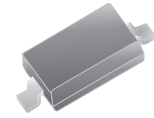


## CZRW55C2V4-G Thru CZRW55C39-G

Voltage: 2.4 to 39 Volts

Power: 500 mWatts

RoHS Device



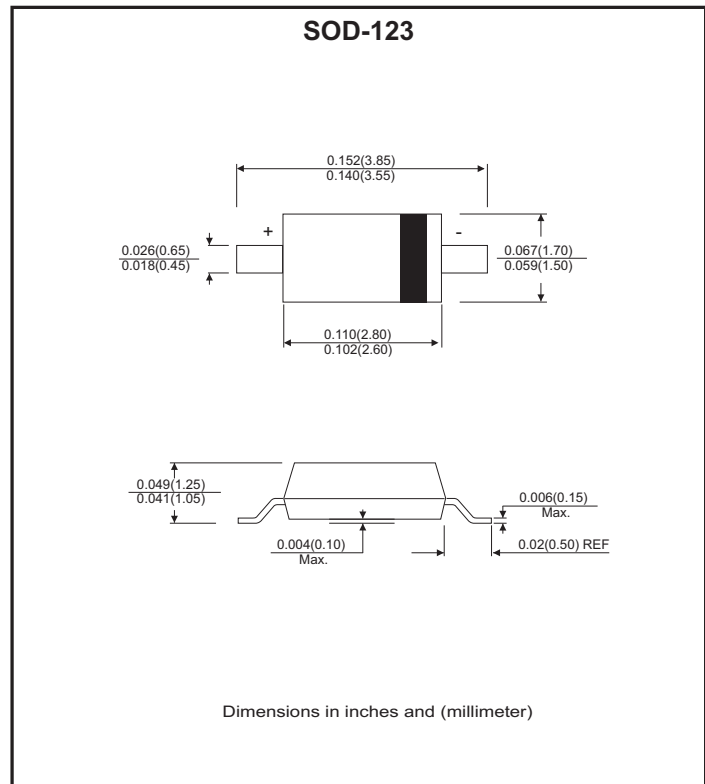
### Features

- Planar die construction.
- 500mW power dissipation.
- Ideally suited for automated assembly process.
- Ultra small surface mount package.

### Mechanical data

- Case: SOD-123, Molded plastic
- Terminals: Solderable per MIL-STD-202G, method 208
- Polarity: Indicated by cathode band.
- Mounting position: Any

Marking: see table on page2



### Maximum Ratings (TA=25°C, unless otherwise specified)

| Parameter  | Symbol                            | Value       | Unit |
|--|-----------------------------------|-------------|------|
| Forward voltage at IF=10mA (Note 2)              | V <sub>F</sub>                    | 0.9         | V    |
| Power dissipation (Note 1)                       | P <sub>D</sub>                    | 500         | mW   |
| Thermal resistance, junction to ambient air      | R <sub>θJA</sub>                  | 250         | °C/W |
| Operating junction and storage temperature range | T <sub>J</sub> , T <sub>STG</sub> | -65 to +150 | °C   |

Note:

1. Device mounted on ceramic PCB: 7.6mm×9.4mm×0.87mm with pad area 25mm<sup>2</sup>
2. Short duration test pulse used to minimize self-heating effect.
3. When provided, otherwise, parts are provided with date code only, and type number identifications appears on reel only.
4. f=1KHz

