



**THE DATASHEET OF  
CZRZ3V3B-HF**



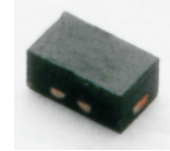
## CZRZ3V3B-HF Thru. CZRZ6V8B-HF

Voltage: 3.3 to 6.8 Volts

Power: 100mW

RoHS Device

Halogen Free



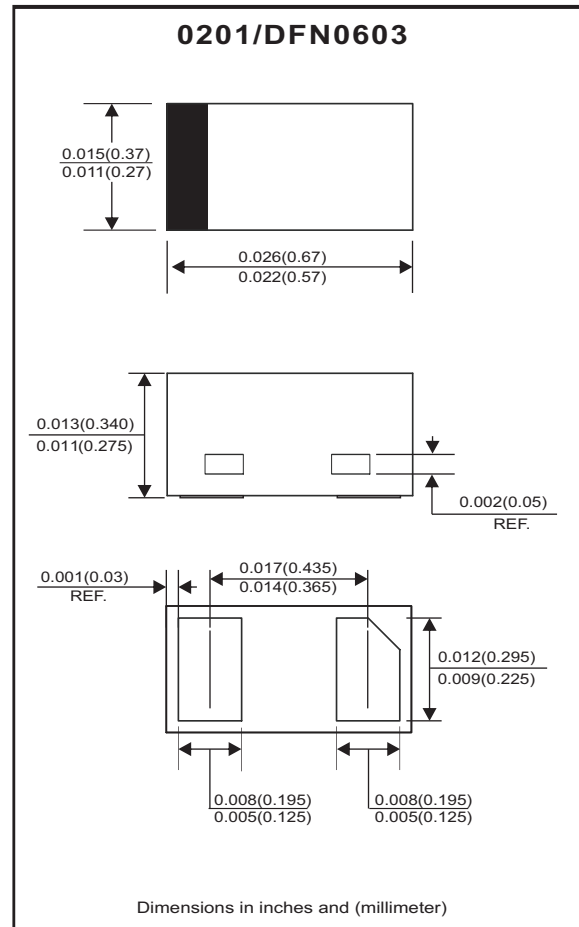
### Features

- 100mW Power Dissipation.
- Voltages : 3.3V, 4.7V, 5.1V, 5.6V, 6.8V
- High reliability.
- Designed for mounting on small surface.
- Extremely thin/leadless package.

### Mechanical data

- Case: 0201/DFN0603 package, molded plastic.
- Terminals: Gold plated, Solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Mounting position: Any

### Circuit diagram



### Maximum Rating (at TA=25°C unless otherwise noted)

| Parameter   | Symbol    | Value       | Unit |
|---|-----------|-------------|------|
| Maximum Forward Voltage Drop at $I_F = 10 \text{ mA}$ | $V_F$     | 0.9         | V    |
| Maximum Power Dissipation at 25 °C                    | $P_D$     | 100         | mW   |
| Junction Temperature                                  | $T_J$     | 150         | °C   |
| Operating Temperature Range                           | $T_{opr}$ | -55 to +125 | °C   |
| Storage Temperature Range                             | $T_{stg}$ | -55 to +150 | °C   |

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

| Part Number | Zener Voltage |      |      |            | Operating resistance |               | Rising Operating Resistance |               | Leakage Current |       |
|-------------|---------------|------|------|------------|----------------------|---------------|-----------------------------|---------------|-----------------|-------|
|             | $V_Z$ (Volts) |      |      | @ $I_{ZT}$ | $Z_{ZT}$ (Ohm)       |               | $Z_{ZK}$ (Ohm)              |               | $I_R@V_R$       |       |
|             | Min           | Nom  | Max  | mA         | Max                  | $I_{ZT}$ (mA) | Max                         | $I_{ZK}$ (mA) | $\mu\text{A}$   | Volts |
| CZRZ3V3B-HF | 3.16          | 3.30 | 3.53 | 5          | 100                  | 5             | 1000                        | 1.0           | 20              | 1.0   |
| CZRZ4V7B-HF | 4.42          | 4.70 | 4.90 | 5          | 100                  | 5             | 800                         | 0.5           | 2.0             | 1.0   |
| CZRZ5V1B-HF | 4.84          | 5.10 | 5.37 | 5          | 80                   | 5             | 500                         | 0.5           | 2.0             | 1.5   |
| CZRZ5V6B-HF | 5.31          | 5.60 | 5.92 | 5          | 60                   | 5             | 200                         | 0.5           | 1.0             | 2.5   |
| CZRZ6V8B-HF | 6.47          | 6.80 | 7.14 | 5          | 40                   | 5             | 60                          | 0.5           | 0.5             | 3.5   |

