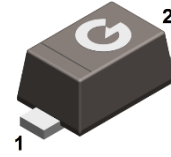
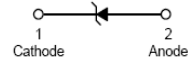


Features

- Tight voltage tolerance: $\pm 2\%$
- Ultra low-profile package well suited for automated assembly
- Moisture sensitivity level 1
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

HF



SOD-523

Mechanical Data

- Case: SOD-523
- 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
TBZX584B13	SOD-523	3000 pcs / Tape & Reel	J5

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	150	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	379	$^{\circ}\text{C/W}$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	224	$^{\circ}\text{C/W}$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	263	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_J	-55 ~ +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^{\circ}\text{C}$

Note 1: The data tested by surface mounted on a 15mm * 15mm * 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
Zener Voltage	V_Z	$I_{ZT} = 5\text{mA}$	12.74	13.0	13.26	V
Forward Voltage	V_F	$I_F = 10\text{mA}$	-	-	0.9	V
Maximum Reverse Current	I_R	$V_R = 8\text{V}$	-	-	0.09	μA
Maximum Zener Impedance	Z_{ZT}	$I_{ZT} = 5\text{mA}$	-	-	30	Ω
Maximum Zener Impedance	Z_{ZK}	$I_{ZK} = 1\text{mA}$	-	-	160	Ω
Temperature Coefficient	T_C	$I_{ZT} = 5\text{mA}$	7	9.06	11	mV/ $^{\circ}\text{C}$

