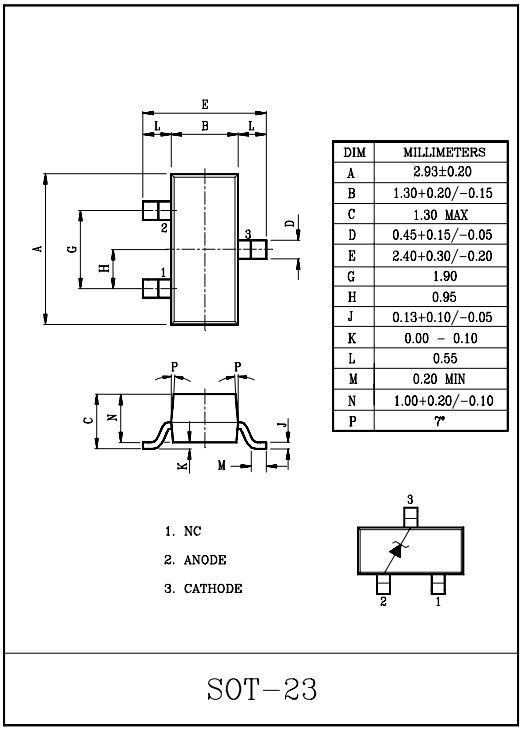
# Z02W2.0V ~ 24V

ZENER DIODE
SILICON EPITAXIAL PLANAR DIODE

CONSTANT VOLTAGE REGULATION APPLICATION.
REFERENCE VOLTAGE APPLICATION.

FEATURES

- Small Package : SOT-23.
- Nominal Voltage Tolerance About ±2.5%.




| DIM | MILLIMETERS |
|---|---|
| A | 2.93±0.20 |
| B | 1.30+0.20/−0.15 |
| C | 1.30 MAX |
| D | 0.45+0.15/−0.05 |
| E | 2.40+0.30/−0.20 |
| G | 1.90 |
| H | 0.95 |
| J | 0.13+0.10/−0.05 |
| K | 0.00 − 0.10 |
| L | 0.55 |
| M | 0.20 MIN |
| N | 1.00+0.20/−0.10 |
| P | 7° |

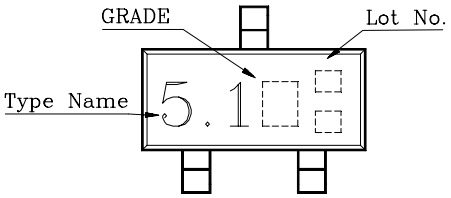
SOT-23

MAXIMUM RATINGS (Ta=25℃)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---|---|---|---|
| Power Dissipation | $P_D$ | 200 | mW |
| Junction Temperature | $T_j$ | 150 | ℃ |
| Storage Temperature Range | $T_{stg}$ | -55~150 | ℃ |

Example : Z02W5.1V

Marking



ELECTRICAL CHARACTERISTICS (Ta=25℃)

