

Features

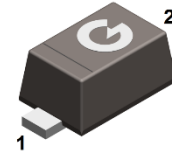
- Fast switching speed
- High conductance
- Connected in series
- RoHS compliant with Halogen-free

HF

Mechanical Data

- Case: SOD-523
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Cathode Anode
1 2



SOD-523

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
1N4448WT	SOD-523	3000 pcs / Tape & Reel	T5

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	250	mA
Non-Repetitive Peak Forward Surge Current, t _p = 1μs	I _{FSM}	4	A
Non-Repetitive Peak Forward Surge Current, t _p = 1s	I _{FSM}	2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	150	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	400	°C/W
Thermal Resistance Junction-to-Case *1	R _{θJC}	315	°C/W
Thermal Resistance Junction-to-Lead *1	R _{θJL}	330	°C/W
Operating Junction Temperature Range	T _J	-65 ~ +150	°C
Storage Temperature Range	T _{STG}	-65 ~ +150	°C

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

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	$I_F = 5\text{mA}$	-	-	0.720	V
		$I_F = 10\text{mA}$	-	-	0.855	V
		$I_F = 100\text{mA}$	-	-	1.000	V
		$I_F = 150\text{mA}$	-	-	1.250	V
Maximum Peak Reverse Current	I_R	$V_R = 20\text{V}$	-	-	25	nA
		$V_R = 25\text{V}, T_J = 125^\circ\text{C}$	-	-	30	μA
		$V_R = 75\text{V}$	-	-	2.5	μA
		$V_R = 75\text{V}, T_J = 150^\circ\text{C}$	-	-	50	μA
Total Capacitance	C_J	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	4	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

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

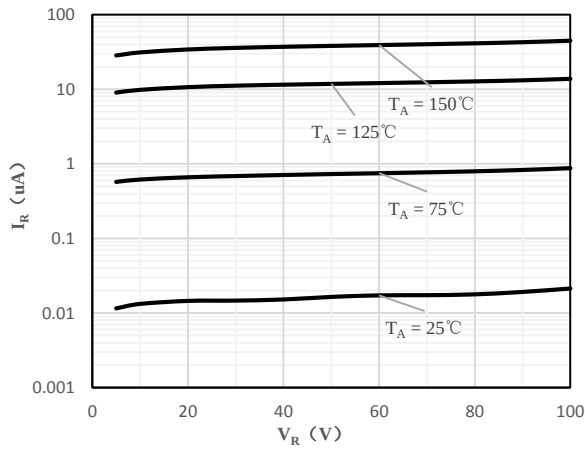


Fig 1 Typical Reverse Characteristic

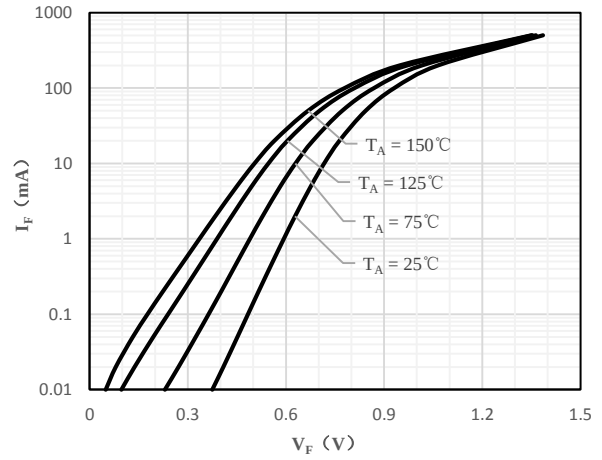


Fig 2 Typical Forward Characteristics

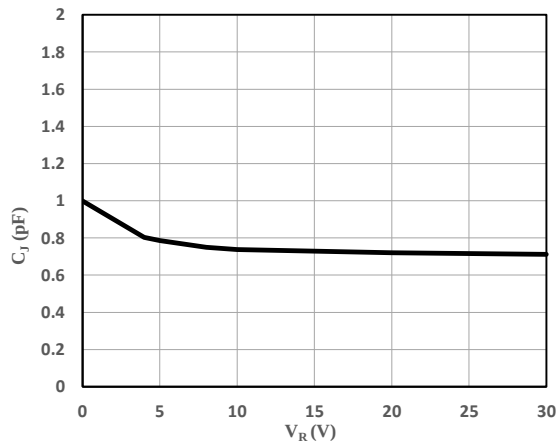


Fig 3 Capacitance vs. Reverse Voltage

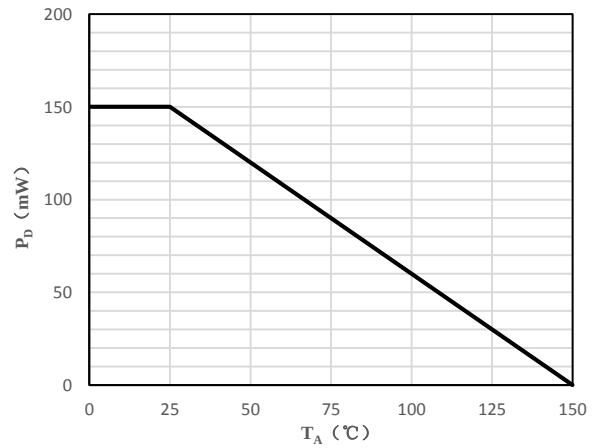
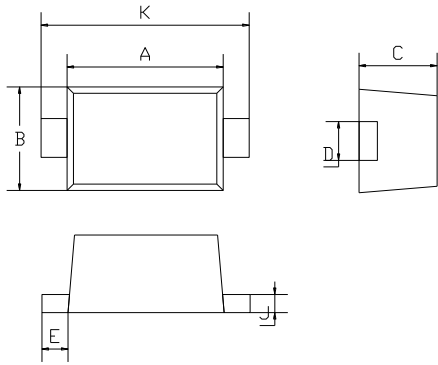


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOD-523		
Dimension	Min.	Max.
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
E	0.15	0.25
J	0.05	0.15
K	1.50	1.70

Package Outline Dimensions (Unit: mm)

SOD-523