## Electrical Characteristics(Ta = 25°C)

| Part No.     | Nom in al Zener Voltage |       |       | Max. Zener Impedence |     |           |      | Max. Reverse Leakage Current |      | Temperature Coefficient of Zener Voltage @IZT=5mA (mV/°C) |      | Marking Code |
|--------------|-------------------------|-------|-------|----------------------|-----|-----------|------|------------------------------|------|---|------|--------------|
|              | VZ @ IZT                |       |       | ZZT @ IZT            |     | ZZK @ IZK |      | IR @ VR                      |      | Min.  | Max. |              |
|              | Nom.                    | Min.  | Max.  | ohm                  | mA  | ohm       | mA   | uA                           | V    |   |      |              |
| CZRW55C2V4-G | 2.4                     | 2.20  | 2.60  | 100                  | 5.0 | 600       | 1.00 | 50.0                         | 1.0  | -3.5  | 0.0  | WX           |
| CZRW55C2V7-G | 2.7                     | 2.50  | 2.90  | 100                  | 5.0 | 600       | 1.00 | 20.0                         | 1.0  | -3.5  | 0.0  | W1           |
| CZRW55C3V0-G | 3.0                     | 2.80  | 3.20  | 95                   | 5.0 | 600       | 1.00 | 10.0                         | 1.0  | -3.5  | 0.0  | W2           |
| CZRW55C3V3-G | 3.3                     | 3.10  | 3.50  | 95                   | 5.0 | 600       | 1.00 | 5.0                          | 1.0  | -3.5  | 0.0  | W3           |
| CZRW55C3V6-G | 3.6                     | 3.40  | 3.80  | 90                   | 5.0 | 600       | 1.00 | 5.0                          | 1.0  | -3.5  | 0.0  | W4           |
| CZRW55C3V9-G | 3.9                     | 3.70  | 4.10  | 90                   | 5.0 | 600       | 1.00 | 3.0                          | 1.0  | -3.5  | 0.0  | W5           |
| CZRW55C4V3-G | 4.3                     | 4.00  | 4.60  | 90                   | 5.0 | 600       | 1.00 | 3.0                          | 1.0  | -3.5  | 0.0  | W6           |
| CZRW55C4V7-G | 4.7                     | 4.40  | 5.00  | 80                   | 5.0 | 500       | 1.00 | 3.0                          | 2.0  | -3.5  | 0.2  | W7           |
| CZRW55C5V1-G | 5.1                     | 4.80  | 5.40  | 60                   | 5.0 | 480       | 1.00 | 2.0                          | 2.0  | -2.7  | 1.2  | W8           |
| CZRW55C5V6-G | 5.6                     | 5.20  | 6.00  | 40                   | 5.0 | 400       | 1.00 | 1.0                          | 2.0  | -2.0  | 2.5  | W9           |
| CZRW55C6V2-G | 6.2                     | 5.80  | 6.60  | 10                   | 5.0 | 150       | 1.00 | 3.0                          | 4.0  | 0.4   | 3.7  | WA           |
| CZRW55C6V8-G | 6.8                     | 6.40  | 7.20  | 15                   | 5.0 | 80        | 1.00 | 2.0                          | 4.0  | 1.2   | 4.5  | WB           |
| CZRW55C7V5-G | 7.5                     | 7.00  | 7.90  | 15                   | 5.0 | 80        | 1.00 | 1.0                          | 5.0  | 2.5   | 5.3  | WC           |
| CZRW55C8V2-G | 8.2                     | 7.70  | 8.70  | 15                   | 5.0 | 80        | 1.00 | 0.7                          | 5.0  | 3.2   | 6.2  | WD           |
| CZRW55C9V1-G | 9.1                     | 8.50  | 9.60  | 15                   | 5.0 | 100       | 1.00 | 0.5                          | 6.0  | 3.8   | 7.0  | WE           |
| CZRW55C10-G  | 10.0                    | 9.40  | 10.60 | 20                   | 5.0 | 150       | 1.00 | 0.2                          | 7.0  | 4.5   | 8.0  | WF           |
| CZRW55C11-G  | 11.0                    | 10.40 | 11.60 | 20                   | 5.0 | 150       | 1.00 | 0.1                          | 8.0  | 5.4   | 9.0  | WG           |
| CZRW55C12-G  | 12.0                    | 11.40 | 12.70 | 25                   | 5.0 | 150       | 1.00 | 0.1                          | 8.0  | 6.0   | 10.0 | WH           |
| CZRW55C13-G  | 13.0                    | 12.40 | 14.10 | 30                   | 5.0 | 170       | 1.00 | 0.1                          | 8.0  | 7.0   | 11.0 | WI           |
| CZRW55C15-G  | 15.0                    | 13.80 | 15.60 | 30                   | 5.0 | 200       | 1.00 | 0.1                          | 10.5 | 9.2   | 13.0 | WJ           |
| CZRW55C16-G  | 16.0                    | 15.30 | 17.10 | 40                   | 5.0 | 200       | 1.00 | 0.1                          | 11.2 | 10.4  | 14.0 | WK           |
| CZRW55C18-G  | 18.0                    | 16.80 | 19.10 | 45                   | 5.0 | 225       | 1.00 | 0.1                          | 12.6 | 12.4  | 16.0 | WL           |
| CZRW55C20-G  | 20.0                    | 18.80 | 21.20 | 55                   | 5.0 | 225       | 1.00 | 0.1                          | 14.0 | 14.4  | 18.0 | WM           |
| CZRW55C22-G  | 22.0                    | 20.80 | 23.30 | 55                   | 5.0 | 250       | 1.00 | 0.1                          | 15.4 | 16.4  | 20.0 | WN           |
| CZRW55C24-G  | 24.0                    | 22.80 | 25.60 | 70                   | 5.0 | 250       | 1.00 | 0.1                          | 16.8 | 18.4  | 22.0 | WO           |
| CZRW55C27-G  | 27.0                    | 25.10 | 28.90 | 80                   | 2.0 | 300       | 0.50 | 0.1                          | 18.9 | 21.4  | 25.3 | WP           |
| CZRW55C30-G  | 30.0                    | 28.00 | 32.00 | 80                   | 2.0 | 300       | 0.50 | 0.1                          | 21.0 | 24.4  | 29.4 | WQ           |
| CZRW55C33-G  | 33.0                    | 31.00 | 35.00 | 80                   | 2.0 | 325       | 0.50 | 0.1                          | 23.1 | 27.4  | 33.4 | WR           |
| CZRW55C36-G  | 36.0                    | 34.00 | 38.00 | 90                   | 2.0 | 350       | 0.50 | 0.1                          | 25.2 | 30.4  | 37.4 | WS           |
| CZRW55C39-G  | 39.0                    | 37.00 | 41.00 | 130                  | 2.0 | 350       | 0.50 | 0.1                          | 27.3 | 33.4  | 41.2 | WT           |

