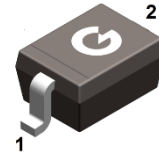


Features

- Extremely low V_F
- Low power loss/high efficient
- Low stored charge, majority carrier conduction
- MSL 1
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF



SOD-323

Mechanical Data

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

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TB5817WSH	SOD-323	3000 pcs / Tape & Reel	SJH

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

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	24	V
Peak Repetitive Reverse Voltage	V_{RRM}	20	V
Working Peak Reverse Voltage	V_{RWM}	20	V
DC Reverse Voltage	V_R	20	V
RMS Reverse Voltage	V_{RMS}	14	V
Maximum Average Forward Output Current	$I_{F(AV)}$	1	A
Peak Forward Surge Current (8.3ms single half sine-wave)	I_{FSM}	10	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation ($T_A = 25^\circ\text{C}$)	P_D	235	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	426	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	230	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	297	$^\circ\text{C/W}$
Operating Junction Temperature	T_J	-65 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^\circ\text{C}$

Note 1: The data tested by surface mounted on a 22mm * 17mm * 1mm FR4-epoxy P.C.B

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 1\text{mA}$	20	-	-	V
Forward Voltage	V_F	$I_F = 1\text{A}$	-	-	0.50	V
		$I_F = 3\text{A}$	-	-	0.75	V
Maximum Peak Reverse Current	I_R	$V_R = 20\text{V}$	-	-	1	mA
Diode capacitance	C_J	$V_R = 4\text{V}, f = 1\text{MHz}$	-	-	120	pF

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

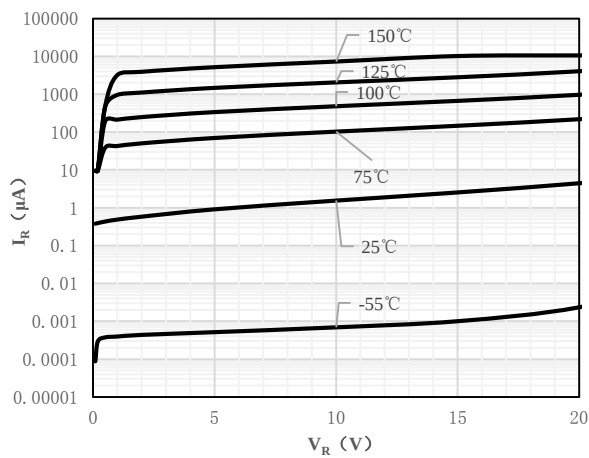


Fig 1 Typical Reverse Characteristic

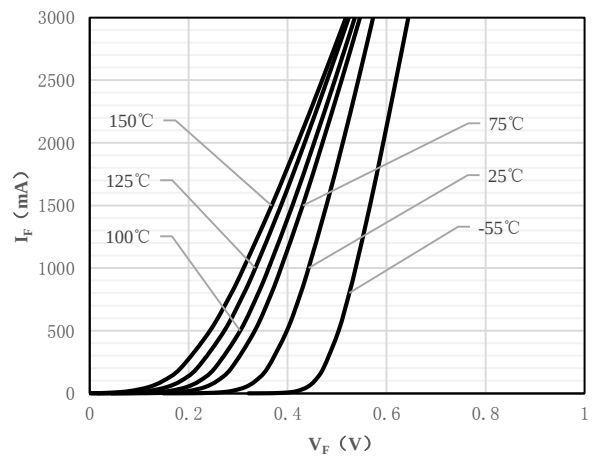


Fig 2 Typical Forward Characteristics

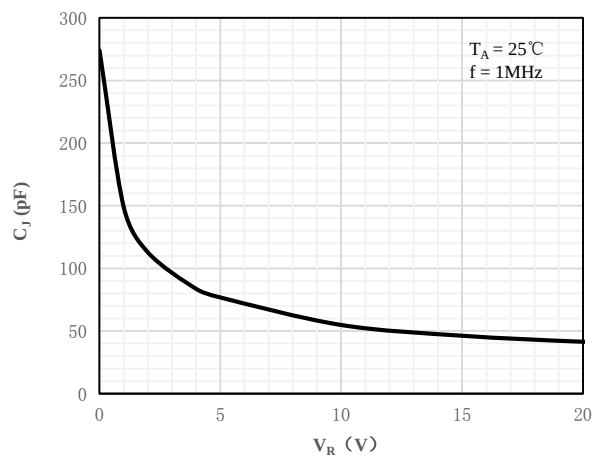


Fig 3 Capacitance vs. Reverse Voltage

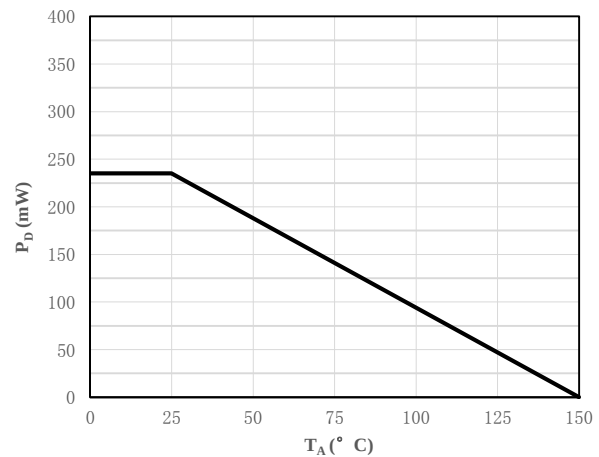
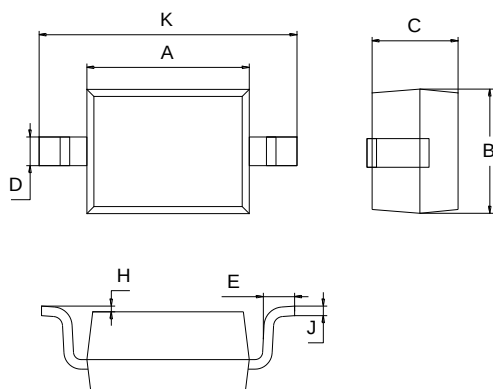


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOD-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-323

