

### Features

- Low forward voltage drop
- Guard ring construction for transient Protection
- High conductance

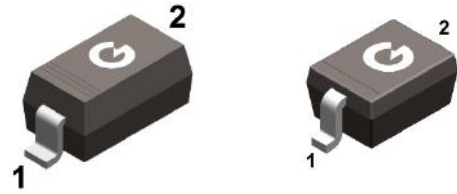
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### Typical Applications

- Surface mount schottky barrier rectifier

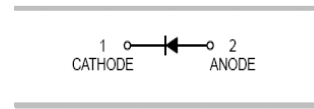
### Mechanical Data

- 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
B0540WH	SOD-123	3000 pcs / Tape & Reel	SFH
B0540WSH	SOD-323	3000 pcs / Tape & Reel	SFH

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

Parameter	Symbol	B0540W(S)H	Units
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	40	V
RMS Reverse Voltage	V <sub>RMS</sub>	28	V
Average Rectified Output Current	I <sub>O</sub>	0.5	A
Peak Forward Surge Current, 8.3ms Single Half-sine-wave	I <sub>FSM</sub>	10	A

### Thermal Characteristics

Parameter	Symbol	B0540WH	B0540WSH	Units
Power Dissipation	P <sub>D</sub>	500	250	mW
Thermal Resistance (Junction-to-Ambient) *	R <sub>θJA</sub> *	250	500	°C /W
Thermal Resistance (Junction-to-Lead) *	R <sub>θJL</sub> *	162	323	°C /W
Thermal Resistance (Junction-to-Case) *	R <sub>θJC</sub> *	138	276	°C /W
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150		°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150		°C

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

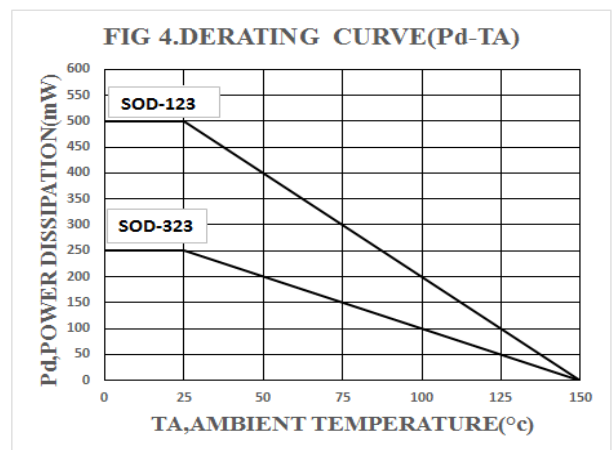
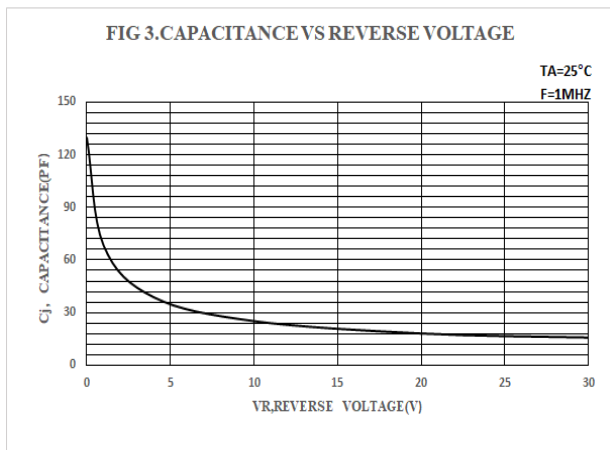
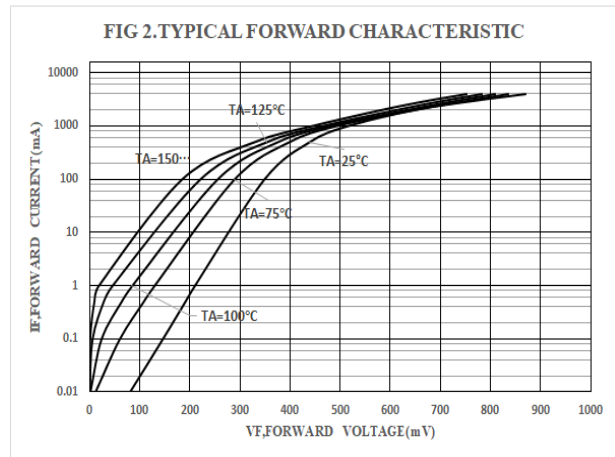
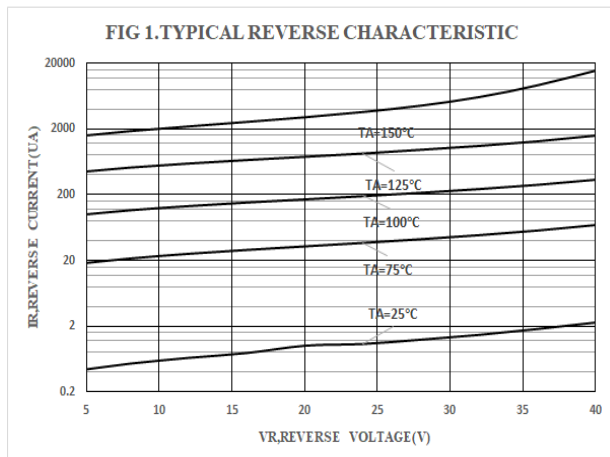
### Electrical Characteristics (@ $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Units
Forward Voltage	$V_F^*$	$I_F=0.5\text{A}$ $I_F=1\text{A}$	-	-	0.51 0.62	V
Maximum Peak Reverse Current	$I_R^{**}$	$V_R=20\text{V}$ $V_R=40\text{V}$	-	-	10 20	$\mu\text{A}$
Capacitance Between Terminals	$C_T$	$V_R=0\text{V}, f=1\text{MHz}$	-	-	170	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