## RATING AND CHARACTERISTIC CURVES

Fig.1 - Forward Characteristics

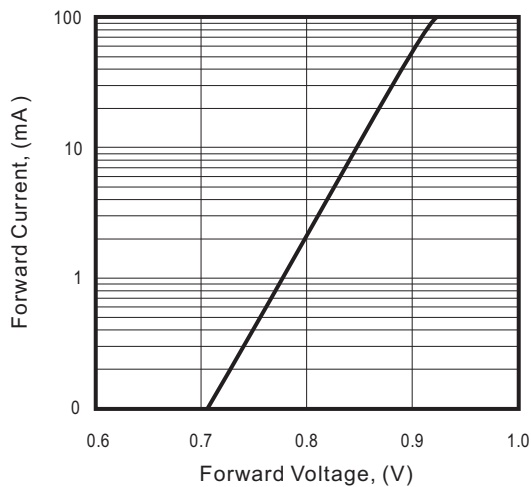


Fig.2 - Zener Breakdown Characteristics

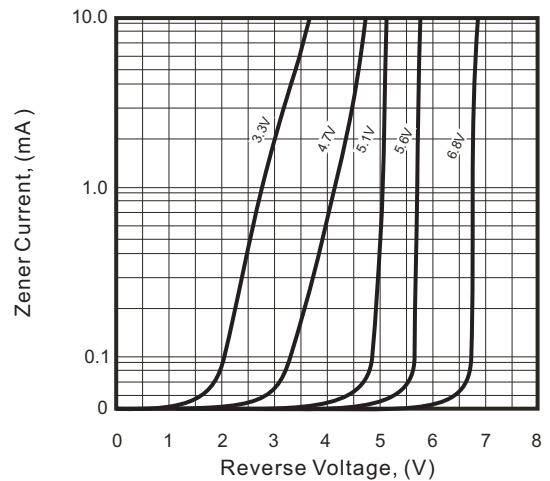
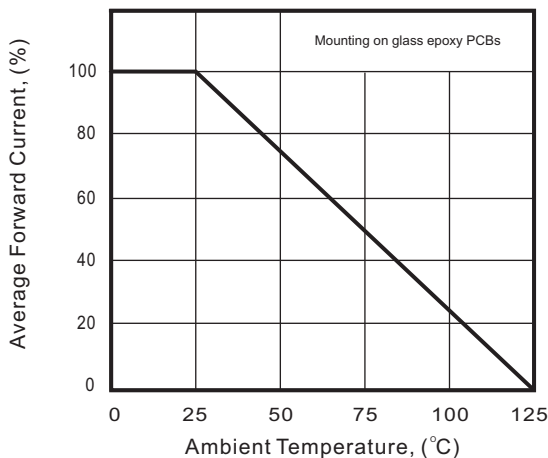
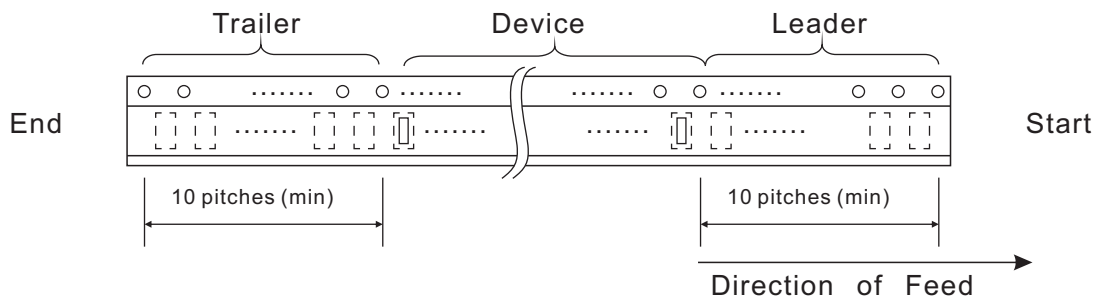
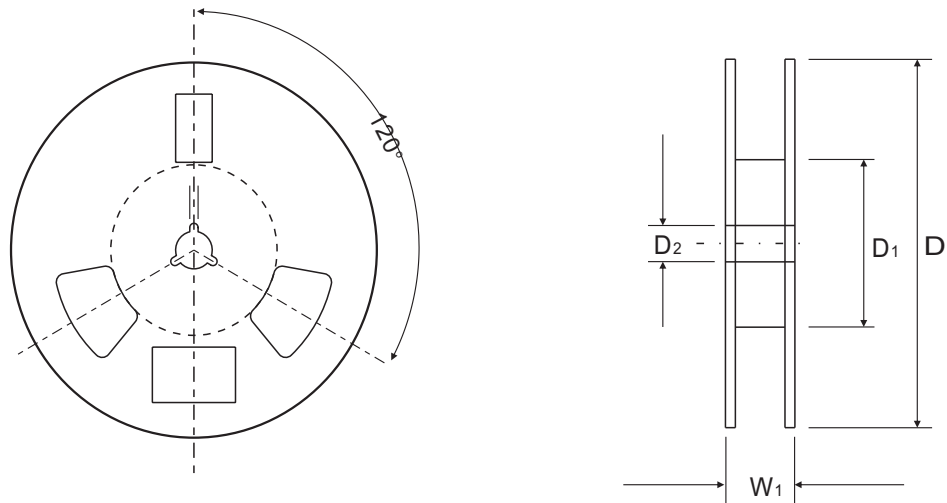
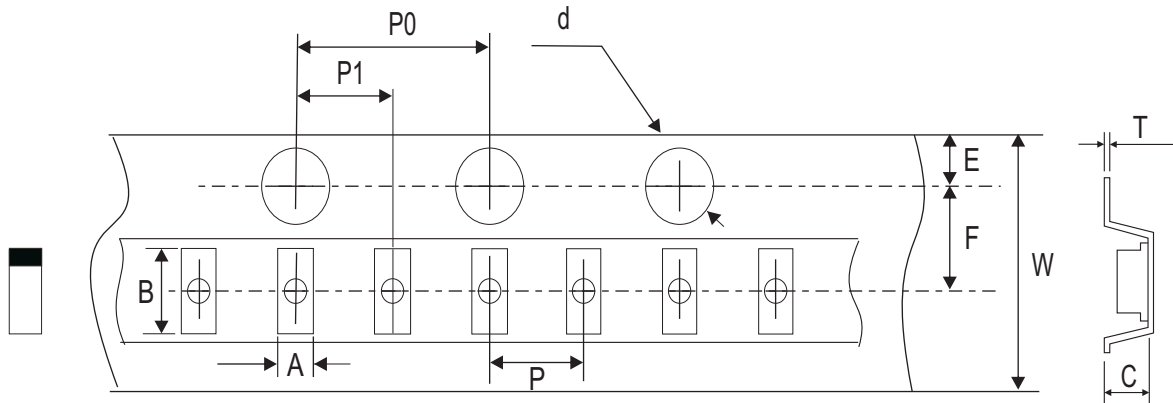


