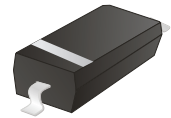
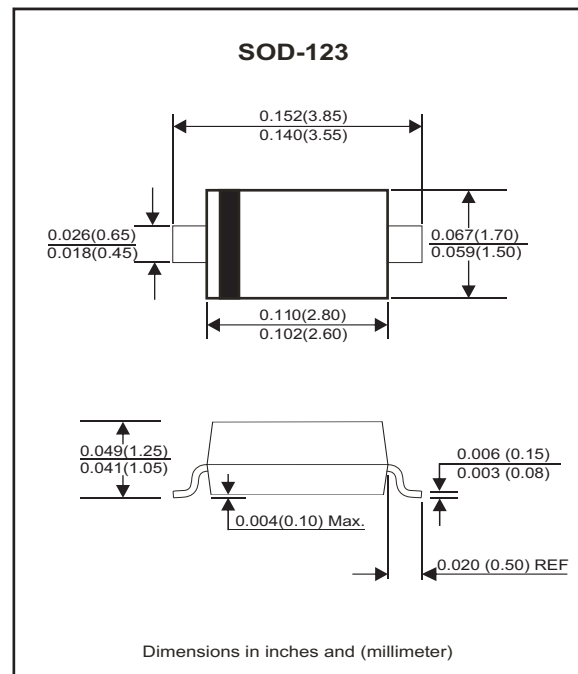


**CZRW5223B-G Thru. CZRW5256B-G****Voltage: 2.7 to 30 Volts****Power: 350 mWatts****RoHS Device****Features**

- For surface mounted applications.
- Ultra-Small surface medium package.
- General purpose, medium current.
- Ideally suited for automated assembly processes.

**Mechanical data**

- Case: SOD-123, Molded plastic.
- Terminals: Solder Plated, solderable per MIL-STD-750, method 2026.
- Polarity: Cathode band.
- Weight: 0.01 gram (approx.).

**Maximum Rating (@Ta=25°C unless otherwise specified)**

| Parameter                                    | Symbol          | Value       | Unit |
|----------------------------------------------|-----------------|-------------|------|
| Forward Voltage (Note 2) @ $I_F=10\text{mA}$ | $V_F$           | 0.9         | V    |
| Power Dissipation (Note 1)                   | $P_D$           | 350         | mW   |
| Thermal Resistance, Junction to Ambient Air  | $R_{\theta JA}$ | 357         | °C/W |
| Operating and Storage Temperature Range      | $T_J, T_{STG}$  | -65 to +150 | °C   |

Notes: 1. Device mounted on ceramic PCB; 7.6mm x 9.4mm x 0.87mm with pad areas 25mm<sup>2</sup>.

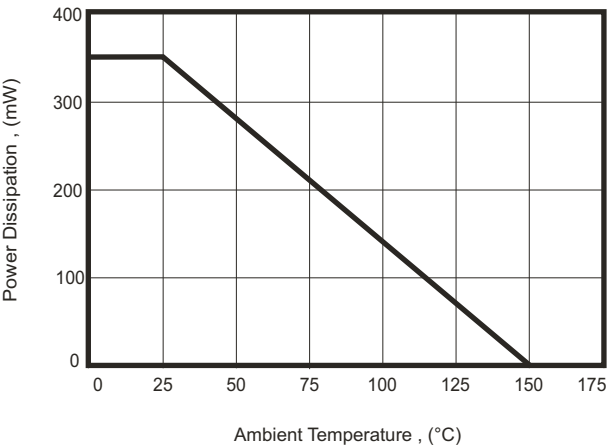
2. Tested with pulses,  $T_p \leq 1.0\text{ms}$ .