| TYPE No. | Grade | Zener Voltage Vz (V) | | | Dynamic Impedance Zz (Ω) | | KNEE Dynamic Impedance Zzk (Ω) | | Reverse Current $I_R$ (μA) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Min. | Max. | Iz (mA) | MAX. | Iz (mA) | MAX. | Iz (mA) | MAX. | $V_R$(V) |
| Z02W2.0V | | 1.85 | 2.15 | 5 | 100 | 5 | 1000 | 0.5 | 120 | 1.0 |
| | X | 1.85 | 2.05 | | | | | | | |
| | Z | 1.95 | 2.15 | | | | | | | |
| Z02W2.2V | | 2.05 | 2.38 | 5 | 100 | 5 | 1000 | 0.5 | 120 | 1.0 |
| | X | 2.05 | 2.26 | | | | | | | |
| | Z | 2.16 | 2.38 | | | | | | | |
| Z02W2.4V | | 2.28 | 2.60 | 5 | 100 | 5 | 1000 | 0.5 | 120 | 1.0 |
| | X | 2.28 | 2.50 | | | | | | | |
| | Z | 2.40 | 2.60 | | | | | | | |
| Z02W2.7V | | 2.50 | 2.90 | 5 | 110 | 5 | 1000 | 0.5 | 120 | 1.0 |
| | X | 2.50 | 2.75 | | | | | | | |
| | Z | 2.65 | 2.90 | | | | | | | |
| Z02W3.0V | | 2.80 | 3.20 | 5 | 120 | 5 | 1000 | 0.5 | 50 | 1.0 |
| | X | 2.80 | 3.05 | | | | | | | |
| | Z | 2.95 | 3.20 | | | | | | | |
| Z02W3.3V | | 3.10 | 3.50 | 5 | 130 | 5 | 1000 | 0.5 | 20 | 1.0 |
| | X | 3.10 | 3.35 | | | | | | | |
| | Z | 3.25 | 3.50 | | | | | | | |
| Z02W3.6V | | 3.40 | 3.80 | 5 | 130 | 5 | 1000 | 0.5 | 10 | 1.0 |
| | X | 3.40 | 3.65 | | | | | | | |
| | Z | 3.55 | 3.80 | | | | | | | |
| Z02W3.9V | | 3.70 | 4.10 | 5 | 130 | 5 | 1000 | 0.5 | 10 | 1.0 |
| | X | 3.70 | 3.97 | | | | | | | |
| | Z | 3.87 | 4.10 | | | | | | | |
| Z02W4.3V | | 4.00 | 4.50 | 5 | 130 | 5 | 1000 | 0.5 | 5 | 1.0 |
| | X | 4.00 | 4.23 | | | | | | | |
| | Y | 4.13 | 4.35 | | | | | | | |
| | Z | 4.25 | 4.50 | | | | | | | |
| Z02W4.7V | | 4.40 | 4.90 | 5 | 120 | 5 | 1000 | 0.5 | 5 | 1.0 |
| | X | 4.40 | 4.63 | | | | | | | |
| | Y | 4.53 | 4.76 | | | | | | | |
| | Z | 4.66 | 4.90 | | | | | | | |
| Z02W5.1V | | 4.80 | 5.40 | 5 | 70 | 5 | 1000 | 0.5 | 1 | 1.5 |
| | X | 4.80 | 5.07 | | | | | | | |
| | Y | 4.97 | 5.24 | | | | | | | |
| | Z | 5.14 | 5.40 | | | | | | | |

ELECTRICAL CHARACTERISTICS (Ta=25℃)

| TYPE No. | Grade | Zener Voltage Vz (V) | | | Dynamic Impedance Zz (Ω) | | KNEE Dynamic Impedance Zzk (Ω) | | Reverse Current $I_R$(μA) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Min. | Max. | Iz (mA) | MAX. | Iz (mA) | MAX. | Iz (mA) | MAX. | $V_R$(V) |
| Z02W5.6V | | 5.30 | 6.00 | 5 | 40 | 5 | 900 | 0.5 | 1 | 2.5 |
| | X | 5.30 | 5.63 | | | | | | | |
| | Y | 5.43 | 5.81 | | | | | | | |
| | Z | 5.61 | 6.00 | | | | | | | |
| Z02W6.2V | | 5.80 | 6.60 | 5 | 30 | 5 | 500 | 0.5 | 1 | 3.0 |
| | X | 5.80 | 6.20 | | | | | | | |
| | Y | 6.00 | 6.39 | | | | | | | |
| | Z | 6.19 | 6.60 | | | | | | | |
| Z02W6.8V | | 6.40 | 7.20 | 5 | 25 | 5 | 150 | 0.5 | 0.5 | 5.0 |
| | X | 6.40 | 6.80 | | | | | | | |
| | Y | 6.60 | 7.02 | | | | | | | |
| | Z | 6.82 | 7.20 | | | | | | | |
| Z02W7.5V | | 7.00 | 7.90 | 5 | 23 | 5 | 120 | 0.5 | 0.5 | 6.0 |
| | X | 7.00 | 7.43 | | | | | | | |
| | Y | 7.23 | 7.66 | | | | | | | |
| | Z | 7.46 | 7.90 | | | | | | | |
| Z02W8.2V | | 7.70 | 8.70 | 5 | 20 | 5 | 120 | 0.5 | 0.5 | 6.5 |
| | X | 7.70 | 8.16 | | | | | | | |
| | Y | 7.96 | 8.43 | | | | | | | |
| | Z | 8.23 | 8.70 | | | | | | | |
| Z02W9.1V | | 8.50 | 9.60 | 5 | 18 | 5 | 120 | 0.5 | 0.5 | 7.0 |
| | X | 8.50 | 9.00 | | | | | | | |
| | Y | 8.80 | 9.30 | | | | | | | |
| | Z | 9.10 | 9.60 | | | | | | | |
| Z02W10V | | 9.40 | 10.60 | 5 | 15 | 5 | 120 | 0.5 | 0.5 | 8.0 |
| | X | 9.40 | 9.93 | | | | | | | |
| | Y | 9.73 | 10.26 | | | | | | | |
| | Z | 10.06 | 10.60 | | | | | | | |
| Z02W11V | | 10.40 | 11.60 | 5 | 15 | 5 | 120 | 0.5 | 0.5 | 8.5 |
| | X | 10.40 | 10.98 | | | | | | | |
| | Y | 10.73 | 11.26 | | | | | | | |
| | Z | 11.06 | 11.60 | | | | | | | |
| Z02W12V | | 11.40 | 12.60 | 5 | 15 | 5 | 110 | 0.5 | 0.5 | 9.0 |
| | X | 11.40 | 11.93 | | | | | | | |
| | Y | 11.73 | 12.26 | | | | | | | |
| | Z | 12.06 | 12.60 | | | | | | | |