## Ratings and Characteristic Curves(CZRW55C2V4-G Thru. CZRW55C39-G)

Fig.1 Power Dissipation Derating Curve

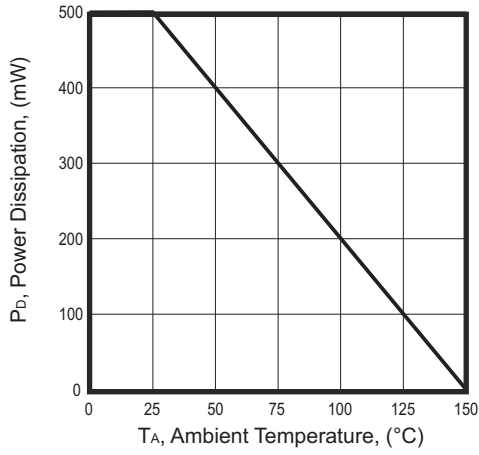


Fig.2 Zener Breakdown Characteristics

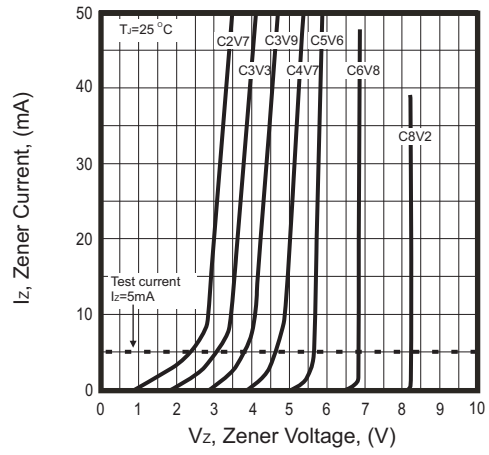


