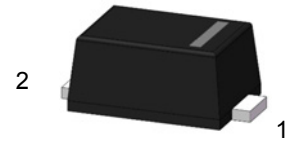


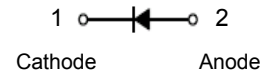
GS1N4448SWS Switching Diode

Features

- Fast switching speed
- Ultra-small surface mount package
- For general purpose switching applications



SOD-323F



Schematic Diagram

Absolute Maximum Ratings $(T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	80	V
Average Rectified Forward Current	$I_{F(AV)}$	150	mA
Forward Continuous Current	I_{FM}	300	mA
Non-Repetitive Peak Forward Surge Current (at $t=1\mu\text{s}$)	I_{FSM}	0.5	A
Power Dissipation ¹	P_D	200	mW
Max. Thermal Resistance from Junction to Ambient ¹	$R_{\theta JA}$	625	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^{\circ}\text{C}$

Note:

1. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout

Electrical Characteristics $(T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Condition	Min.	Max.	Unit
Forward Voltage	V_F	$I_F=5\text{mA}$	0.62	0.72	V
		$I_F=10\text{mA}$	-	0.855	
		$I_F=100\text{mA}$	-	1	
		$I_F=150\text{mA}$	-	1.25	
Reverse Leakage Current	I_R	$V_R=80\text{V}$	-	100	nA
		$V_R=20\text{V}$	-	25	nA
		$V_R=75\text{V}, T_J=150^{\circ}\text{C}$	-	50	μA
		$V_R=25\text{V}, T_J=150^{\circ}\text{C}$	-	30	μA
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=100\mu\text{A}$	80	-	V
Total Capacitance	C_{tot}	$V_R=0.5\text{V}, f=1\text{MHz}$	-	1.5	pF
Reverse Recovery Time	t_{rr}	$I_F=10\text{mA}, V_R=6\text{V}, I_{rr}=0.1 \times I_R, R_L=100\Omega$	-	4	nS

