

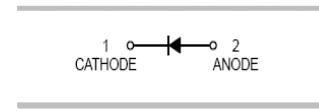
### Features

- Low Forward Voltage Drop.



### Typical Applications

- Low Voltage Rectification.
- High Efficiency DC/DC Conversion.
- Switch Mode Power Supply.
- Inverse Polarity Protection.
- Low Power Consumption Applications.



**B2020W**  
**SOD-123**

### Mechanical Data

- Case: SOD-123.
- Molding Compound, UL Flammability Classification Rating 94V-0.
- Terminals: Tin Plated Leads, Solderable Per MIL-STD-202, Method 208.

### Ordering Information

Part Number	Package	Shipping	Marking Code
B2020W□	SOD-123	3000/Tape Reel	SH

- : none is for Lead Free package;  
“G” is for Halogen Free package.

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

Parameter	Symbol	Values	Units
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	20	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	20	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	V
Maximum Average Forward Output Current	I <sub>F(AV)</sub>	2	A
Peak Forward Surge Current, 8.3ms Single Half-sine-wave	I <sub>FSM</sub>	10	A

### Thermal Characteristics

Parameter	Symbol	Values	Units
Power Dissipation <sup>(Note1)</sup>	P <sub>D</sub>	300	mW
Power Dissipation <sup>(Note2)</sup>		670	
Thermal Resistance from Junction to Ambient <sup>(Note1)</sup>	R <sub>θJA</sub>	333	°C/W
Thermal Resistance from Junction to Ambient <sup>(Note2)</sup>		149	
Operating Junction Temperature Range	T <sub>J</sub>	125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

Notes: 1: Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.

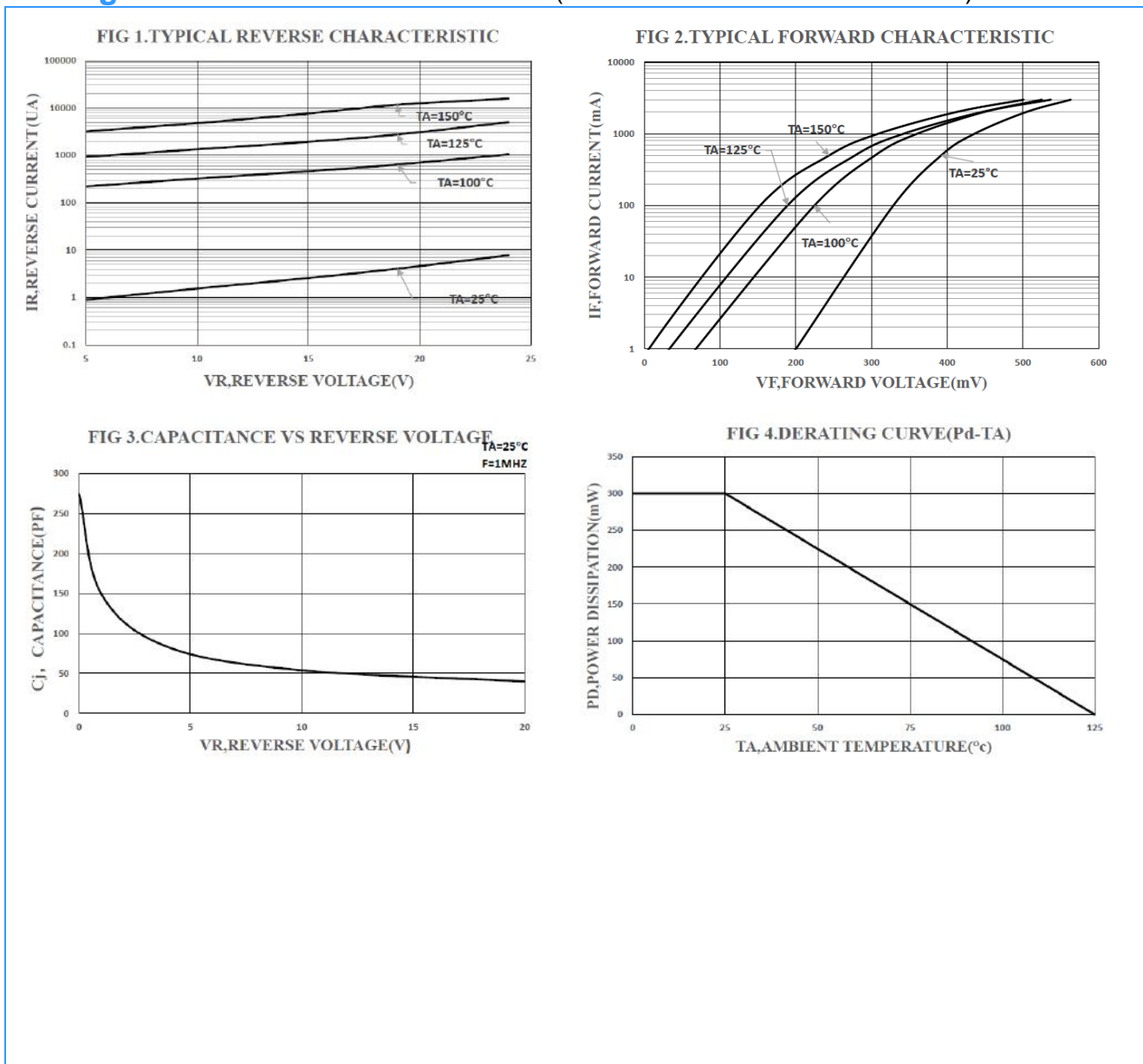
2: Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for cathode 1cm2.