Fig.3 Zener Breakdown Characteristics

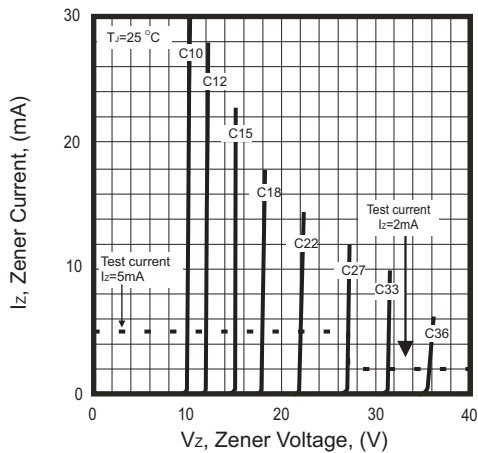


Fig.4 Zener Breakdown Characteristics

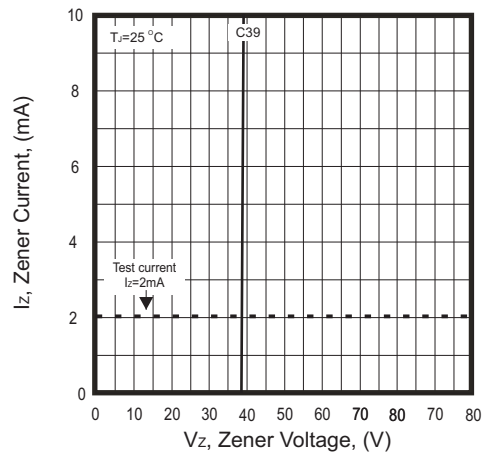
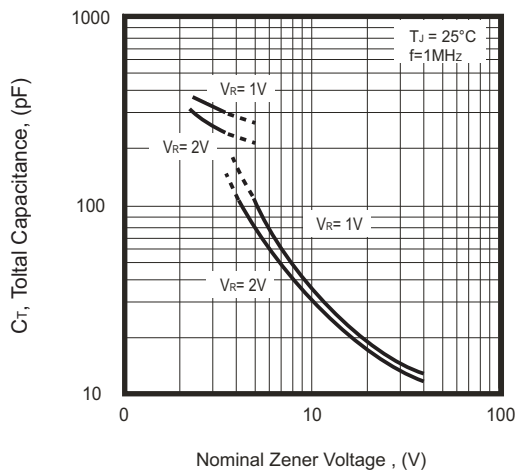
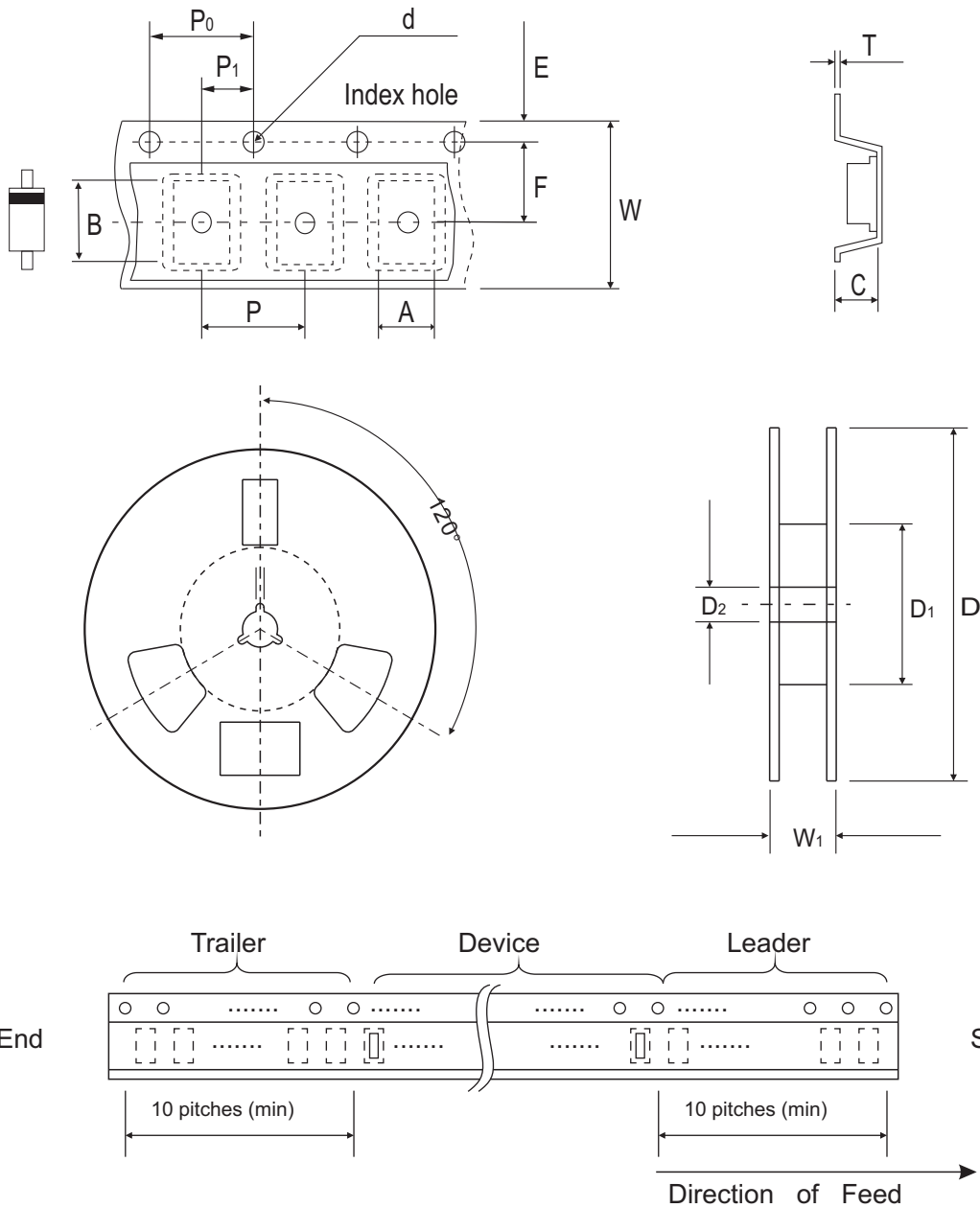


