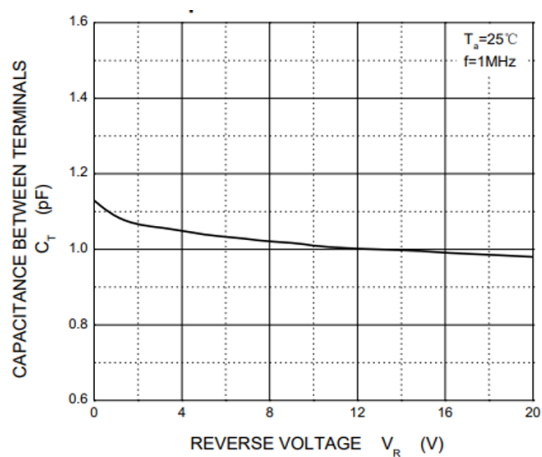
Typical Characteristics



Forward current(I_F) vs Forward voltage(V_F)



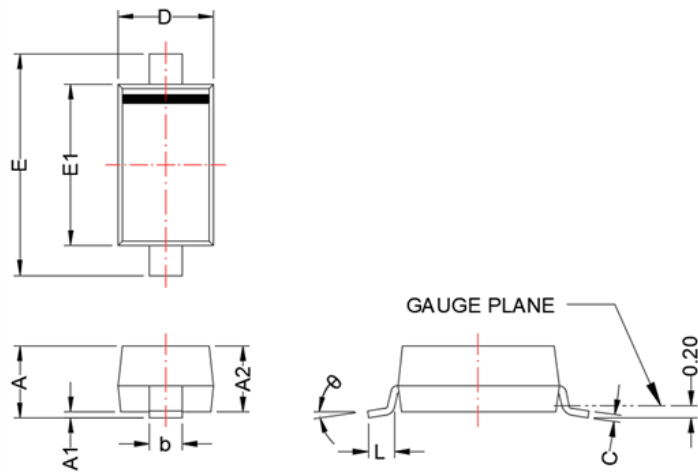
Reverse current(I_R) vs Reverse voltage(V_R)



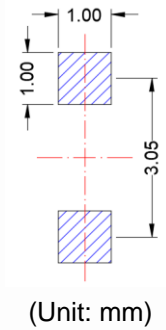
Capacitance Characteristics

SOD-123

Package Dimension



Recommended Land Pattern



| Dimensions | | | | |
|------------|-------------|------|--------|-------|
| Symbol | Millimeters | | Inches | |
| | Min | Max | Min | Max |
| A | 1.05 | 1.25 | 0.041 | 0.049 |
| A1 | 0.00 | 0.10 | 0.000 | 0.004 |
| A2 | 1.05 | 1.15 | 0.041 | 0.045 |
| b | 0.45 | 0.65 | 0.018 | 0.026 |
| c | 0.08 | 0.15 | 0.003 | 0.006 |
| D | 1.50 | 1.70 | 0.059 | 0.067 |
| E | 3.55 | 3.85 | 0.140 | 0.152 |
| E1 | 2.60 | 2.80 | 0.102 | 0.110 |
| L | 0.25 | 0.45 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |





NOTE:



Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

NOTICE

- Globaltech Semiconductor assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all Globaltech Semiconductor products described or contained herein. Globaltech Semiconductor products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Globaltech Semiconductor makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- 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 Neihsu District Taipei City 114, Taiwan (R.O.C) |
|  | 886-2-2657-9980 |
|  | 886-2-2657-3630 |
|  | sales_twn@gs-power.com |

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