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

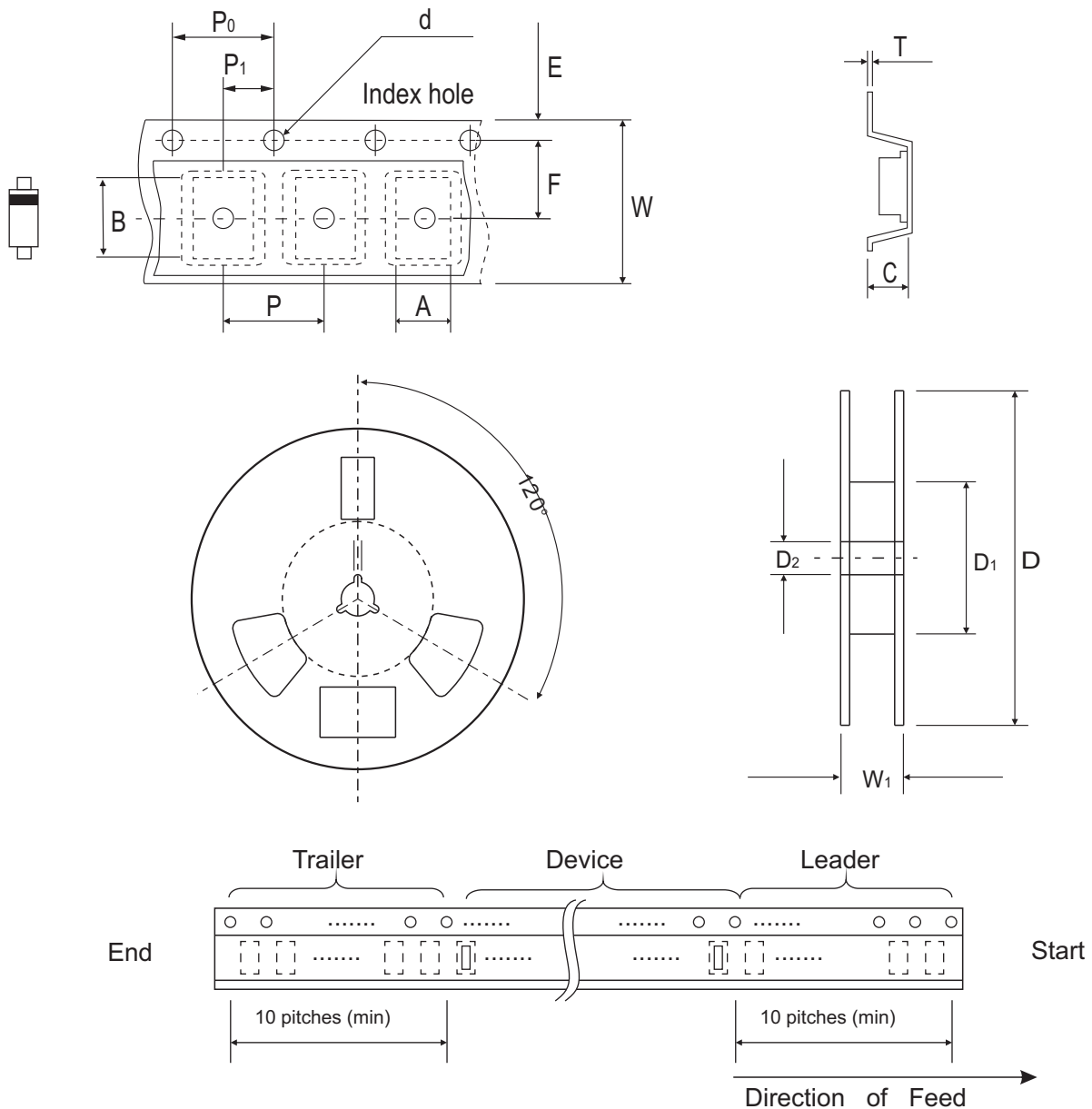
| Part Number | Zener Voltage                      |     |       | Operating resistance  |                      | Rising operating resistance |                      | Reverse current     |                    | Marking Code |
|-------------|------------------------------------|-----|-------|-----------------------|----------------------|-----------------------------|----------------------|---------------------|--------------------|--------------|
|             | V <sub>Z</sub> (V)@I <sub>ZT</sub> |     |       | Z <sub>ZT</sub> (Ohm) |                      | Z <sub>ZK</sub> (Ohm)       |                      | I <sub>R</sub> (uA) |                    |              |
|             | Min                                | Nom | Max   | Max                   | I <sub>ZT</sub> (mA) | Max                         | I <sub>ZK</sub> (mA) | Max                 | V <sub>R</sub> (V) |              |
| CZRW5223B-G | 2.57                               | 2.7 | 2.84  | 30                    | 20                   | 1300                        | 0.25                 | 75                  | 1.0                | C3           |
| CZRW5225B-G | 2.85                               | 3.0 | 3.15  | 30                    | 20                   | 1600                        | 0.25                 | 50                  | 1.0                | C5           |
| CZRW5226B-G | 3.14                               | 3.3 | 3.47  | 28                    | 20                   | 1600                        | 0.25                 | 25                  | 1.0                | G1           |
| CZRW5227B-G | 3.42                               | 3.6 | 3.78  | 24                    | 20                   | 1700                        | 0.25                 | 15                  | 1.0                | G2           |
| CZRW5228B-G | 3.71                               | 3.9 | 4.10  | 23                    | 20                   | 1900                        | 0.25                 | 10                  | 1.0                | G3           |
| CZRW5229B-G | 4.09                               | 4.3 | 4.52  | 22                    | 20                   | 2000                        | 0.25                 | 5                   | 1.0                | G4           |
| CZRW5230B-G | 4.47                               | 4.7 | 4.94  | 19                    | 20                   | 1900                        | 0.25                 | 5                   | 2.0                | G5           |
| CZRW5231B-G | 4.85                               | 5.1 | 5.36  | 17                    | 20                   | 1600                        | 0.25                 | 5                   | 2.0                | E1           |
| CZRW5232B-G | 5.32                               | 5.6 | 5.88  | 11                    | 20                   | 1600                        | 0.25                 | 5                   | 3.0                | E2           |
| CZRW5233B-G | 5.70                               | 6.0 | 6.30  | 7                     | 20                   | 1600                        | 0.25                 | 5                   | 3.5                | E3           |
| CZRW5234B-G | 5.89                               | 6.2 | 6.51  | 7                     | 20                   | 1000                        | 0.25                 | 5                   | 4.0                | E4           |
| CZRW5235B-G | 6.46                               | 6.8 | 7.14  | 5                     | 20                   | 750                         | 0.25                 | 3                   | 5.0                | E5           |
| CZRW5236B-G | 7.13                               | 7.5 | 7.88  | 6                     | 20                   | 500                         | 0.25                 | 3                   | 6.0                | F1           |