Electrical Characteristic Curves

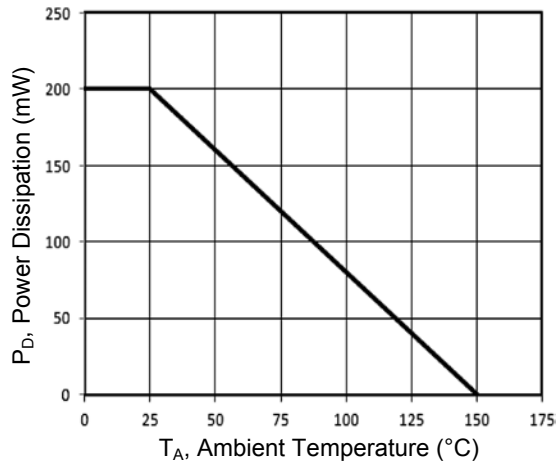


Figure 1. Power Derating Curve

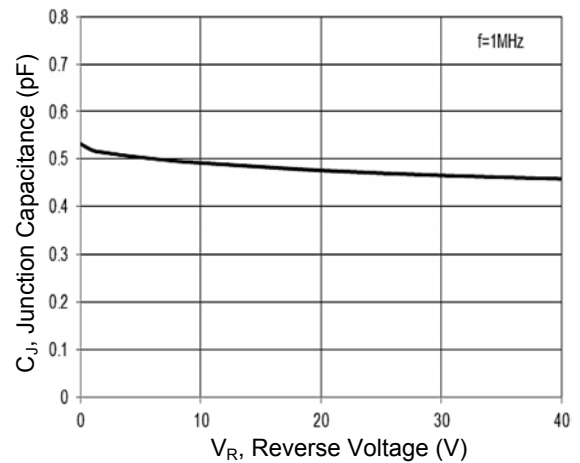


Figure 2. Capacitance Characteristics

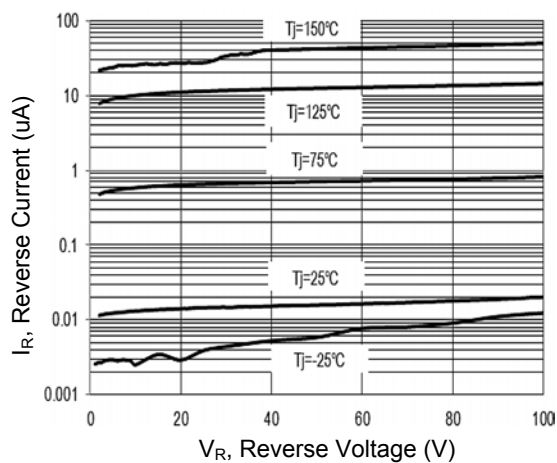


Figure 3. Reverse Characteristics

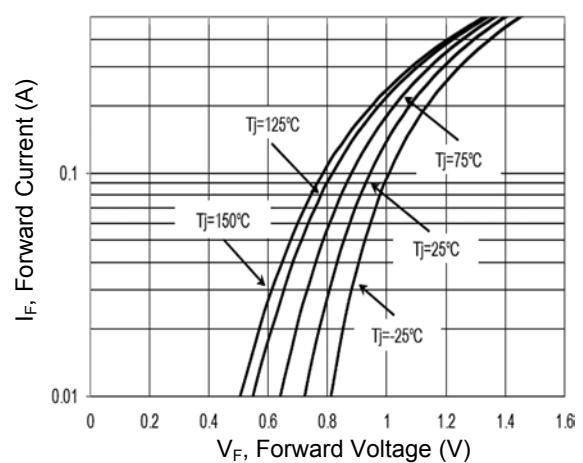
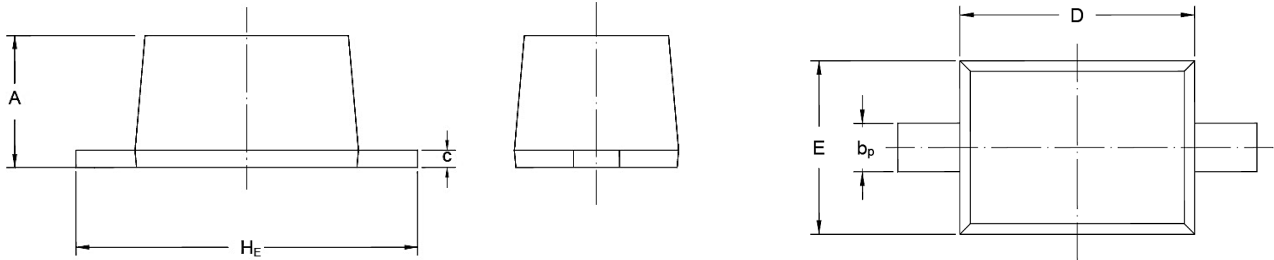


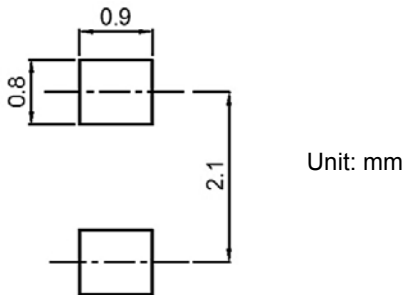
Figure 4. Forward Characteristics

Package Outline Dimensions (SOD-323F)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.800	1.100	0.031	0.043
b _p	0.250	0.400	0.010	0.016
c	0.100	0.150	0.004	0.006
D	1.600	1.800	0.063	0.071
E	1.150	1.350	0.045	0.053
H _E	2.300	2.800	0.091	0.110

Recommended Pad Layout



Order Information

Device	Package	Marking	Carrier	Quantity
GS1N4448SWS	SOD-323F	W2	Tape & Reel	3,000 Pcs / Reel