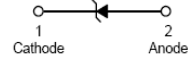


Features

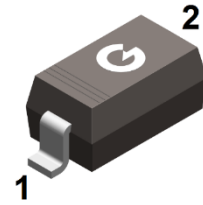
- Tight voltage tolerance: $\pm 5\%$
- Ultra low-profile package well suited for automated assembly
- Moisture sensitivity level 1
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

HF



Mechanical Data

- Case: SOD-123
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOD-123

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TBZT52C5V1	SOD-123	3000 pcs / Tape & Reel	W8

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	500	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	250	$^{\circ}\text{C/W}$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	150	$^{\circ}\text{C/W}$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	180	$^{\circ}\text{C/W}$
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 1 inch² FR-4 board with 2OZ copper

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Zener Voltage	V_Z	$I_{ZT} = 5\text{mA}$	4.85	5.1	5.36	V
Forward Voltage	V_F	$I_F = 10\text{mA}$	-	-	0.9	V
Maximum Reverse Current	I_R	$V_R = 2\text{V}$	-	-	2	μA
Maximum Zener Impedance	Z_{ZT}	$I_{ZT} = 5\text{mA}$	-	-	60	Ω
Maximum Zener Impedance	Z_{ZK}	$I_{ZK} = 1\text{mA}$	-	-	480	Ω
Temperature Coefficient	T_C	$I_{ZT} = 5\text{mA}$	-2.7	-0.051	1.2	mV/ $^{\circ}\text{C}$

