

### Features

- Low reverse current and low forward voltage
- High reliability
- Small surface mounting type

HF

### Typical Applications

- For general purpose applications

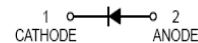
### Mechanical Data

- Case: SOD-123,SOD-323
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Tin plated leads, solderable per MIL-STD-202, Method 208



SOD-123

SOD323



### Ordering Information

Part Number	Package	Shipping	Marking Code
B5818W	SOD-123	3000pcs / Tape & Reel	SK
B5818WS	SOD-323	3000pcs / Tape & Reel	SK
B5819W	SOD-123	3000pcs / Tape & Reel	SL
B5819WS	SOD-323	3000pcs / Tape & Reel	SL

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

Parameter	Symbol	B5818W(S)	B5819W(S)	Units
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	30	40	V
RMS Reverse Voltage	V <sub>RMS</sub>	21	28	V
Maximum Average Forward Output Current	I <sub>F(AV)</sub>	1		A
Peak Forward Surge Current,8.3ms Single Half-sine-wave	I <sub>FSM</sub>	10		A

### Thermal Characteristics

Parameter	Symbol	B5818W/B5819W	B5818WS/B5819WS	Units
Power Dissipation	P <sub>D</sub>	500	250	mW
Typical Thermal Resistance per leg	R <sub>θJA</sub> *	200	400	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	125		°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150		°C

\* Part mounted on FR-4 board with recommended pad layout

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

Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Units
Forward Voltage	$V_F^*$	$I_F=1\text{A}$ B5818W(S)	-	-	0.55	V
		$I_F=1\text{A}$ B5819W(S)			0.60	
		$I_F=3\text{A}$ B5818W(S)			0.875	
		$I_F=3\text{A}$ B5819W(S)	-	-	0.90	
Maximum Peak Reverse Current	$I_R^{**}$	$V_R=30\text{V}$ B5818W(S) $V_R=40\text{V}$ B5819W(S)	-	-	1	mA
Capacitance Between Terminals	$C_T$	$V_R=4\text{V}, f=1\text{MHz}$	-	39	120	pF

