TECH PUBLIC
台舟电子

# BZX84CxxxLT1G-TP Series
## 350m Watt Zener Voltage Regulators

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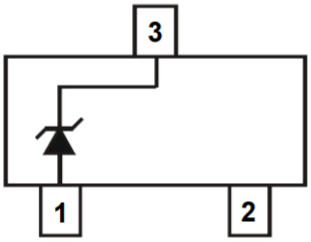
## Features

- Low Zener Impedance
- Power Dissipation of 350mW
- High Stability and High Reliability
- Halogen free and RoHS compliant
- SOT23 surface mount package

## Applications

- General voltage regulation
- Mobile & handheld systems
- Household Electric Appliances
- Industrial automation
- communication field

## Pin Configuration




SOT23

## Maximum Ratings& Thermal Characteristics

**(Tamb=25°C unless otherwise specified)**

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Forward Voltage @ IF=10mA | VF | 0.9 | V |
| Power Dissipation | PD | 300 | mW |
| Thermal Resistance (Junction-to-Ambient) | RθJA | 417 | °C/W |
| Junction Temperature Range | TJ | -55 ~ +150 | °C |
| Storage Temperature Range | TSTG | -65 ~ +150 | °C |

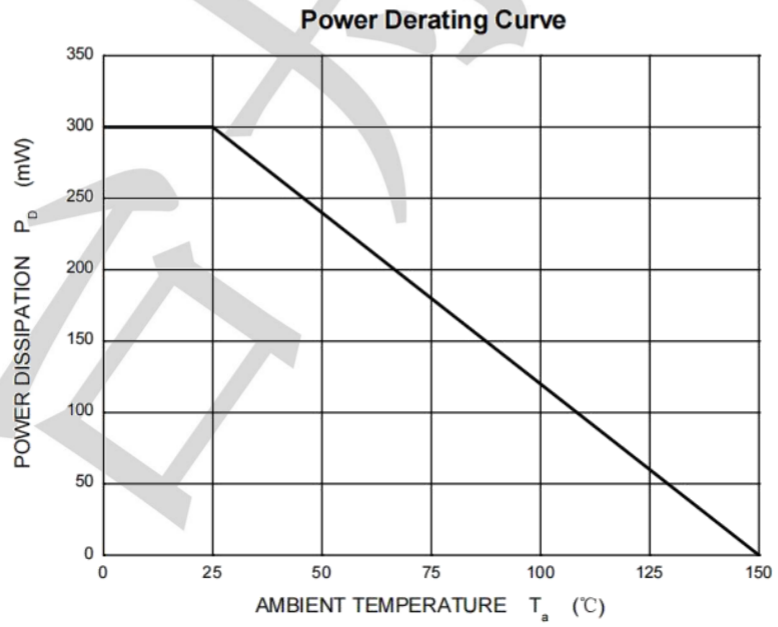
## Electrical Characteristics (TA=25°C unless otherwise specified)

