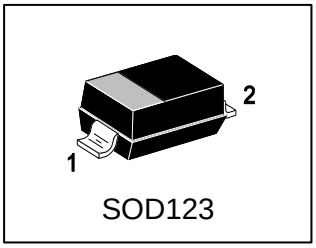
# LBZT52C5V6T1G

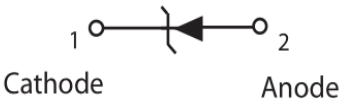
SURFACE MOUNT ZENER DIODE




SOD123

## 1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- 300mW power dissipation
- Ideal for surface mountted application




## 2. DEVICE MARKING AND ORDERING INFORMATION

| Device | Marking | Shipping |
|---|---|---|
| LBZT52C5V6T1G | W9 | 3000/Tape&Reel |

## 3. THERMAL CHARACTERISTICS

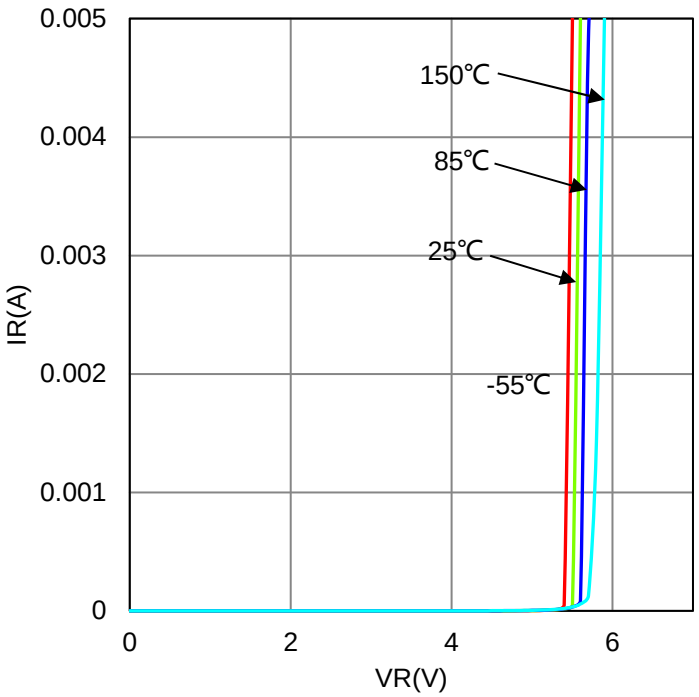
| Parameter | Symbol | Limits | Unit |
|---|---|---|---|
| Total Power Dissipation on FR-4 Board(Note 1) | PD | 300 | mW |
| Thermal Resistance, Junction to Ambient(Note 1) | RΘJA | 440 | ℃/W |
| Junction to Case | RΘJC | 200 | ℃/W |
| Operating Temperature Range | Top | -55~+125 | ℃ |
| Junction and Storage temperature | TJ,Tstg | −55～+150 | ℃ |

1. Device mounted on an FR-4 PCB, single-sided copper, tin-plated and standard footprint.

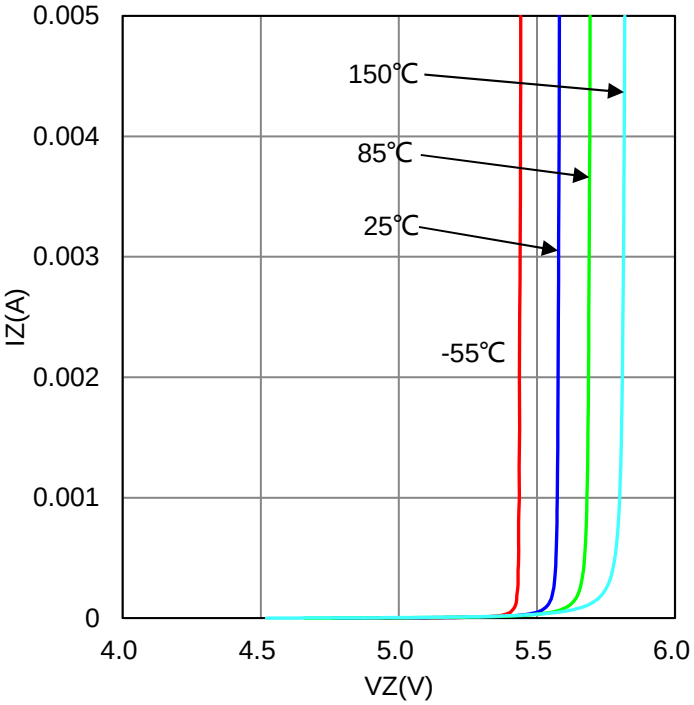
## 4. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