Fig.3 - Current Derating Curve



## Reel Taping Specification



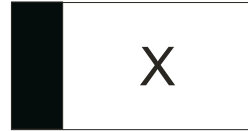
| 0201<br>(DFN0603) | SYMBOL | A                  | B             | C             | d             | D             | D <sub>1</sub> | D <sub>2</sub> |
|-------------------|--------|--------------------|---------------|---------------|---------------|---------------|----------------|----------------|
|                   | (mm)   | 0.39 +0.03/-0.02   | 0.72 ± 0.03   | 0.36 ± 0.03   | 1.50 + 0.10   | 178 ± 1.00    | 54.4 ± 0.40    | 13.0 ± 0.20    |
|                   | (inch) | 0.015 +0.001/0.001 | 0.028 ± 0.001 | 0.014 ± 0.001 | 0.059 + 0.004 | 7.008 ± 0.039 | 2.142 ± 0.016  | 0.512 ± 0.008  |

| 0201<br>(DFN0603) | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | T             | W             | W <sub>1</sub> |
|-------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
|                   | (mm)   | 1.75 ± 0.10   | 3.50 ± 0.05   | 2.00 ± 0.05   | 4.00 ± 0.05    | 2.00 ± 0.05    | 0.23 ± 0.05   | 8.00 ± 0.10   | 12.30 ± 0.10   |
|                   | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.079 ± 0.004 | 0.157 ± 0.004  | 0.079 ± 0.004  | 0.009 ± 0.002 | 0.315 ± 0.008 | 0.484 ± 0.004  |

# SMD Zener Diode

## Marking Code

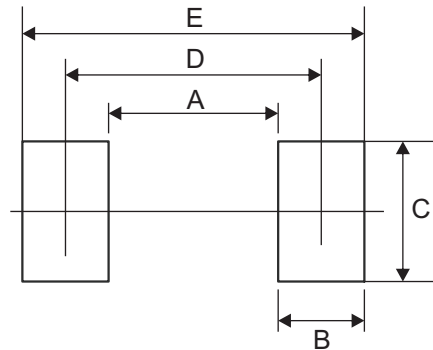
| Part Number | Marking Code |
|-------------|--------------|
| CZRZ3V3B-HF | E            |
| CZRZ4V7B-HF | I            |
| CZRZ5V1B-HF | J            |
| CZRZ5V6B-HF | K            |
| CZRZ6V8B-HF | L            |



X = Product type marking code

## Suggested PAD Layout

| SIZE | 0201(DFN0603) |        |
|------|---------------|--------|
|      | (mm)          | (inch) |
| A    | 0.16          | 0.006  |
| B    | 0.24          | 0.009  |
| C    | 0.34          | 0.013  |
| D    | 0.40          | 0.016  |
| E    | 0.64          | 0.025  |



## Standard Packaging

| Case Type    | Qty Per Reel | Reel Size |
|--------------|--------------|-----------|
|              | (Pcs)        | (inch)    |
| 0201/DFN0603 | 10,000       | 7         |

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