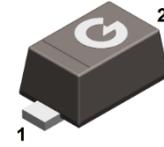
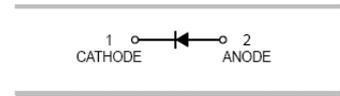


### Features

- Fast speed switching
- High conductance
- RoHS compliant with Halogen-free

HF



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
BAS16X	SOD-523	3000 pcs / Tape & Reel	A6

### Maximum Ratings (@ T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	85	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	85	V
DC Blocking Voltage	V <sub>R</sub>	85	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	60	V
Forward Current	I <sub>F</sub>	155	mA
Repetitive Peak Forward Current	I <sub>FRM</sub>	500	mA
Peak Forward Surge Current, 1μs Single Half-sine-wave	I <sub>FSM</sub>	4	A
Peak Forward Surge Current, 1ms Single Half-sine-wave	I <sub>FSM</sub>	1	A
Peak Forward Surge Current, 1s Single Half-sine-wave	I <sub>FSM</sub>	0.5	A

### Thermal Characteristics

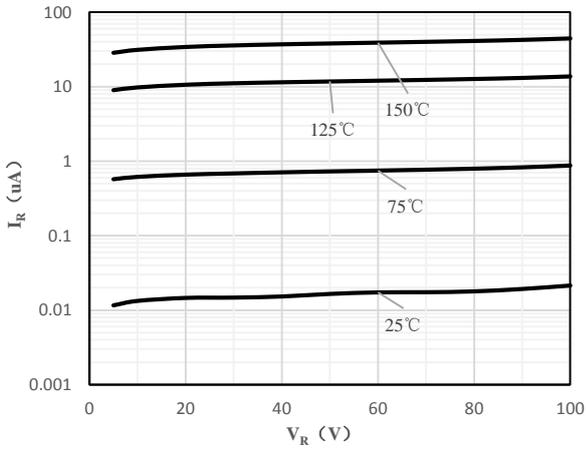
Parameter	Symbol	Value	Unit
Power Dissipation (T <sub>A</sub> = 25°C)	P <sub>D</sub>	150	mW
Thermal Resistance Junction-to-Air *1	R <sub>θJA</sub>	280	°C/W
Thermal Resistance Junction-to-Case *1	R <sub>θJC</sub>	190	°C/W
Thermal Resistance Junction-to-Lead *1	R <sub>θJL</sub>	200	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-65 ~ +150	°C
Storage Temperature Range	T <sub>STG</sub>	-65 ~ +150	°C

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

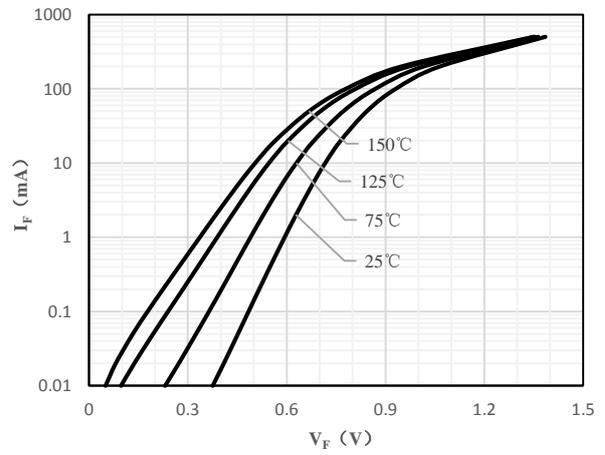
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	85	-	-	V
Forward Voltage	$V_F$	$I_F = 1\text{mA}$	-	-	0.715	V
		$I_F = 10\text{mA}$	-	-	0.855	V
		$I_F = 50\text{mA}$	-	-	1.000	V
		$I_F = 150\text{mA}$	-	-	1.250	V
Maximum Peak Reverse Current	$I_R$	$V_R = 25\text{V}$	-	-	30	nA
		$V_R = 75\text{V}$	-	-	2	$\mu\text{A}$
Total Capacitance	$C_J$	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	1.5	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

Note 1: The data tested by surface mounted on a 1 inch<sup>2</sup> FR-4 board with 2OZ copper

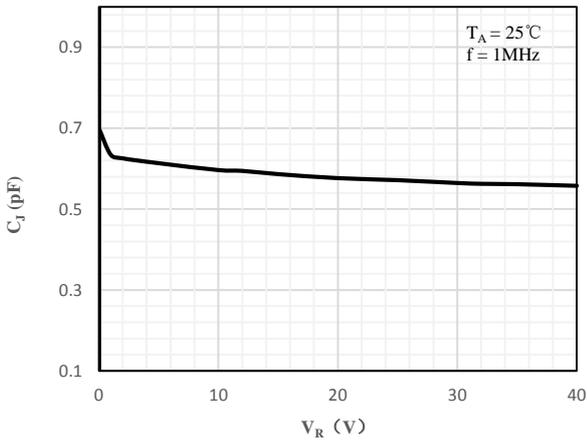
**Ratings and Characteristics Curves** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)



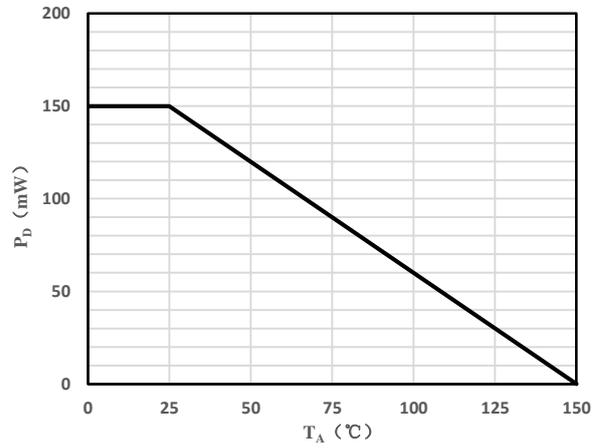
**Fig 1 Typical Reverse Characteristic**



**Fig 2 Typical Forward Characteristics**

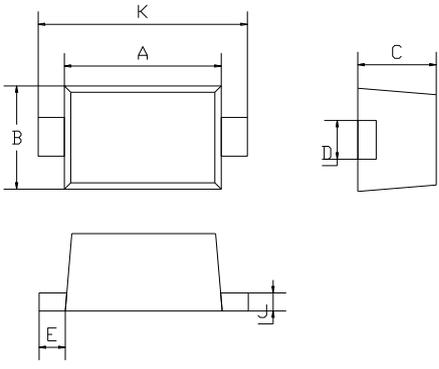


**Fig 3 Capacitance vs. Reverse Voltage**



**Fig 4 Power Derating Curve**

**Package Outline Dimensions** (Unit: mm)



SOD-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**