ELECTRICAL CHARACTERISTICS (Ta=25℃)

| TYPE No. | Grade | Zener Voltage Vz (V) | | | Dynamic Impedance Zz (Ω) | | KNEE Dynamic Impedance Zzk (Ω) | | Reverse Current $I_R$(μA) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Min. | Max. | Iz (mA) | MAX. | Iz (mA) | MAX. | Iz (mA) | MAX. | $V_R$(V) |
| Z02W13V | | 12.40 | 14.10 | 5 | 15 | 5 | 110 | 0.5 | 0.5 | 10 |
| | X | 12.40 | 13.08 | | | | | | | |
| | Y | 12.88 | 13.57 | | | | | | | |
| | Z | 13.37 | 14.10 | | | | | | | |
| Z02W15V | | 13.80 | 15.60 | 5 | 15 | 5 | 110 | 0.5 | 0.5 | 11 |
| | X | 13.80 | 14.63 | | | | | | | |
| | Y | 14.33 | 15.11 | | | | | | | |
| | Z | 14.81 | 15.60 | | | | | | | |
| Z02W16V | | 15.30 | 17.10 | 5 | 18 | 5 | 150 | 0.5 | 0.5 | 12 |
| | X | 15.30 | 16.10 | | | | | | | |
| | Y | 15.80 | 16.60 | | | | | | | |
| | Z | 16.30 | 17.10 | | | | | | | |
| Z02W18V | | 16.80 | 19.10 | 5 | 20 | 5 | 150 | 0.5 | 0.5 | 14 |
| | X | 16.80 | 17.76 | | | | | | | |
| | Y | 17.46 | 18.43 | | | | | | | |
| | Z | 18.13 | 19.10 | | | | | | | |
| Z02W20V | | 18.80 | 21.20 | 5 | 25 | 5 | 200 | 0.5 | 0.5 | 15 |
| | X | 18.80 | 19.78 | | | | | | | |
| | Y | 19.48 | 20.46 | | | | | | | |
| | Z | 20.16 | 21.20 | | | | | | | |
| Z02W22V | | 20.80 | 23.30 | 5 | 30 | 5 | 200 | 0.5 | 0.5 | 17 |
| | X | 20.80 | 21.88 | | | | | | | |
| | Y | 21.48 | 22.56 | | | | | | | |
| | Z | 22.16 | 23.30 | | | | | | | |
| Z02W24V | | 22.80 | 25.60 | 5 | 40 | 5 | 200 | 0.5 | 0.5 | 19 |
| | X | 22.80 | 24.11 | | | | | | | |
| | Y | 23.61 | 24.92 | | | | | | | |
| | Z | 24.42 | 25.60 | | | | | | | |

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