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

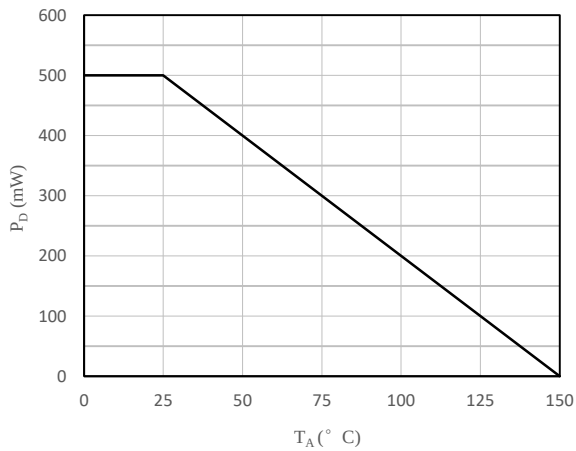


Fig 1 Steady State Power Derating

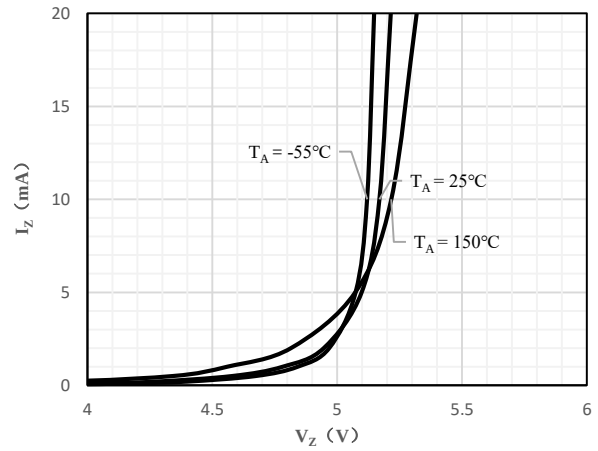


Fig 2 Typical Zener Breakdown Characteristics

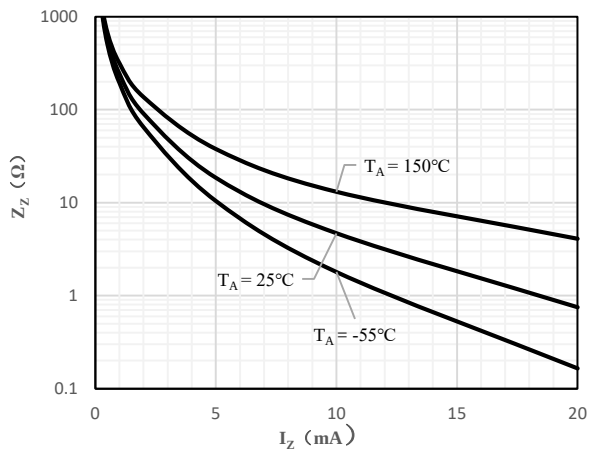


Fig 3 Zener Impedance vs. Zener Current

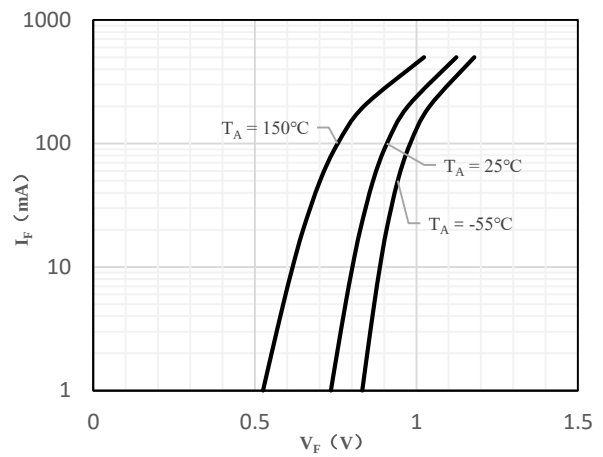


Fig 4 Typical Forward Characteristics

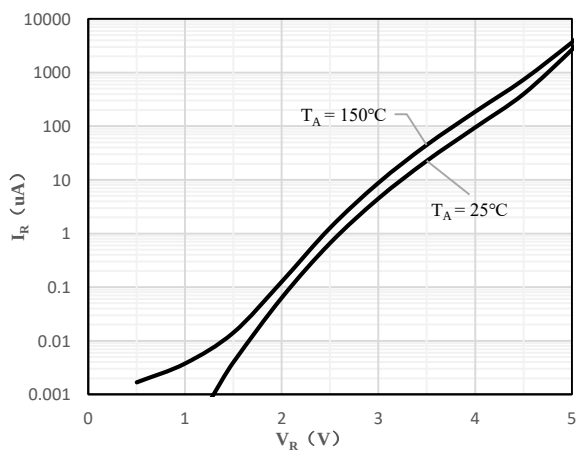
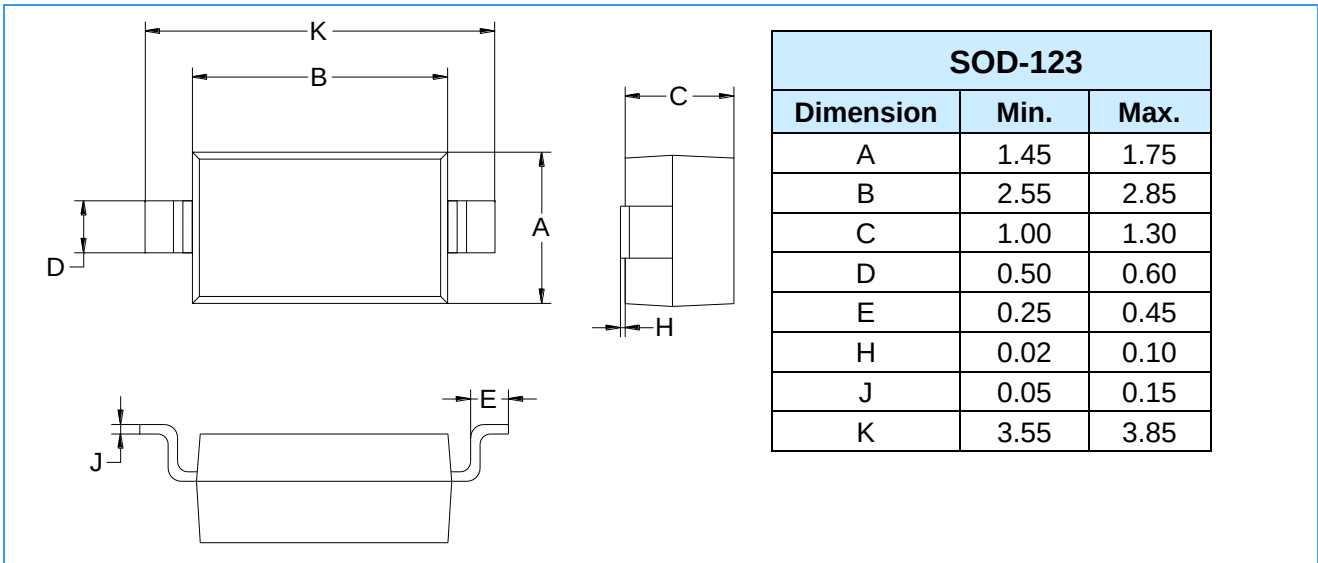


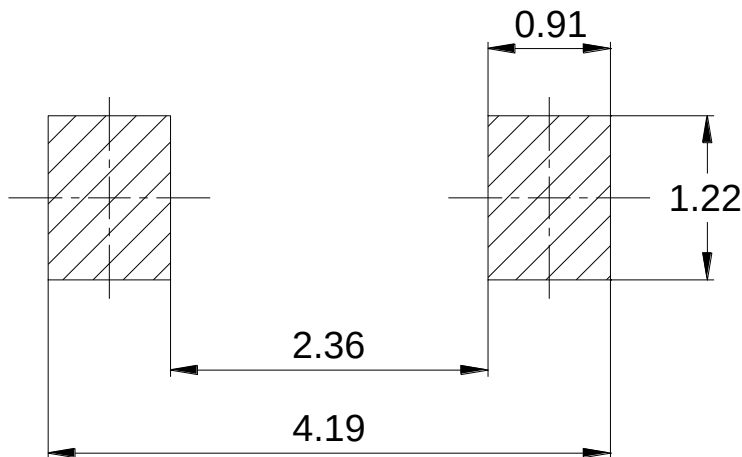
Fig 5 Typical Reverse Characteristics

Package Outline Dimensions (Unit: mm)



Package Outline Dimensions (Unit: mm)

SOD-123



Important Notice

Changzhou Galaxy Century Microelectronics (GME) reserves the right to make changes without further notice to any product information (copyrighted) herein to make corrections, modifications, improvements, or other changes. GME does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others.