

Features

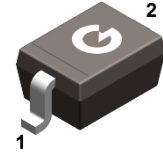
- Fast switching speed
- High conductance
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF

1 CATHODE 2 ANODE

Mechanical Data

- Case: SOD-323
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOD-323

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TG1N4148WS	SOD-323	3000 pcs / Tape & Reel	T4

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V _{RM}	100	V
Peak Repetitive Peak Reverse Voltage	V _{RRM}	75	V
Working Peak Reverse Voltage	V _{RWM}	75	V
DC Blocking Voltage	V _R	75	V
RMS Reverse Voltage	V _{R(RMS)}	53	V
Average Rectified Output Current	I _F	200	mA
Peak Forward Surge Current, 1μs Single Half-sine-wave	I _{FSM}	2	A
Peak Forward Surge Current, 1s Single Half-sine-wave	I _{FSM}	1	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	200	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	625	°C/W
Thermal Resistance Junction-to-Case *1	R _{θJC}	350	°C/W
Thermal Resistance Junction-to-Air *2	R _{θJA}	315	°C/W
Thermal Resistance Junction-to-Case *2	R _{θJC}	180	°C/W
Thermal Resistance Junction-to-Lead *2	R _{θJL}	250	°C/W
Operating Junction Temperature Range	T _J	-65 ~ +150	°C
Storage Temperature Range	T _{STG}	-65 ~ +150	°C

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 10\mu\text{A}$	75	-	-	V
Forward Voltage	V_F	$I_F = 1\text{mA}$	-	-	0.715	V
		$I_F = 10\text{mA}$	-	-	0.855	V
		$I_F = 50\text{mA}$	-	-	1.000	V
		$I_F = 150\text{mA}$	-	-	1.250	V
Maximum Peak Reverse Current	I_R	$V_R = 20\text{V}$	-	-	25	nA
		$V_R = 75\text{V}$	-	-	1	μA
Total Capacitance	C_J	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	2	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	4	ns

Notes:

- The data tested by surface mounted on a minimum recommended FR-4 board
- The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

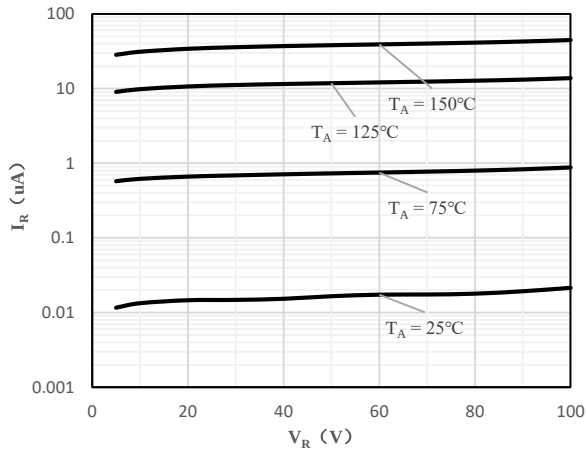


Fig 1 Typical Reverse Characteristic

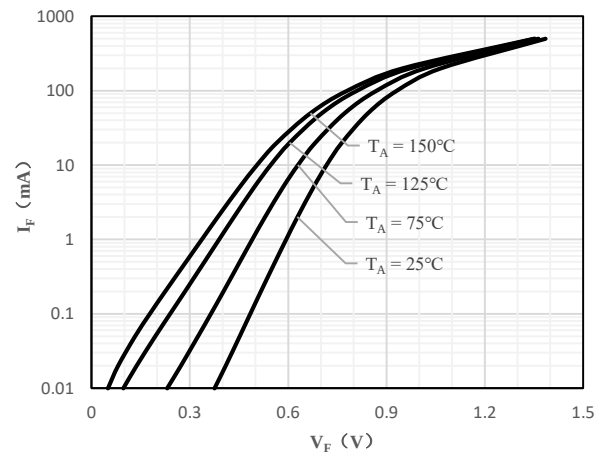


Fig 2 Typical Forward Characteristics

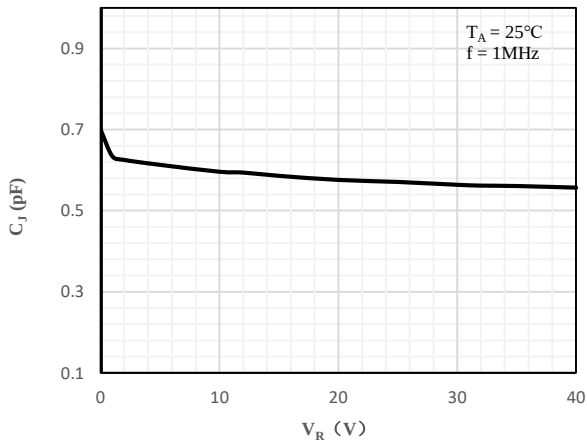


Fig 3 Capacitance vs. Reverse Voltage

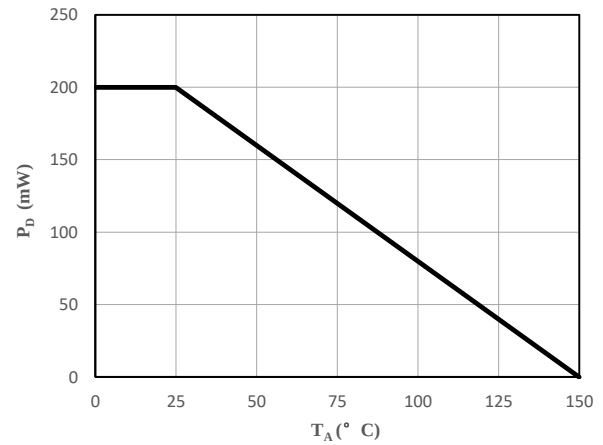
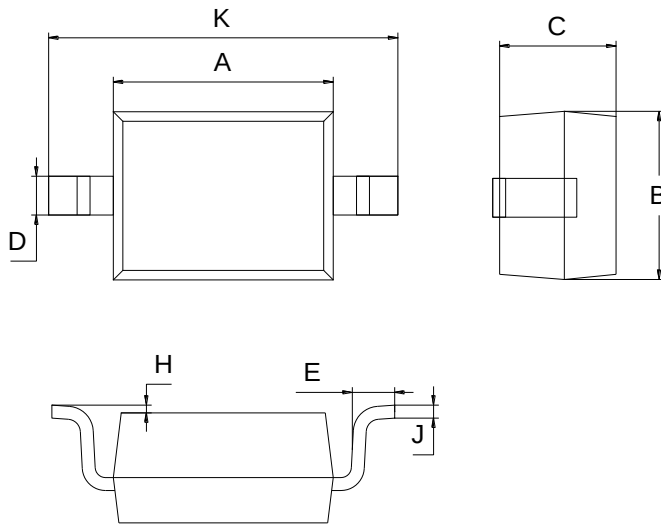


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOD-323		
Dimension	Min.	Max.
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

Mounting Pad Layout (Unit: mm)

SOD-323

