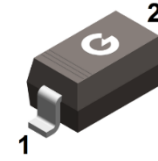


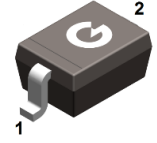
Features

- High reliability
- Small surface mounting type
- Low reverse current and low forward voltage
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF



SOD-123



SOD-323

Application

- Surface mount schottky barrier rectifier

Mechanical Data

- Case: SOD-123, SOD-323
- 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
TB5818WH	SOD-123	3000 pcs / Tape & Reel	SKH
TB5818WSH	SOD-323	3000 pcs / Tape & Reel	SKH
TB5819WH	SOD-123	3000 pcs / Tape & Reel	SLH
TB5819WSH	SOD-323	3000 pcs / Tape & Reel	SLH

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	TB5818W(S)H	TB5819W(S)H	Unit
Peak Repetitive Peak Reverse Voltage	V _{RRM}	30	40	V
Working Peak Reverse Voltage	V _{RWM}	30	40	V
DC Blocking Voltage	V _R	30	40	V
RMS Reverse Voltage	V _{RMS}	21	28	V
Average Rectified Output Current	I _F	1.0		A
Peak Forward Surge Current, 8.3ms Single Half-sine-wave	I _{FSM}	10		A

Thermal Characteristics

Parameter	Symbol	TB5818W(S)H	TB5819W(S)H	Unit
Power Dissipation	P_D	500	250	mW
Thermal Resistance (Junction-to-Ambient) *1	$R_{\theta JA}$	250	500	°C/W
Thermal Resistance (Junction-to-Case) *1	$R_{\theta JC}$	138	276	°C/W
Thermal Resistance (Junction-to-Lead) *1	$R_{\theta JL}$	162	323	°C/W
Operating junction Temperature	T_J	-55~ +150		°C
Storage Temperature Range	T_{STG}	-55~ +150		°C

Note 1: Part mounted on FR-4 board with recommended pad layout

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 1\text{mA}$ TB5818W(S)H	30	-	-	V
		$I_R = 1\text{mA}$ TB5819W(S)H	40	-	-	V
Forward Voltage	V_F	$I_F = 1\text{A}$ TB5818W(S)H	-	-	0.55	V
		$I_F = 1\text{A}$ TB5819W(S)H	-	-	0.60	V
		$I_F = 3\text{A}$ TB5818W(S)H	-	-	0.875	V
		$I_F = 3\text{A}$ TB5819W(S)H	-	-	0.90	V
Maximum Peak Reverse Current	I_R	$V_R = 30\text{V}$ TB5818W(S)H	-	-	10	μA
		$V_R = 40\text{V}$ TB5819W(S)H	-	-	20	μA
Typical Junction Capacitance	C_J	$V_R = 4\text{V}$, $f = 1\text{MHz}$	-	39	120	pF

