

**High voltage switching diode**

# BAS21SG

**Description**

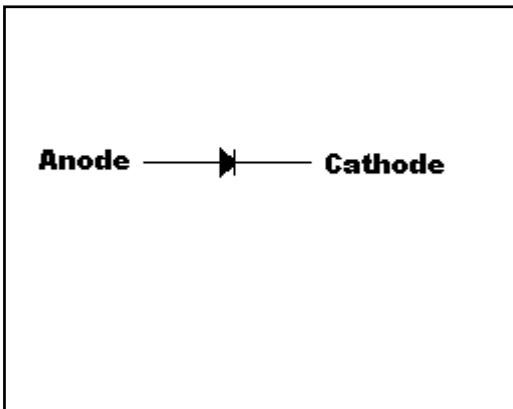
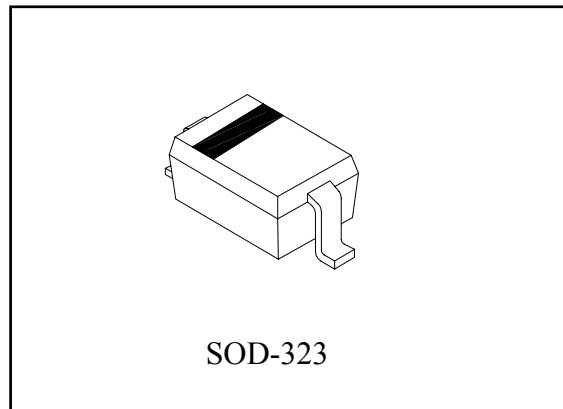
High voltage switching diode encapsulated in a SOD-323 small plastic SMD package.

**Features**

- Fast switching speed
- Low forward voltage drop
- Small plastic SMD package

**Mechanical Data**

- Case: Molded Plastic, JEDEC SOD-323.
- Terminals: Solder plated, solderable per MIL-STD-750 Method 2026
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight: 0.0045 gram, 0.000159 ounce

**Symbol****Outline**



**Absolute Maximum Ratings**(Ta=25°C , unless otherwise specified)

- Maximum Temperatures  
Storage Temperature Tstg ..... -55~+150 °C  
Junction Temperature Tj ..... +150 °C
- Maximum Power Dissipation  
Total Power Dissipation Ptot (Note)..... 200 mW  
Derate above 25°C ..... 1.57mW/°C
- Maximum Voltages and Currents  
Continuous Reverse Voltage VR..... 250V  
Continuous Forward Current IF (Note)..... 200 mA  
Peak Repetitive Forward Current IFRM (Note).....625 mA
- Thermal Resistance, Junction to Ambient Air RθJA.....635°C/W

Note : Parts mounted on FR-5 board with minimum pad.

**Characteristics** (Ta=25°C)

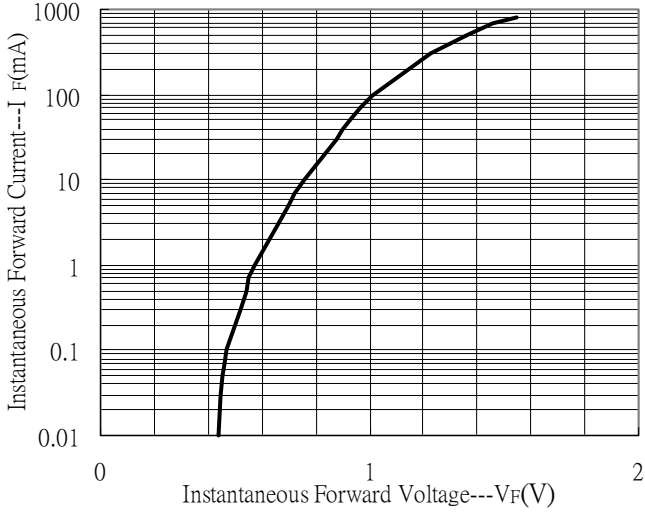
Characteristic	Symbol	Condition	Min.	Max.	Unit
Reverse Breakdown Voltage	VBR	IR=100μA	250	-	V
Forward Voltage (Note)	VF(1)	IF=100mA	-	1	V
	VF(2)	IF=200mA	-	1.25	V
Reverse Leakage Current (Note)	IR(1)	VR=200V,Tj=25°C	-	100	nA
	IR(2)	VR=200V,Tj=150°C		100	μA
Diode Capacitance	CD	VR=0V, f=1MHz	-	5	pF
Reverse Recovery Time	trr	IF=IR=30mA RL=100Ω measured at IR=3mA	-	50	ns

Notes: Pulse test, tp=380μs, duty cycle<2%.