| Part Number | Zener Voltage | | | Maximum Zener Impedance | | | | Maximum Reverse Current $I_R$ @ $V_R$ | |
|---|---|---|---|---|---|---|---|---|---|
| | $V_Z$ @ $I_{ZT}$ | | | $I_{ZT}$ | $Z_{ZT}$ @ $I_{ZT}$ | IZK | $Z_{ZK}$ @ $I_{ZK}$ | $I_R$ | $V_R$ |
| | Min.(V) | Nom(V) | Max.(V) | mA | Ω | mA | Ω | μA | V |
| BZX84C2V4LT1G-TP | 2.20 | 2.40 | 2.60 | 5 | 100 | 1 | 600 | 50 | 1.0 |
| BZX84C2V7LT1G-TP | 2.50 | 2.70 | 2.90 | 5 | 100 | 1 | 600 | 20 | 1.0 |
| BZX84C3V0LT1G-TP | 2.80 | 3.00 | 3.20 | 5 | 95 | 1 | 600 | 10 | 1.0 |
| BZX84C3V3LT1G-TP | 3.10 | 3.30 | 3.50 | 5 | 95 | 1 | 600 | 5 | 1.0 |
| BZX84C3V6LT1G-TP | 3.40 | 3.60 | 3.80 | 5 | 90 | 1 | 600 | 5 | 1.0 |
| BZX84C3V9LT1G-TP | 3.70 | 3.90 | 4.10 | 5 | 90 | 1 | 600 | 3 | 1.0 |
| BZX84C4V3LT1G-TP | 4.00 | 4.30 | 4.60 | 5 | 90 | 1 | 600 | 3 | 1.0 |
| BZX84C4V7LT1G-TP | 4.40 | 4.70 | 5.00 | 5 | 80 | 1 | 500 | 3 | 2.0 |
| BZX84C5V1LT1G-TP | 4.80 | 5.10 | 5.40 | 5 | 60 | 1 | 480 | 2 | 2.0 |
| BZX84C5V6LT1G-TP | 5.20 | 5.60 | 6.00 | 5 | 40 | 1 | 400 | 1 | 2.0 |
| BZX84C6V2LT1G-TP | 5.80 | 6.20 | 6.60 | 5 | 10 | 1 | 150 | 3 | 4.0 |
| BZX84C6V8LT1G-TP | 6.40 | 6.80 | 7.20 | 5 | 15 | 1 | 80 | 2 | 4.0 |
| BZX84C7V5LT1G-TP | 7.00 | 7.50 | 7.90 | 5 | 15 | 1 | 80 | 1 | 5.0 |
| BZX84C8V2LT1G-TP | 7.70 | 8.20 | 8.70 | 5 | 15 | 1 | 80 | 0.7 | 5.0 |
| BZX84C9V1LT1G-TP | 8.50 | 9.10 | 9.60 | 5 | 15 | 1 | 100 | 0.5 | 6.0 |
| BZX84C10LT1G-TP | 9.40 | 10.00 | 10.60 | 5 | 20 | 1 | 150 | 0.2 | 7.0 |
| BZX84C11LT1G-TP | 10.40 | 11.00 | 11.60 | 5 | 20 | 1 | 150 | 0.1 | 8.0 |
| BZX84C12LT1G-TP | 11.40 | 12.00 | 12.70 | 5 | 25 | 1 | 150 | 0.1 | 8.0 |
| BZX84C13LT1G-TP | 12.40 | 13.00 | 14.10 | 5 | 30 | 1 | 170 | 0.1 | 8.0 |
| BZX84C15LT1G-TP | 13.80 | 15.00 | 15.60 | 5 | 30 | 1 | 200 | 0.1 | 10.5 |
| BZX84C16LT1G-TP | 15.30 | 16.00 | 17.10 | 5 | 40 | 1 | 200 | 0.1 | 11.2 |
| BZX84C18LT1G-TP | 16.80 | 18.00 | 19.10 | 5 | 45 | 1 | 225 | 0.1 | 12.6 |
| BZX84C20LT1G-TP | 18.80 | 20.00 | 21.20 | 5 | 55 | 1 | 225 | 0.1 | 14.0 |
| BZX84C22LT1G-TP | 20.80 | 22.00 | 23.30 | 5 | 55 | 1 | 250 | 0.1 | 15.4 |
| BZX84C24LT1G-TP | 22.80 | 24.00 | 25.60 | 5 | 70 | 1 | 250 | 0.1 | 16.8 |
| BZX84C27LT1G-TP | 25.10 | 27.00 | 28.90 | 2 | 80 | 0.5 | 300 | 0.1 | 18.9 |