| Characteristic | Symbol | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| Forward Voltage (IF=10 mA) | VF | - | - | 0.9 | V |
| Zener Voltage (IZT=5mA) | VZ | 5.2 | 5.6 | 6.0 | V |
| Operating Resistance (IZT=5mA) | ZZT | - | - | 40 | Ω |
| Rising Operating Resistance (IZK=1mA) | ZZK | - | - | 400 | Ω |
| Reverse Leakage Current (VR=2V) | IR | - | - | 1 | μA |
| Maximum Temperature Coefficient (IZT=5mA) | ΘVZ | -2.0 | - | 2.5 | mV/℃ |

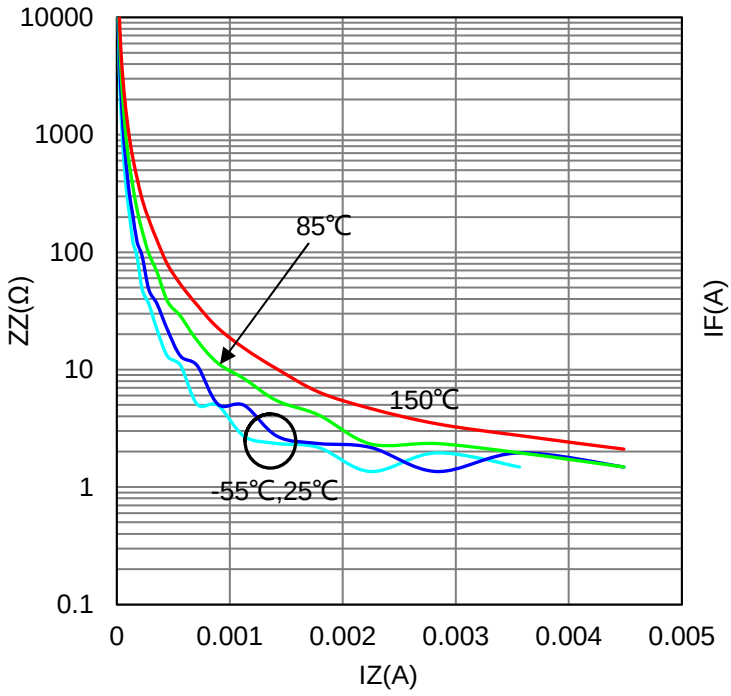
## 5.ELECTRICAL CHARACTERISTICS CURVES



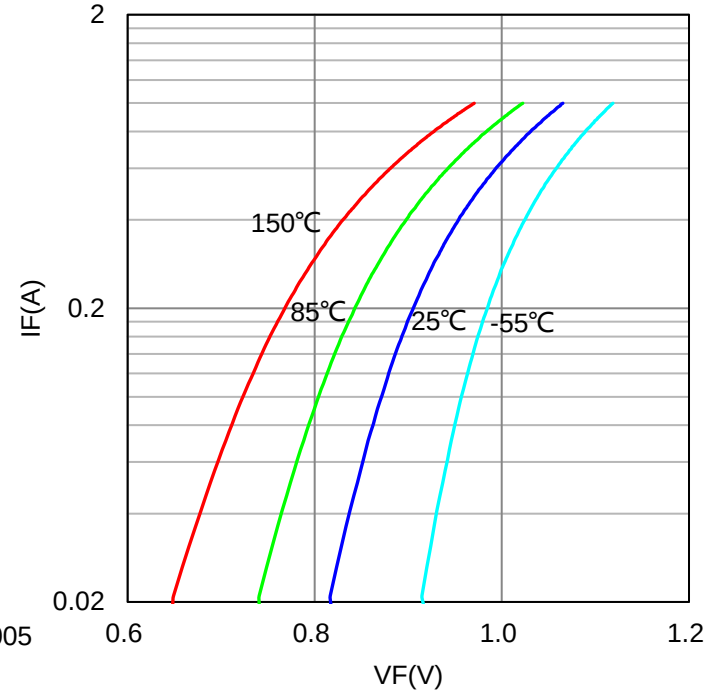

IR vs. VR




IZ vs. VZ

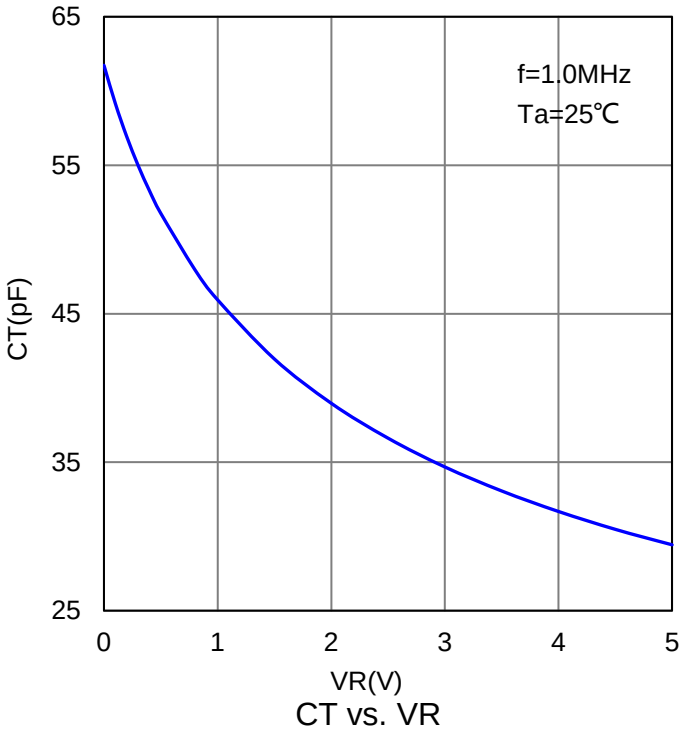



ZZ vs. IZ



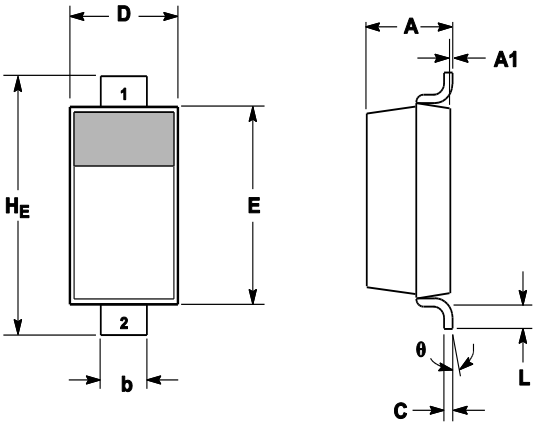

IF vs. VF

## 5.ELECTRICAL CHARACTERISTICS CURVES(Con.)



CT vs. VR