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

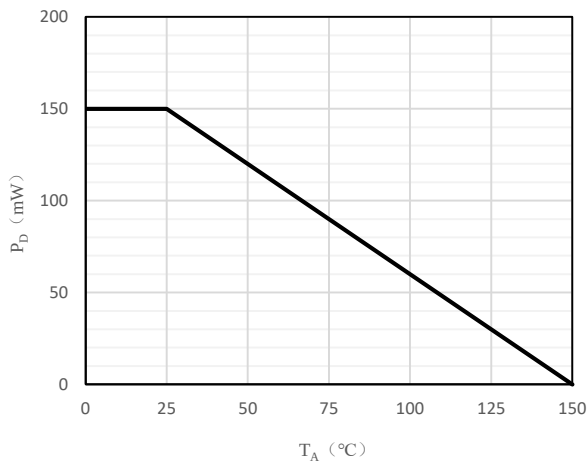


Fig 1 Steady State Power Derating

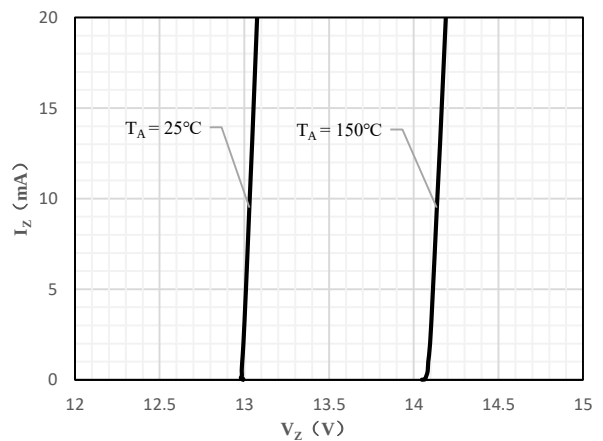


Fig 2 Typical Zener Breakdown Characteristics

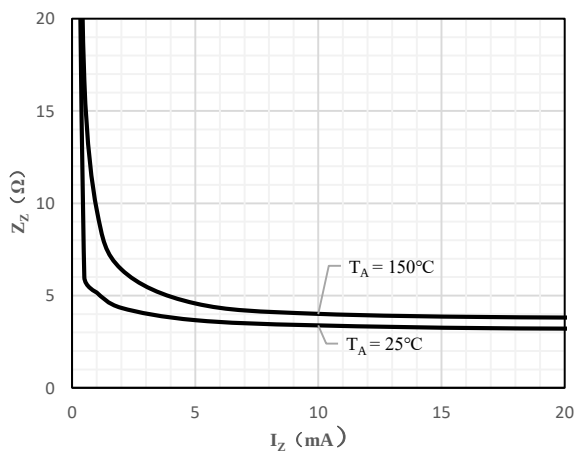


Fig 3 Zener Impedance vs. Zener Current

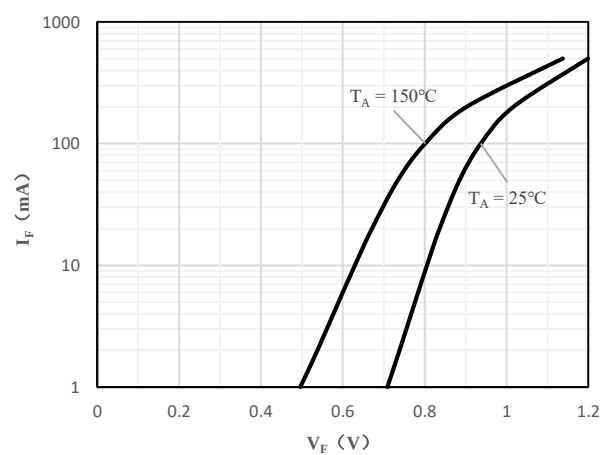


Fig 4 Typical Forward Characteristics

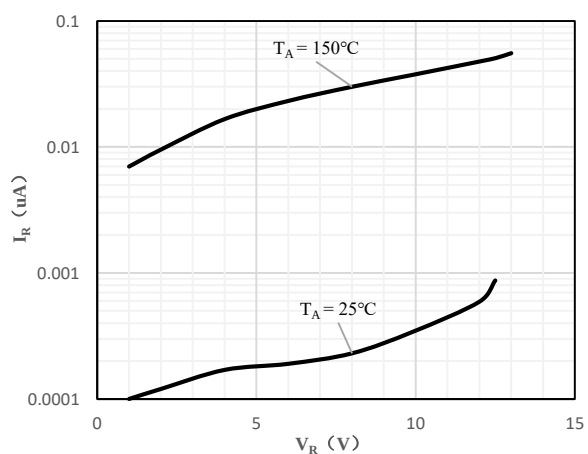
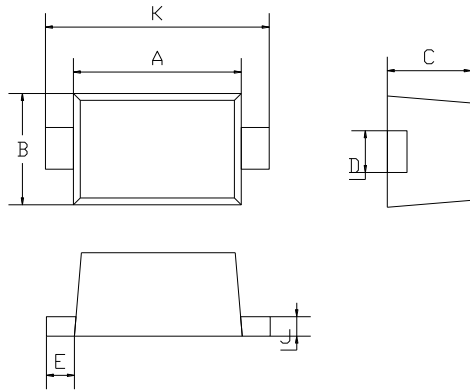


Fig 5 Typical Reverse Characteristics

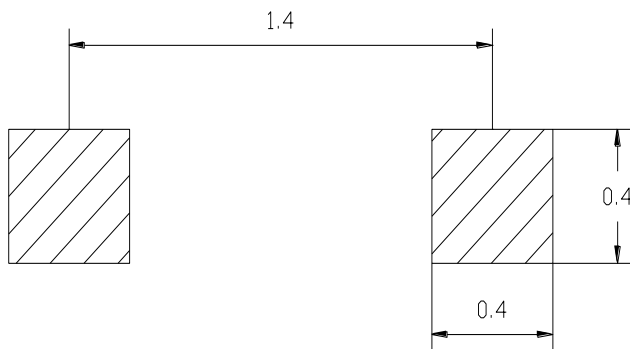
Package Outline Dimensions (Unit: mm)



SOD-523		
Dimension	Min.	Max.
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
E	0.15	0.25
J	0.05	0.15
K	1.50	1.70

Package Outline Dimensions (Unit: mm)

SOD-523



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