## Electrical Characteristics (TA=25°C unless otherwise specified)

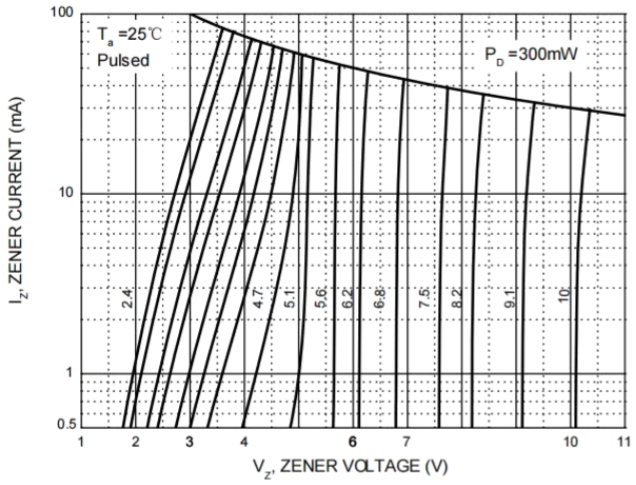
| Part Number | Zener Voltage | | | Maximum Zener Impedance | | | | Maximum Reverse Current $I_R$ @ $V_R$ | |
|---|---|---|---|---|---|---|---|---|---|
| | $V_Z$ @ $I_{ZT}$ | | | $I_{ZT}$ | $Z_{ZT}$ @ $I_{ZT}$ | IZK | $Z_{ZK}$ @ $I_{ZK}$ | $I_R$ | $V_R$ |
| | Min.(V) | Nom(V) | Max.(V) | mA | Ω | mA | Ω | μA | V |
| BZX84C30LT1G-TP | 28.00 | 30.00 | 32.00 | 2 | 80 | 0.5 | 300 | 0.1 | 21.0 |
| BZX84C33LT1G-TP | 31.00 | 33.00 | 35.00 | 2 | 80 | 0.5 | 325 | 0.1 | 23.1 |
| BZX84C36LT1G-TP | 34.00 | 36.00 | 38.00 | 2 | 90 | 0.5 | 350 | 0.1 | 25.2 |
| BZX84C39LT1G-TP | 37.00 | 39.00 | 41.00 | 2 | 130 | 0.5 | 350 | 0.1 | 27.3 |
| BZX84C43LT1G-TP | 40.85 | 43.00 | 45.15 | 2 | 150 | 0.5 | 375 | 0.1 | 30.1 |
| BZX84C47LT1G-TP | 44.65 | 47.00 | 49.35 | 2 | 170 | 0.5 | 375 | 0.1 | 32.9 |
| BZX84C51LT1G-TP | 48.45 | 51.00 | 53.55 | 2 | 180 | 0.5 | 400 | 0.1 | 35.7 |
| BZX84C56LT1G-TP | 53.20 | 56.00 | 58.80 | 2 | 200 | 0.5 | 425 | 0.05 | 39.2 |
| BZX84C62LT1G-TP | 58.90 | 62.00 | 65.10 | 2 | 215 | 0.5 | 450 | 0.05 | 43.4 |
| BZX84C68LT1G-TP | 64.60 | 68.00 | 71.40 | 2 | 240 | 0.5 | 475 | 0.05 | 47.6 |
| BZX84C75LT1G-TP | 71.25 | 75.00 | 78.75 | 2 | 255 | 0.5 | 500 | 0.05 | 52.5 |