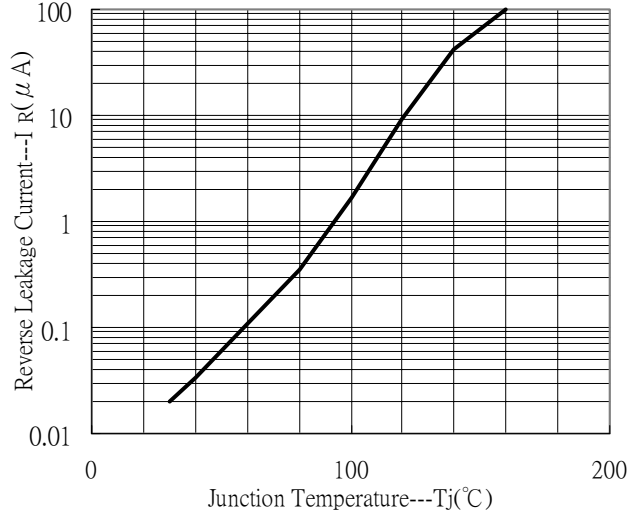


### Characteristic Curves

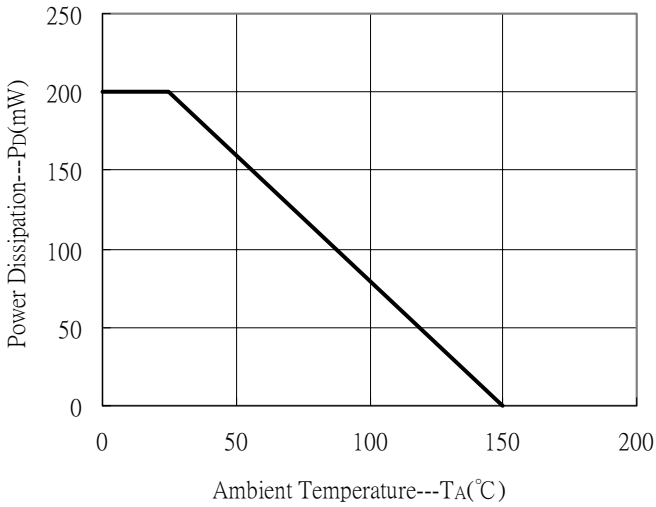
Forward Characteristics



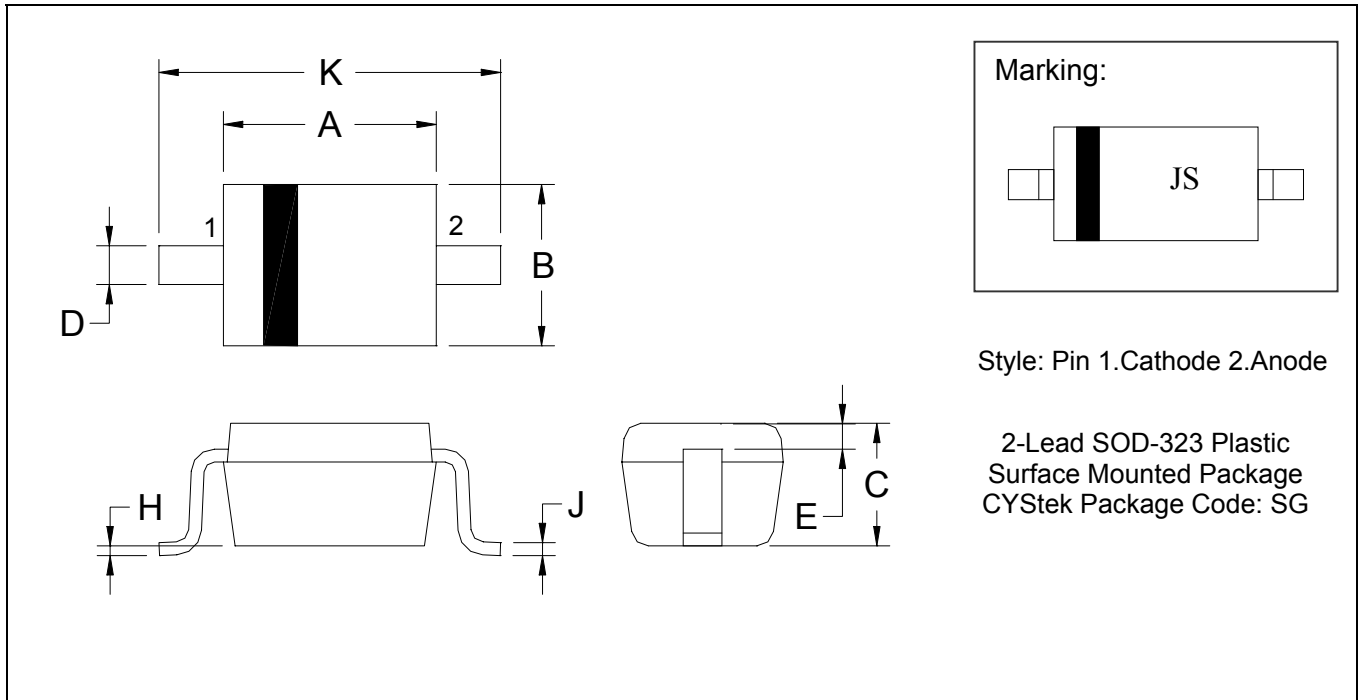
Reverse Leakage Current vs Junction Temperature



Power Derating Curve



**SOD-323 Dimension**



\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.0630	0.0709	1.60	1.80	E	0.0060	-	0.15	-
B	0.0453	0.0531	1.15	1.35	H	0.0000	0.0040	0.00	0.10
C	0.0315	0.0394	0.80	1.00	J	0.0035	0.0070	0.089	0.177
D	0.0098	0.0157	0.25	0.40	K	0.0906	0.1063	2.30	2.70

- Notes: 1.Controlling dimension : millimeters.  
 2.Lead thickness specified per L/F drawing with solder plating.  
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

**Material:**

- Lead: 42 Alloy ; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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