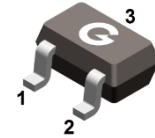
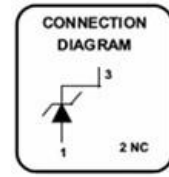


## Features

- 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



SOT-323

## Mechanical Data

- Case: SOT-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 |
|-------------|---------|------------------------|--------------|
| TBZX84C6V2W | SOT-323 | 3000 pcs / Tape & Reel | KR4          |

## Thermal Characteristics

| Parameter                              | Symbol          | Value      | Unit                 |
|----------------------------------------|-----------------|------------|----------------------|
| Power Dissipation *1                   | $P_D$           | 200        | mW                   |
| Thermal Resistance Junction-to-Air *1  | $R_{\theta JA}$ | 625        | $^{\circ}\text{C/W}$ |
| Thermal Resistance Junction-to-Air *2  | $R_{\theta JA}$ | 270        | $^{\circ}\text{C/W}$ |
| Thermal Resistance Junction-to-Case *2 | $R_{\theta JC}$ | 175        | $^{\circ}\text{C/W}$ |
| Thermal Resistance Junction-to-Lead *2 | $R_{\theta JL}$ | 200        | $^{\circ}\text{C/W}$ |
| Operating Junction Temperature Range   | $T_J$           | -55 ~ +150 | $^{\circ}\text{C}$   |
| Storage Temperature Range              | $T_{STG}$       | -65 ~ +150 | $^{\circ}\text{C}$   |

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

| Parameter               | Symbol   | Test Condition        | Min. | Typ.  | Max. | Unit                         |
|-------------------------|----------|-----------------------|------|-------|------|------------------------------|
| Zener Voltage           | $V_Z$    | $I_{ZT} = 5\text{mA}$ | 5.89 | 6.20  | 6.51 | V                            |
| Forward Voltage         | $V_F$    | $I_F = 10\text{mA}$   | -    | -     | 0.9  | V                            |
| Maximum Reverse Current | $I_R$    | $V_R = 4\text{V}$     | -    | -     | 3    | $\mu\text{A}$                |
| Maximum Zener Impedance | $Z_{ZT}$ | $I_{ZT} = 5\text{mA}$ | -    | -     | 10   | $\Omega$                     |
| Maximum Zener Impedance | $Z_{ZK}$ | $I_{ZK} = 1\text{mA}$ | -    | -     | 150  | $\Omega$                     |
| Temperature Coefficient | $T_C$    | $I_{ZT} = 5\text{mA}$ | 0.4  | 2.291 | 3.7  | $\text{mV}/^{\circ}\text{C}$ |

Notes:

1. The data tested by surface mounted on a minimum recommended FR-4 board
2. The data tested by surface mounted on a 25.4mm \* 25.4mm \* 1mm FR4-epoxy P.C.B