| CZRW5237B-G | 7.79                               | 8.2 | 8.61  | 8                     | 20                   | 500                         | 0.25                 | 3                   | 6.5                | F2           |
| CZRW5238B-G | 8.27                               | 8.7 | 9.14  | 8                     | 20                   | 600                         | 0.25                 | 3                   | 6.5                | F3           |
| CZRW5239B-G | 8.65                               | 9.1 | 9.56  | 10                    | 20                   | 600                         | 0.25                 | 3                   | 7.0                | F4           |
| CZRW5240B-G | 9.50                               | 10  | 10.50 | 17                    | 20                   | 600                         | 0.25                 | 3                   | 8.0                | F5           |
| CZRW5241B-G | 10.45                              | 11  | 11.55 | 22                    | 20                   | 600                         | 0.25                 | 2                   | 8.4                | H1           |
| CZRW5242B-G | 11.40                              | 12  | 12.60 | 30                    | 20                   | 600                         | 0.25                 | 1                   | 9.1                | H2           |
| CZRW5243B-G | 12.35                              | 13  | 13.65 | 13                    | 9.5                  | 600                         | 0.25                 | 0.5                 | 9.9                | H3           |
| CZRW5244B-G | 13.30                              | 14  | 14.70 | 15                    | 9.0                  | 600                         | 0.25                 | 0.1                 | 10                 | H4           |
| CZRW5245B-G | 14.25                              | 15  | 15.75 | 16                    | 8.5                  | 600                         | 0.25                 | 0.1                 | 11                 | H5           |
| CZRW5246B-G | 15.20                              | 16  | 16.80 | 17                    | 7.8                  | 600                         | 0.25                 | 0.1                 | 12                 | J1           |
| CZRW5248B-G | 17.10                              | 18  | 18.90 | 21                    | 7.0                  | 600                         | 0.25                 | 0.1                 | 14                 | J3           |
| CZRW5250B-G | 19.00                              | 20  | 21.00 | 25                    | 6.2                  | 600                         | 0.25                 | 0.1                 | 15                 | J5           |
| CZRW5251B-G | 20.90                              | 22  | 23.10 | 29                    | 5.6                  | 600                         | 0.25                 | 0.1                 | 17                 | K1           |
| CZRW5252B-G | 22.80                              | 24  | 25.20 | 33                    | 5.2                  | 600                         | 0.25                 | 0.1                 | 18                 | K2           |
| CZRW5253B-G | 23.75                              | 25  | 26.25 | 35                    | 5.0                  | 600                         | 0.25                 | 0.1                 | 19                 | K3           |
| CZRW5254B-G | 25.65                              | 27  | 28.35 | 41                    | 5.0                  | 600                         | 0.25                 | 0.1                 | 21                 | K4           |
| CZRW5255B-G | 26.60                              | 28  | 29.40 | 44                    | 4.5                  | 600                         | 0.25                 | 0.1                 | 21                 | K5           |
| CZRW5256B-G | 28.50                              | 30  | 31.50 | 49                    | 4.2                  | 600                         | 0.25                 | 0.1                 | 23                 | M1           |