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

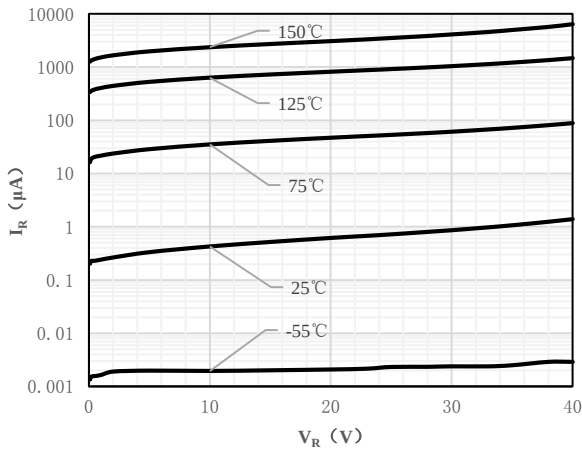


Fig 1 Typical Reverse Characteristic

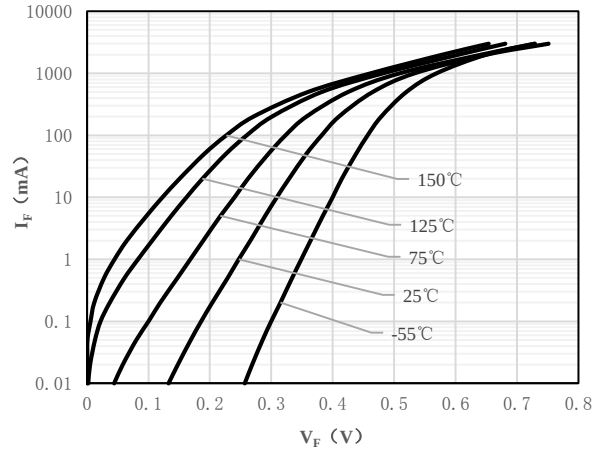


Fig 2 Typical Forward Characteristics

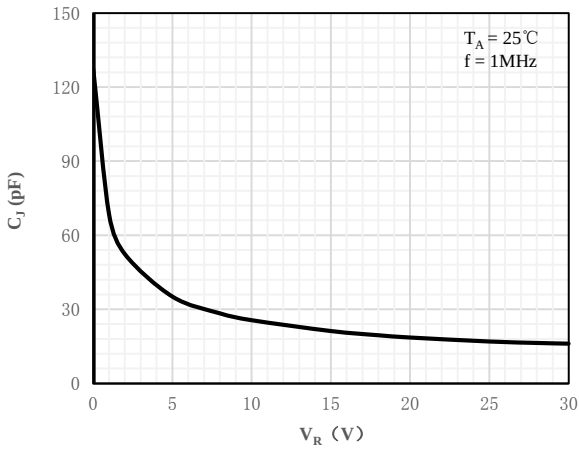


Fig 3 Capacitance vs. Reverse Voltage

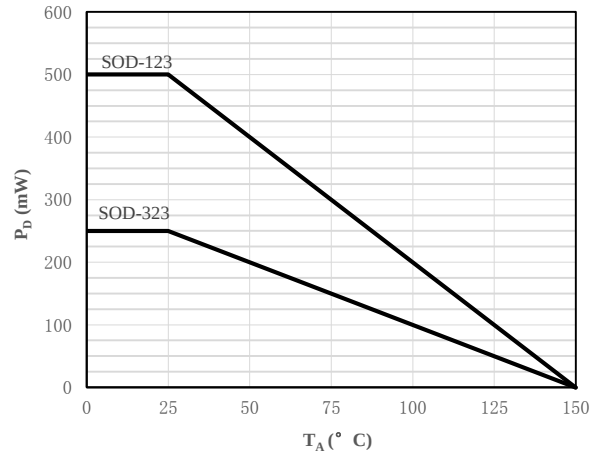
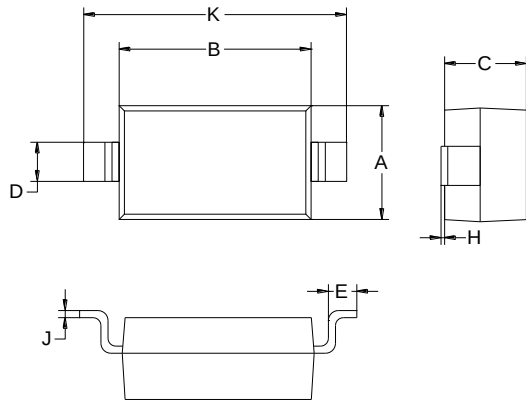
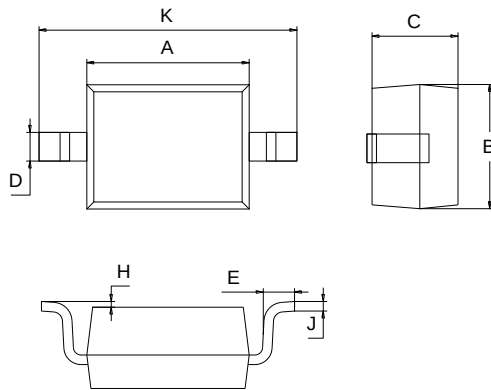


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



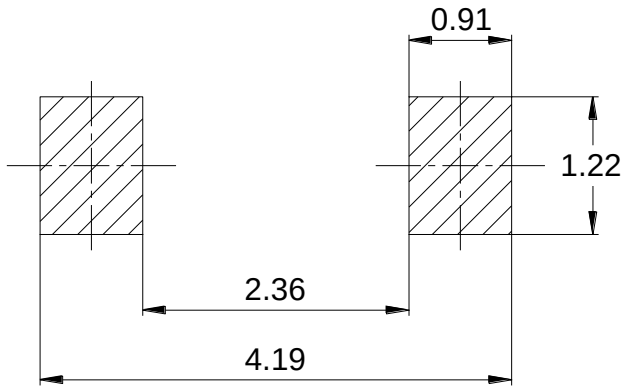
SOD-123		
Dimension	Min.	Max.
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85



SOD-323		
Dimension	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