Fig.4- Total Capacitance vs Nominal Zener Voltage



## Reel Taping Specification



| SOD-123 | SYMBOL | A             | B             | C             | d             | D             | D1            | D2            |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|         | (mm)   | 1.85 ± 0.10   | 3.94 ± 0.10   | 1.57 ± 0.10   | 1.55 ± 0.10   | 178 ± 1.00    | 54.40 ± 0.40  | 13.0 ± 0.20   |
|         | (inch) | 0.073 ± 0.004 | 0.155 ± 0.004 | 0.062 ± 0.004 | 0.061 ± 0.004 | 7.008 ± 0.039 | 2.142 ± 0.016 | 0.512 ± 0.008 |

| SOD-123 | SYMBOL | E             | F             | P             | P0            | P1            | W                       | W1            |
|---------|--------|---------------|---------------|---------------|---------------|---------------|-------------------------|---------------|
|         | (mm)   | 1.75 ± 0.10   | 3.50 ± 0.05   | 4.00 ± 0.10   | 4.00 ± 0.10   | 2.00 ± 0.10   | 8.00 + 0.30 / - 0.10    | 9.50 ± 1.00   |
|         | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.158 ± 0.004 | 0.158 ± 0.004 | 0.079 ± 0.004 | 0.315 + 0.011 / - 0.004 | 0.374 ± 0.039 |