RATING AND CHARACTERISTIC CURVES (CZRW5223B-G Thru CZRW5256B-G)

Fig.1- Power Derating Curve



## Reel Taping Specification



| SOD-123 | SYMBOL | A             | B             | C             | d             | D             | D <sub>1</sub> | D <sub>2</sub> |
|---------|--------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
|         | (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             | P <sub>0</sub> | P <sub>1</sub> | W                  | W <sub>1</sub> |
|---------|--------|---------------|---------------|---------------|----------------|----------------|--------------------|----------------|
|         | (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+0.012/-0.004 | 0.374 ± 0.039  |

## Marking Code

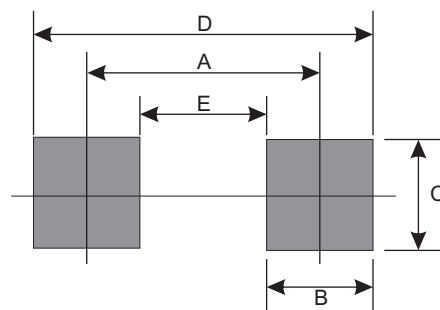
| Part Number               | Marking Code |
|---------------------------|--------------|
| CZRW5223B-G ~ CZRW5256B-G | XX           |



Product type marking code (see page.2)

## Suggested PAD Layout

| SIZE | SOD-123 |        |
|------|---------|--------|
|      | (mm)    | (inch) |
| A    | 3.35    | 0.132  |
| B    | 0.80    | 0.031  |
| C    | 1.00    | 0.039  |
| D    | 4.15    | 0.163  |
| E    | 2.55    | 0.100  |



## Standard Packaging

| Case Type | Qty Per Reel | Reel Size |
|-----------|--------------|-----------|
|           | (Pcs)        | (inch)    |
| SOD-123   | 3,000        | 7         |