## Typical Characteristics Curves

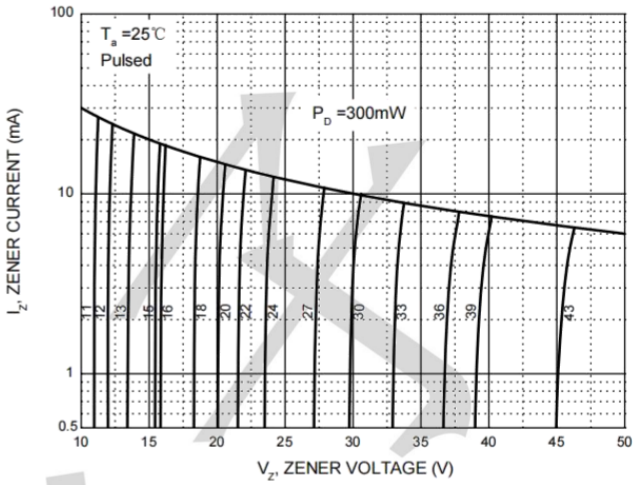


## Typical Characteristics Curves

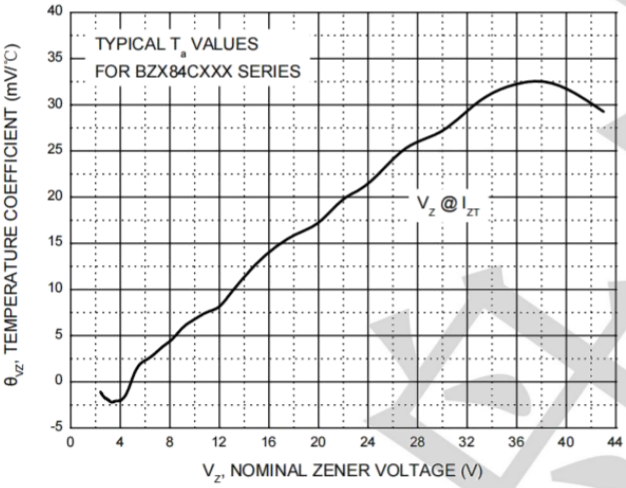
Zener Characteristics ($V_Z$ Up to 10 V)



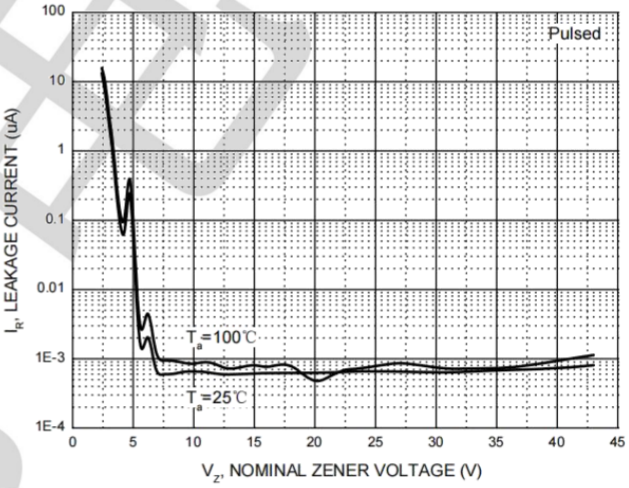

Zener Characteristics (11 V to 43 V)



