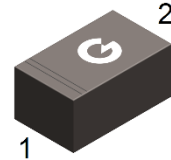


## Features

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

HF



DFN1006-2

## Mechanical Data

- Case: DFN1006-2
- 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 |
|-------------|-----------|-------------------------|--------------|
| TBZT52C13L  | DFN1006-2 | 10000 pcs / Tape & Reel | WI           |

## Thermal Characteristics

| Parameter                            | Symbol          | Value      | Unit                 |
|--------------------------------------|-----------------|------------|----------------------|
| Power Dissipation                    | $P_D$           | 100        | mW                   |
| Thermal Resistance Junction-to-Air   | $R_{\theta JA}$ | 1250       | $^{\circ}\text{C/W}$ |
| Operating Junction Temperature Range | $T_J$           | -55 ~ +150 | $^{\circ}\text{C}$   |
| Storage Temperature Range            | $T_{STG}$       | -65 ~ +150 | $^{\circ}\text{C}$   |

Note: These ratings are limiting values above which the serviceability of the diodes may be impaired

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

| Parameter               | Symbol   | Test Condition        | Min.  | Typ.  | Max.  | Unit                   |
|-------------------------|----------|-----------------------|-------|-------|-------|------------------------|
| Zener Voltage           | $V_Z$    | $I_{ZT} = 5\text{mA}$ | 12.35 | 13.00 | 13.65 | V                      |
| Forward Voltage         | $V_F$    | $I_F = 10\text{mA}$   | -     | -     | 0.9   | V                      |
| Maximum Reverse Current | $I_R$    | $V_R = 8\text{V}$     | -     | -     | 0.1   | $\mu\text{A}$          |
| Maximum Zener Impedance | $Z_{ZT}$ | $I_{ZT} = 5\text{mA}$ | -     | -     | 30    | $\Omega$               |
| Maximum Zener Impedance | $Z_{ZK}$ | $I_{ZK} = 1\text{mA}$ | -     | -     | 170   | $\Omega$               |
| 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)