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

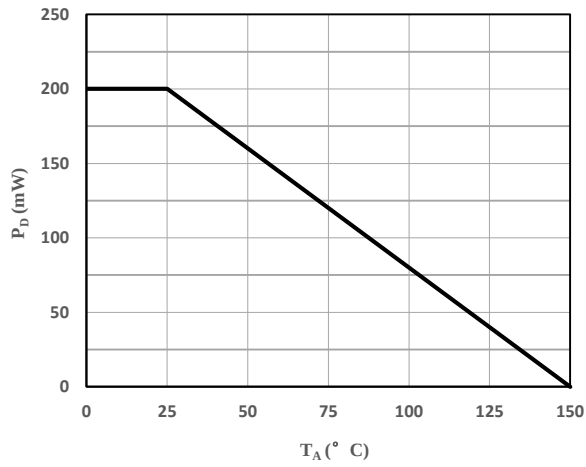


Fig 1 Steady State Power Derating

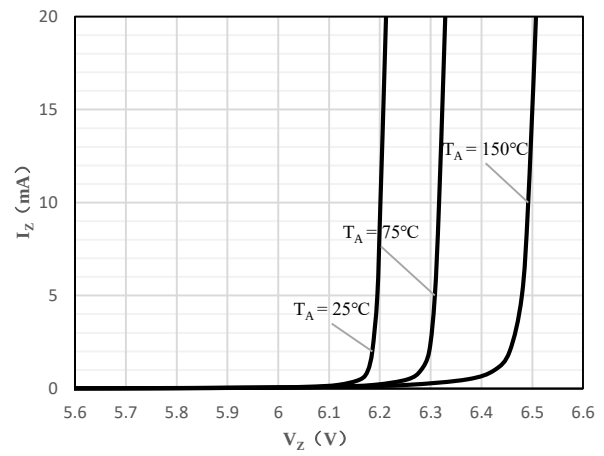


Fig 2 Typical Zener Breakdown Characteristics

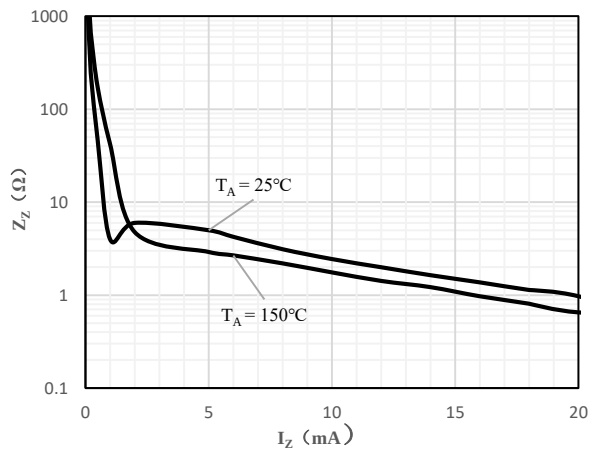


Fig 3 Zener Impedance vs. Zener Current

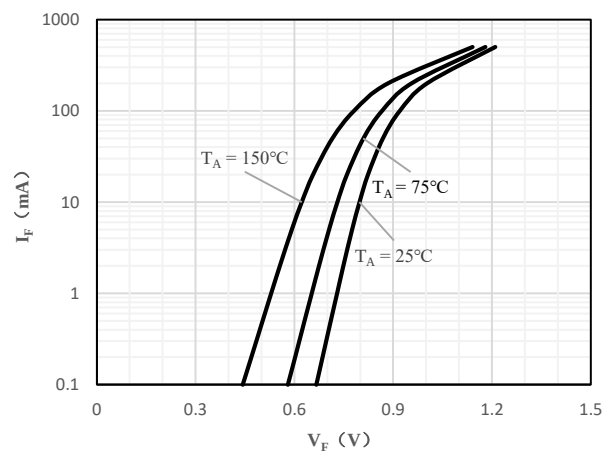