\*Pulse width  $\leq 380\ \mu\text{s}$ , Duty cycle  $< 2\%$

\*\*pulse test,  $t_p \leq 5\text{ms}$

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

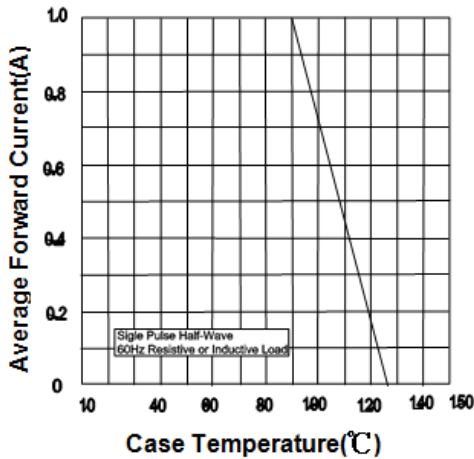


Fig.1 Forward Current Derating Curve

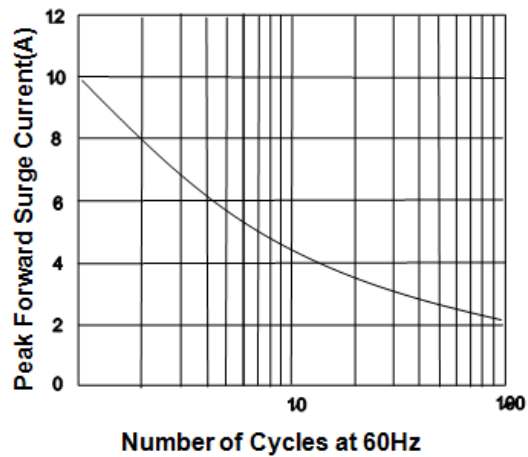


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

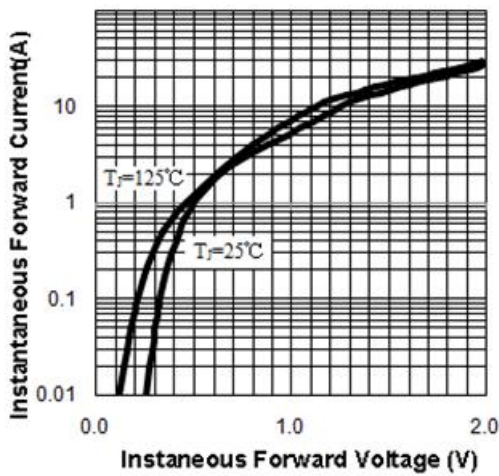


Fig.3 Typical Instantaneous Forward Characteristics

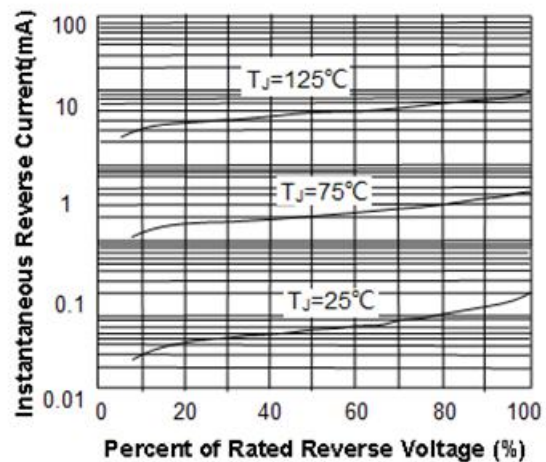
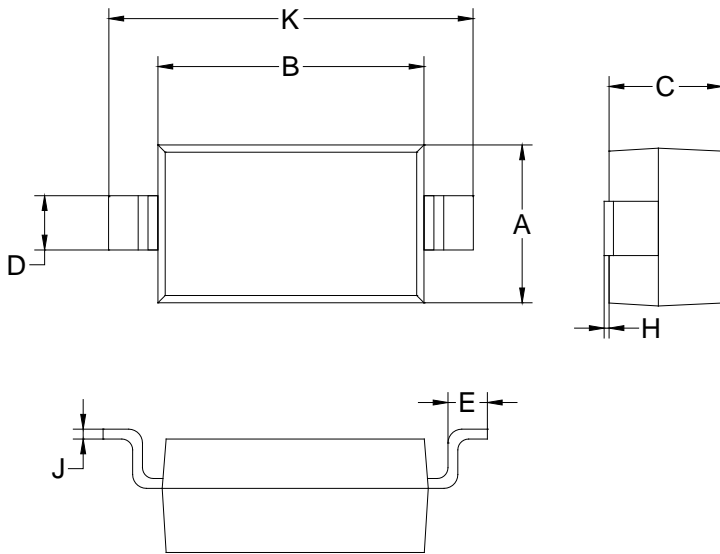


Fig.4 Typical Reverse Characteristics

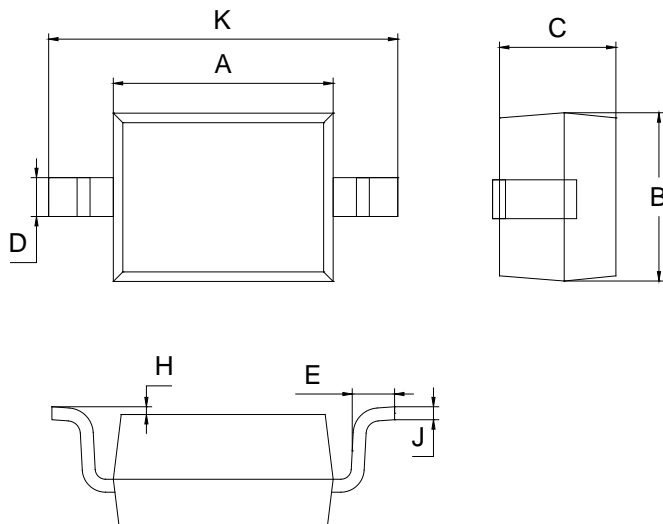
Package Outline Dimensions (unit: mm)

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

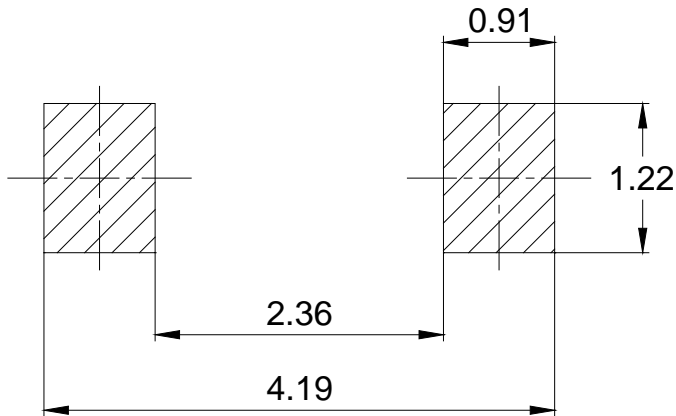
SOD-323



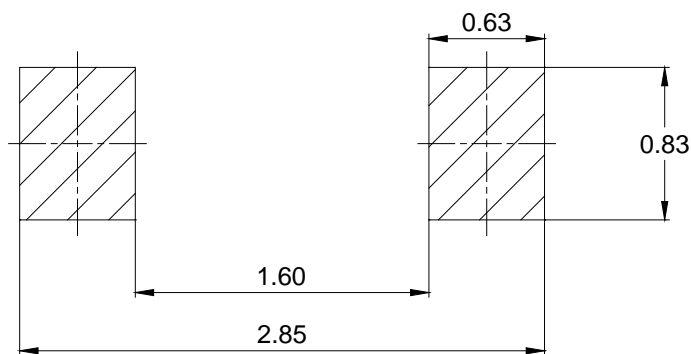
SOD-323		
Dim	Min	Max
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

Mounting Pad Layout (unit: mm)

SOD-123



SOD-323



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