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

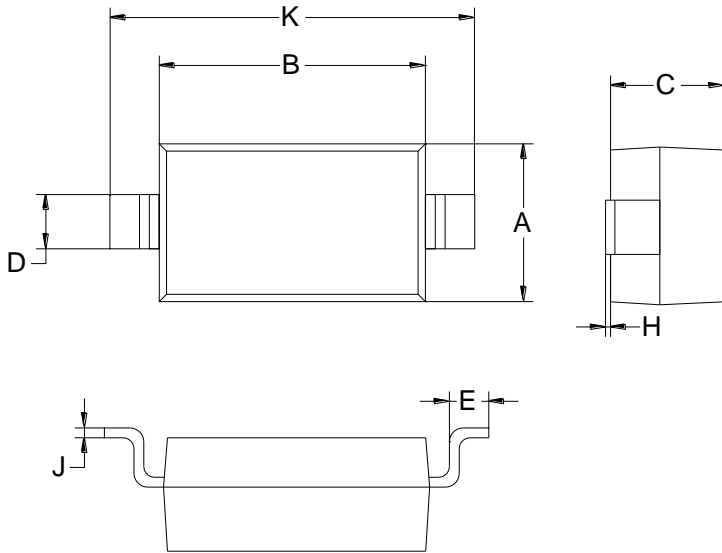
\*\*pulse test ,  $t_p \leq 5\text{ms}$

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



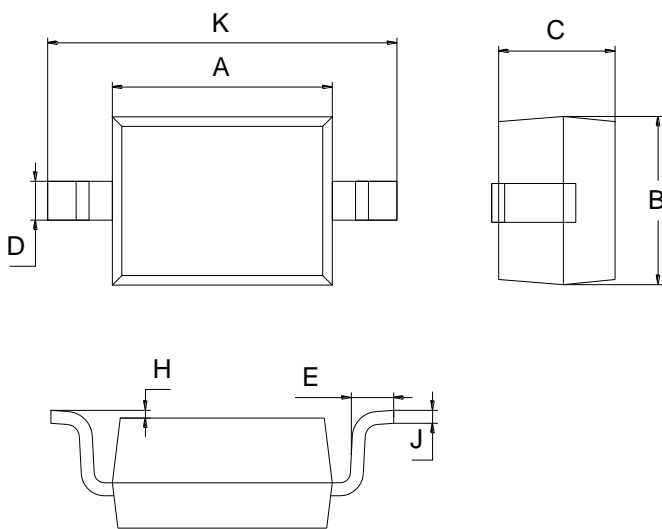
**Package Outline Dimensions** (unit: mm)

**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

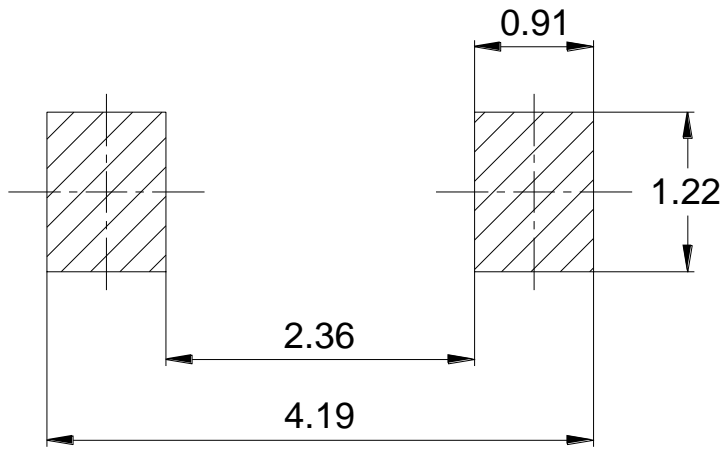
**SOD-323**



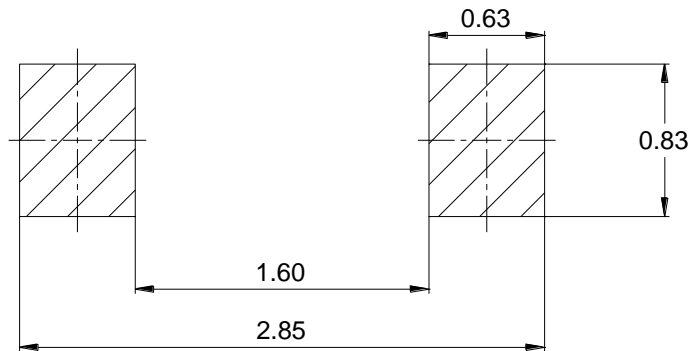
SOD-323		
Dim	Min	Max
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

Mounting Pad Layout (unit: mm)

SOD-123



SOD-323



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