Fig 4 Typical Forward Characteristics

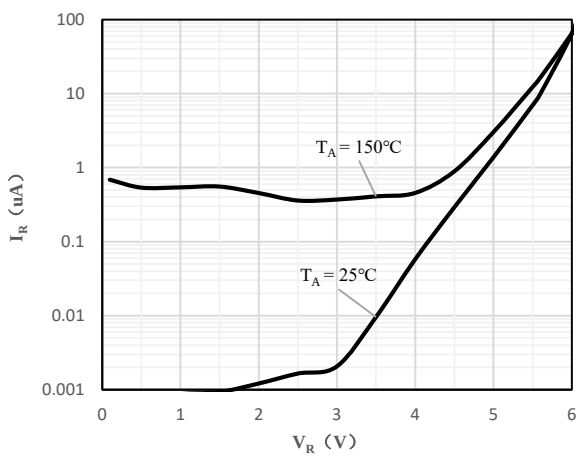
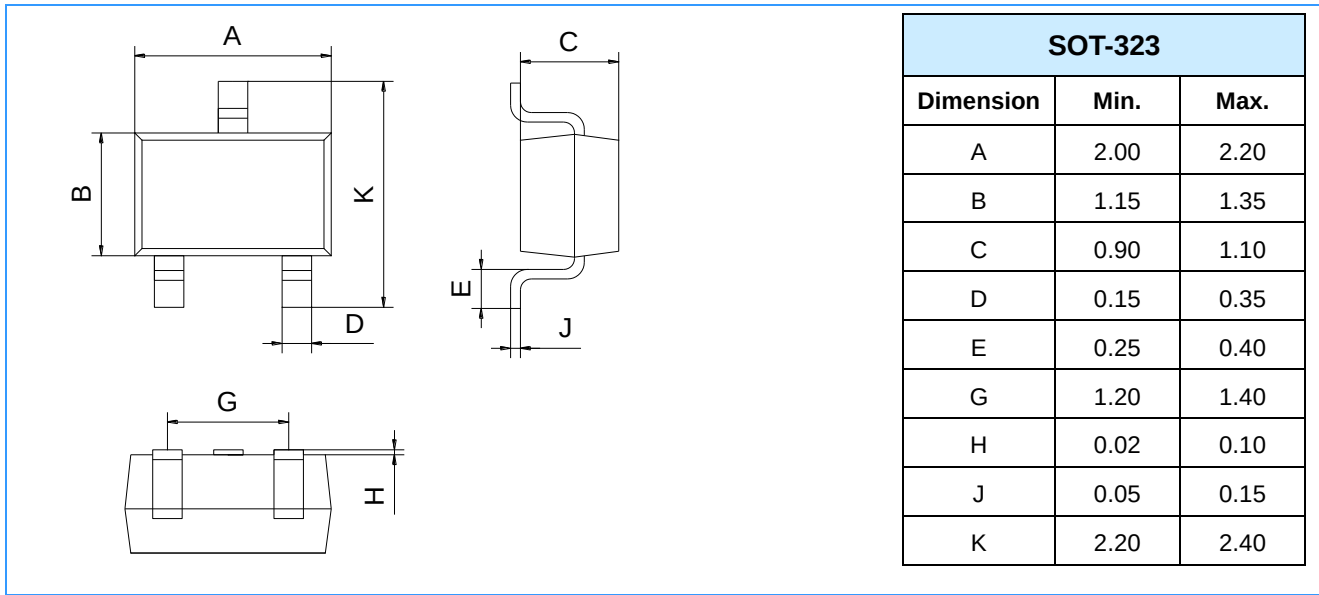
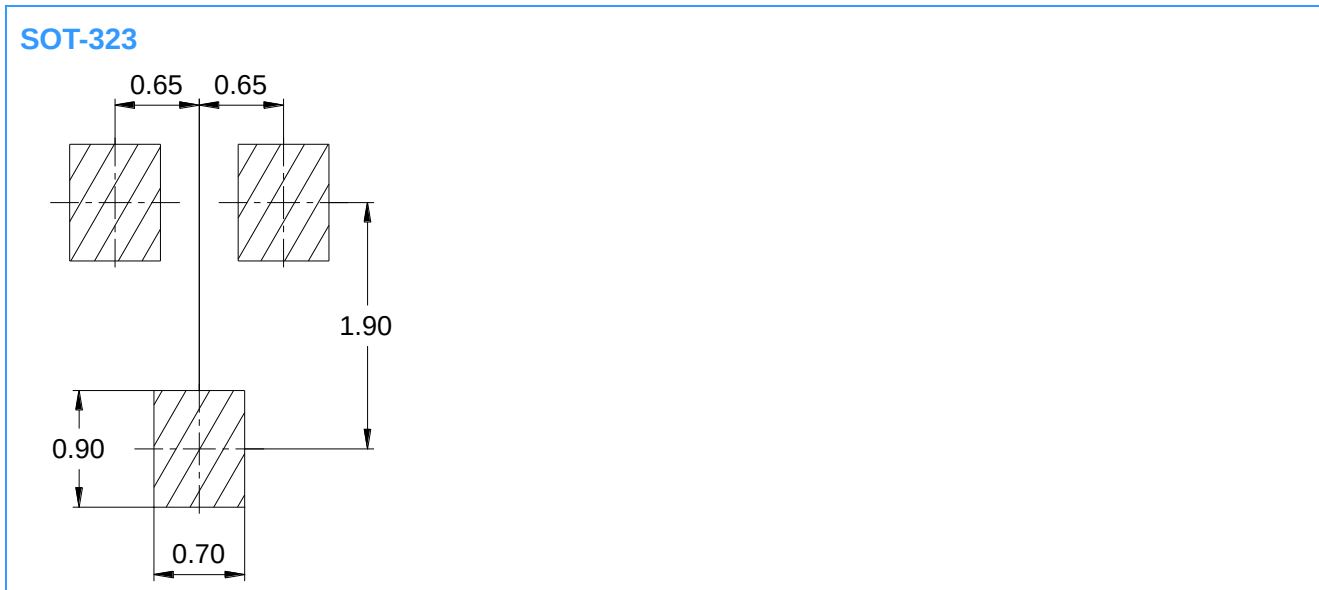


Fig 5 Typical Reverse Characteristics

## Package Outline Dimensions (Unit: mm)



## Mounting Pad Layout (Unit: mm)



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