## 6.OUTLINE AND DIMENSIONS

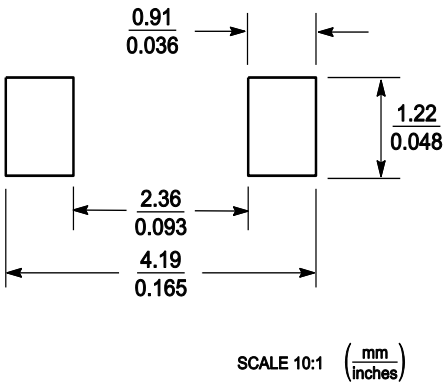



Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

| | MILLIMETERS | | | INCHES | | |
|---|---|---|---|---|---|---|
| DIM | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 0.94 | 1.17 | 1.35 | 0.037 | 0.046 | 0.053 |
| A1 | 0.00 | 0.05 | 0.10 | 0.000 | 0.002 | 0.004 |
| b | 0.51 | 0.61 | 0.71 | 0.020 | 0.024 | 0.028 |
| c | --- | --- | 0.15 | --- | --- | 0.006 |
| D | 1.40 | 1.60 | 1.80 | 0.055 | 0.063 | 0.071 |
| E | 2.54 | 2.69 | 2.84 | 0.100 | 0.106 | 0.112 |
| $H_E$ | 3.56 | 3.68 | 3.86 | 0.140 | 0.145 | 0.152 |
| L | 0.25 | --- | --- | 0.010 | --- | --- |
| θ | 0° | --- | 10° | 0° | --- | 10° |

## 7.SOLDERING FOOTPRINT



## DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.

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