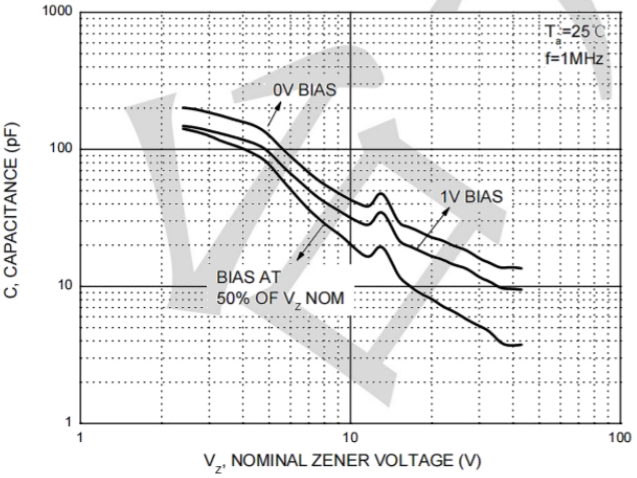

Temperature Coefficients



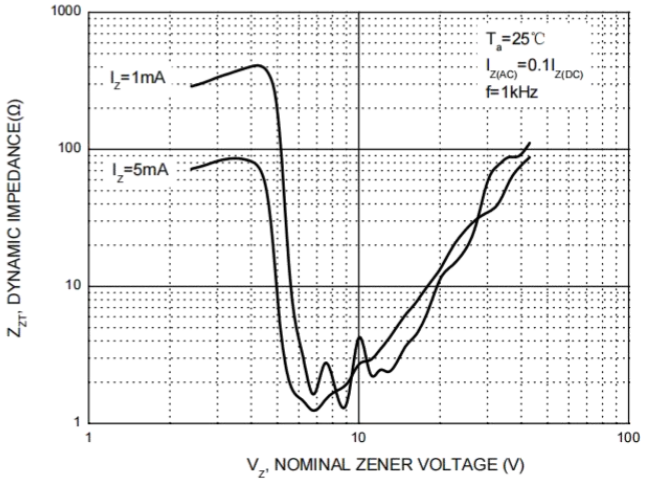

Typical L eakage Current




Typical C apacitance

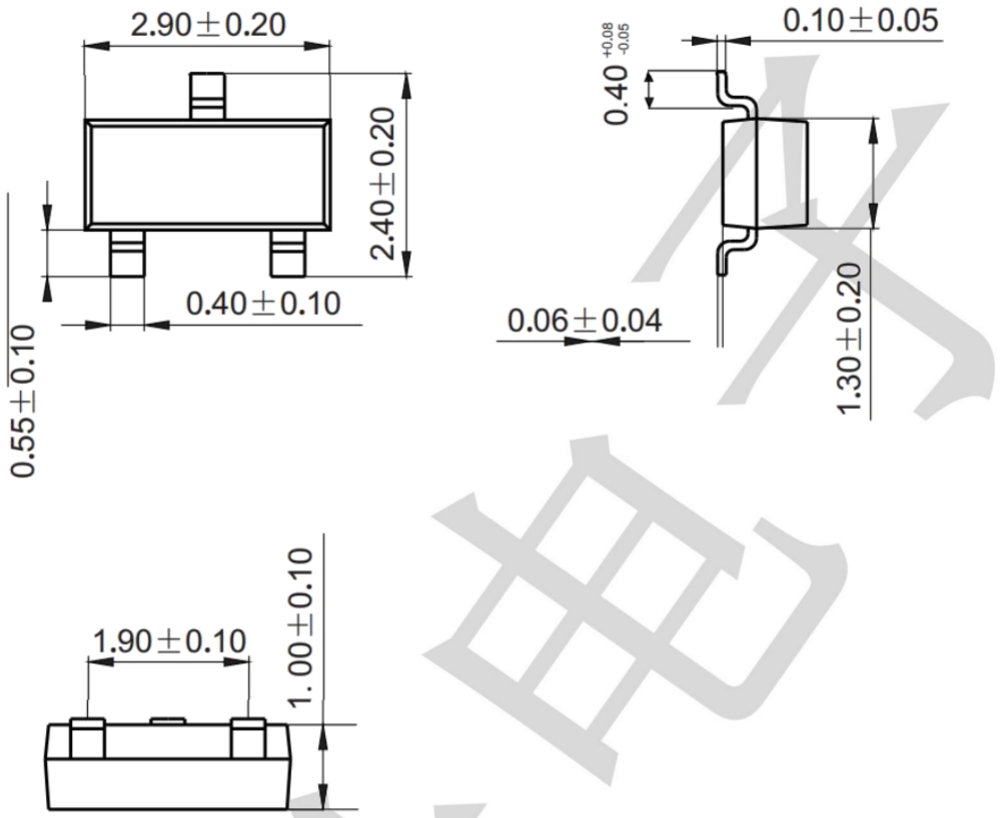


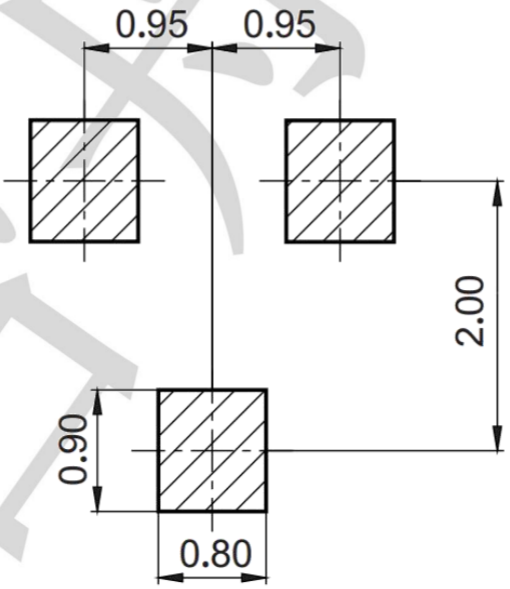

Effect of Zener Voltage on Zener Impedance



## Package Outline Dimensions (unit: mm)

**SOT23**




## Mounting Pad Layout (unit: mm)