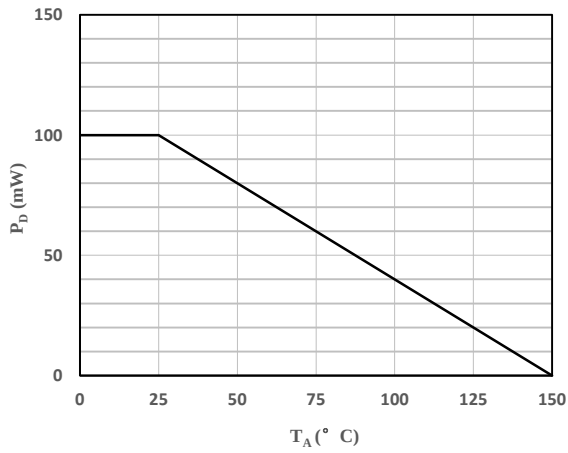


Fig 1 Steady State Power Derating

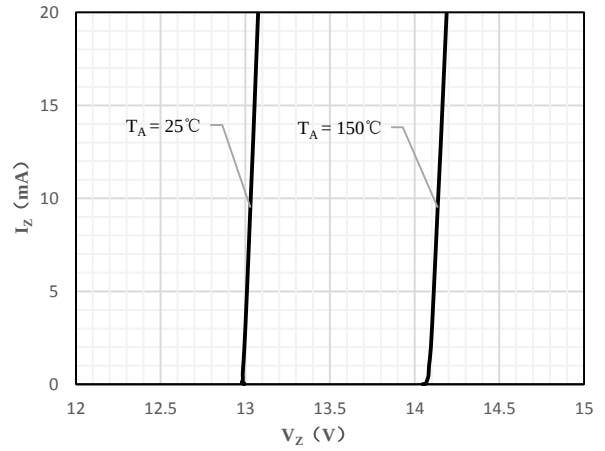


Fig 2 Typical Zener Breakdown Characteristics

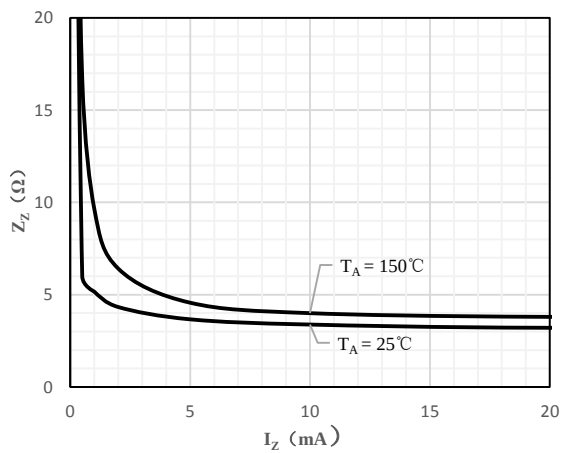


Fig 3 Zener Impedance vs. Zener Current

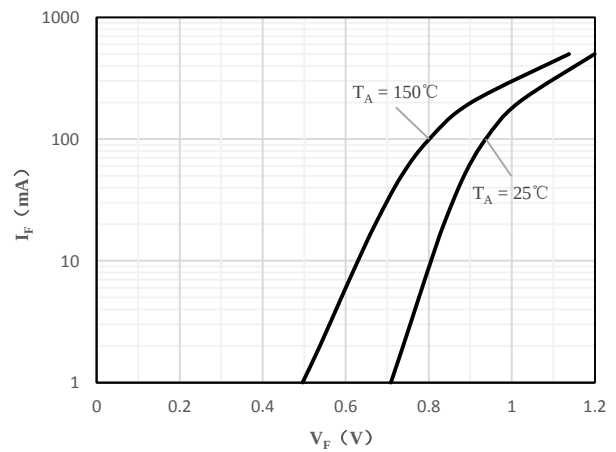


Fig 4 Typical Forward Characteristics

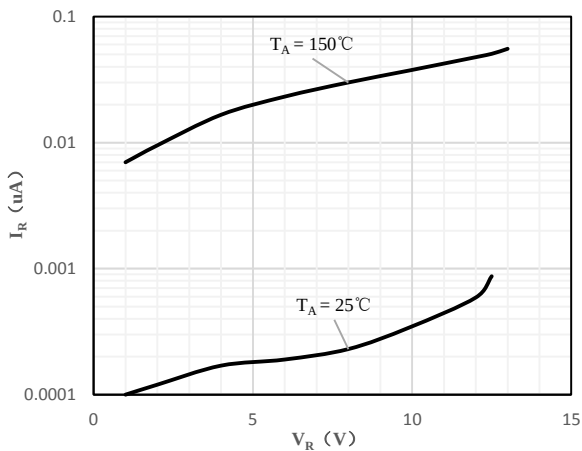
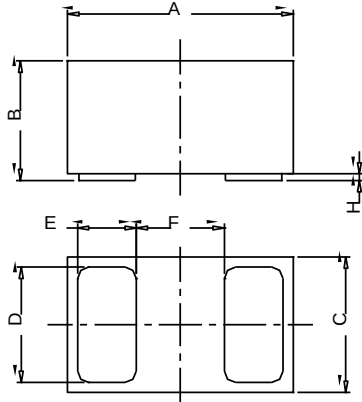


Fig 5 Typical Reverse Characteristics

**Package Outline Dimensions** (Unit: mm)



| DFN1006-2 |      |      |       |
|-----------|------|------|-------|
| Dimension | Min. | Typ. | Max.  |
| A         | 0.95 | 1.00 | 1.075 |
| B         | 0.45 | 0.50 | 0.55  |
| C         | 0.55 | 0.60 | 0.675 |
| D         | 0.45 | 0.50 | 0.55  |
| E         | 0.20 | 0.25 | 0.30  |
| F         | -    | 0.40 | -     |
| H         | 0    | 0.03 | 0.05  |

**Package Outline Dimensions** (Unit: mm)

**DFN1006-2**

