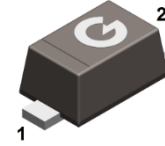


Features

- Fast switching speed
- High conductance
- Low reverse current
- RoHS compliant with Halogen-free

HF

1 CATHODE 2 ANODE



SOD-523

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

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAS716	SOD-523	3000 pcs / Tape & Reel	S1

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

Parameter	Symbol	Value	Unit
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, t _p = 8.3ms	I _{FSM}	1	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	225	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	275	°C/W
Thermal Resistance Junction-to-Case *1	R _{θJC}	190	°C/W
Thermal Resistance Junction-to-Lead *1	R _{θJL}	200	°C/W
Operating Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +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	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	75	-	-	V
Forward Voltage	V_F	$I_F = 1\text{mA}$	-	-	0.9	V
		$I_F = 10\text{mA}$	-	-	1.0	V
		$I_F = 50\text{mA}$	-	-	1.1	V
		$I_F = 150\text{mA}$	-	-	1.25	V
Maximum Peak Reverse Current	I_R	$V_R = 75\text{V}$	-	-	5	nA
		$V_R = 100\text{V}$	-	-	80	nA
Total Capacitance	C_J	$V_R = 0\text{V}$, $f = 1.0\text{MHz}$	-	-	2	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R$, $R_L = 100\Omega$	-	-	3	μs

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

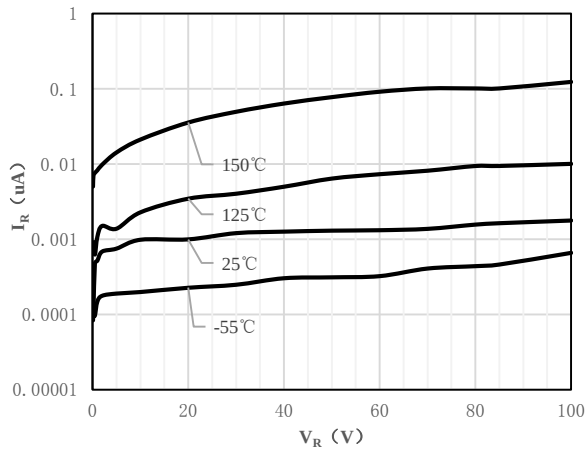


Fig 1 Typical Reverse Characteristic

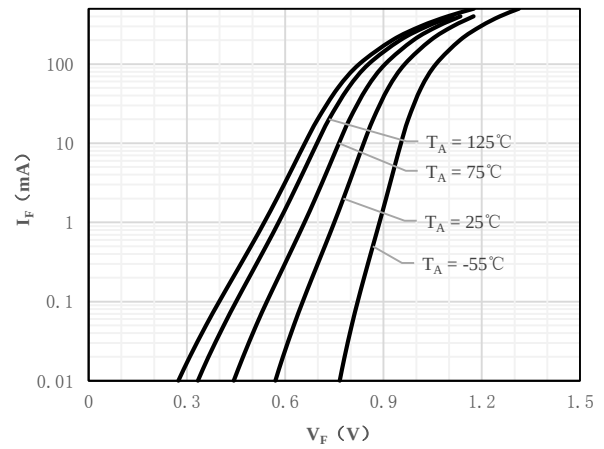


Fig 2 Typical Forward Characteristics

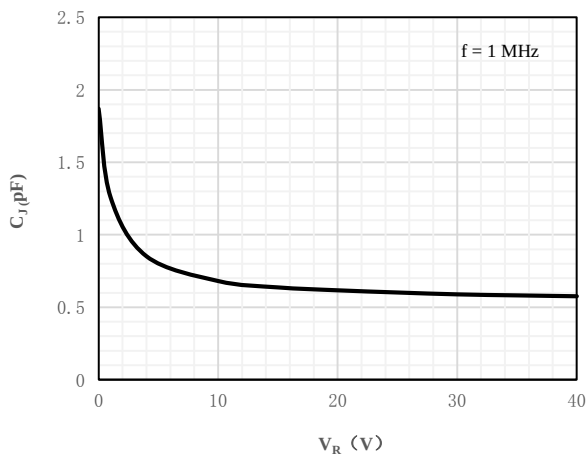


Fig 3 Capacitance vs. Reverse Voltage

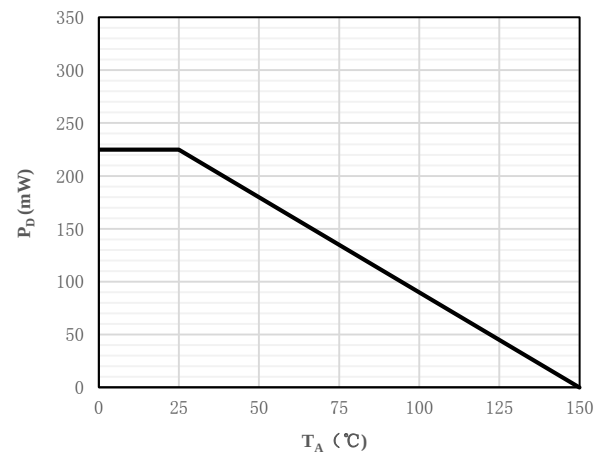
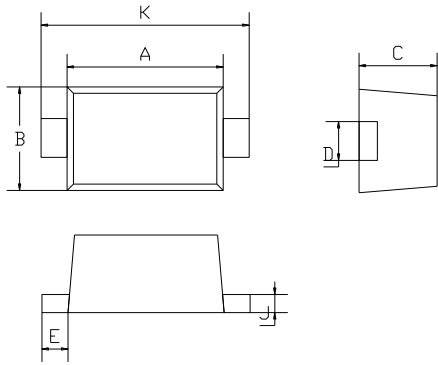


Fig 4 Power Derating Curve

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