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

Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Units
Reverse breakdown voltage	$V_{(BR)}$	$I_R=1\text{mA}$	20	-	-	V
Forward Voltage	$V_F^*$	$I_F=1\text{A}$	-	-	0.45	V
		$I_F=2\text{A}$	-	-	0.55	
Maximum Peak Reverse Current	$I_R$	$V_R=10\text{V}$ $V_R=20\text{V}$	-	-	80 100	$\mu\text{A}$

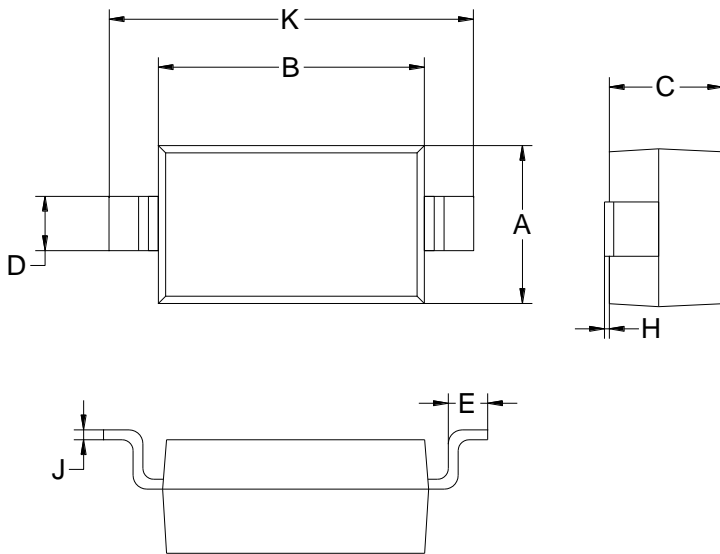
\*Pulse test:  $t_p \leq 300 \mu\text{s}$ ;  $\delta \leq 0.02$ .

Ratings and Characteristic Curves ( $T_A=25^\circ\text{C}$  unless otherwise noted)



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

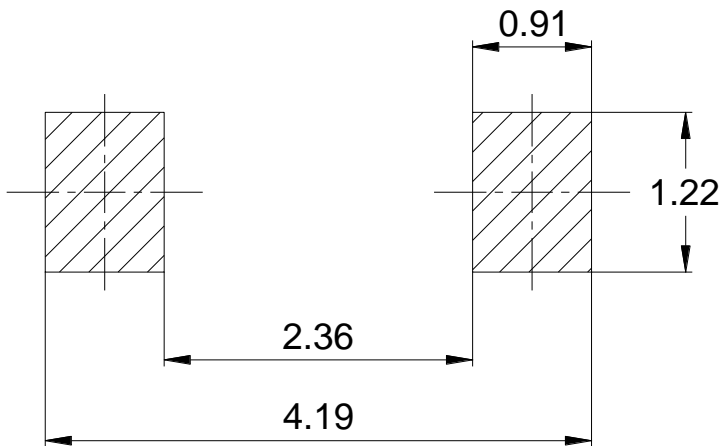
**SOD-123**



SOD-123		
Dim	Min	Max
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

**Mounting Pad Layout**(unit:mm)

**SOD-123**



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