

## CZRV5221B - CZRV5259B

Voltage: 2.4 - 39 Volts

Power: 200mWatts

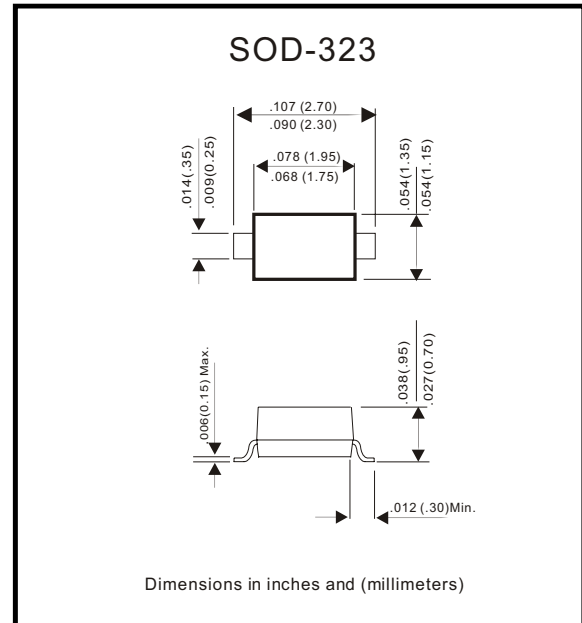


### FEATURES

- Planar Die construction
- 200mW Power Dissipation
- Zener Voltages from 2.4V - 39V
- Ideally Suited for Automated Assembly Processes

### MECHANICAL DATA

- Case: SOD-323, Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Approx. Weight: 0.008 gram



### Maximum Ratings and Electrical Characteristics

| Parameter   | Symbol    | Value       |
|---|-----------|-------------|
| Power Dissipation (Note 1) @ 75 °C  | $P_D$     | 200         |
| Peak forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) (Note 2) | $I_{FSM}$ | 2.0         |
| Operating Junction and Storage Temperature Range  | $T_J$     | -55 to +150 |

#### NOTES:

- Mounted on 5.0mm2 (.013mm thick) land areas.
- Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

## ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ unless otherwise noted) $V_F=1.2\text{V}$ max, $I_F=100\text{mA}$

| Part Number                   | Nominal Zener Voltage |        |        | Max. Zener Impedance |     |                   |      | Max. Reverse Leakage Current |     |
|-------------------------------|-----------------------|--------|--------|----------------------|-----|-------------------|------|------------------------------|-----|
|                               | $V_Z @ I_{ZT}$        |        |        | $Z_{ZT} @ I_{ZT}$    |     | $Z_{ZK} @ I_{ZK}$ |      | $I_R @ V_R$                  |     |
|                               | Nom. V                | Min. V | Max. V | $\Omega$             | mA  | $\Omega$          | mA   | $\mu\text{A}$                | V   |
| <b>200 mWatts Zener Diode</b> |                       |        |        |                      |     |                   |      |                              |     |
| CZRV5221B                     | 2.4                   | 2.28   | 2.52   | 30                   | 20  | 1200              | 0.25 | 100                          | 1   |
| CZRV5222B                     | 2.5                   | 2.38   | 2.63   | 30                   | 20  | 1250              | 0.25 | 100                          | 1   |
| CZRV5223B                     | 2.7                   | 2.57   | 2.84   | 30                   | 20  | 1300              | 0.25 | 75                           | 1   |
| CZRV5225B                     | 3                     | 2.85   | 3.15   | 30                   | 20  | 1600              | 0.25 | 50                           | 1   |
| CZRV5226B                     | 3.3                   | 3.14   | 3.47   | 28                   | 20  | 1600              | 0.25 | 25                           | 1   |
| CZRV5227B                     | 3.6                   | 3.42   | 3.78   | 24                   | 20  | 1700              | 0.25 | 15                           | 1   |
| CZRV5228B                     | 3.9                   | 3.71   | 4.1    | 23                   | 20  | 1900              | 0.25 | 10                           | 1   |
| CZRV5229B                     | 4.3                   | 4.09   | 4.52   | 22                   | 20  | 2000              | 0.25 | 5                            | 1   |
| CZRV5230B                     | 4.7                   | 4.47   | 4.94   | 19                   | 20  | 1900              | 0.25 | 5                            | 2   |
| CZRV5231B                     | 5.1                   | 4.85   | 5.36   | 17                   | 20  | 1600              | 0.25 | 5                            | 2   |
| CZRV5232B                     | 5.6                   | 5.32   | 5.88   | 11                   | 20  | 1600              | 0.25 | 5                            | 3   |
| CZRV5234B                     | 6.2                   | 5.89   | 6.51   | 7                    | 20  | 1000              | 0.25 | 5                            | 4   |
| CZRV5235B                     | 6.8                   | 6.46   | 7.14   | 5                    | 20  | 750               | 0.25 | 3                            | 5   |
| CZRV5236B                     | 7.5                   | 7.13   | 7.88   | 6                    | 20  | 500               | 0.25 | 3                            | 6   |
| CZRV5237B                     | 8.2                   | 7.79   | 8.61   | 8                    | 20  | 500               | 0.25 | 3                            | 6   |
| CZRV5239B                     | 9.1                   | 8.65   | 9.56   | 10                   | 20  | 600               | 0.25 | 3                            | 6.5 |
| CZRV5240B                     | 10                    | 9.5    | 10.5   | 17                   | 20  | 600               | 0.25 | 3                            | 8   |
| CZRV5241B                     | 11                    | 10.45  | 11.55  | 22                   | 20  | 600               | 0.25 | 3                            | 8.4 |
| CZRV5242B                     | 12                    | 11.4   | 12.6   | 30                   | 20  | 600               | 0.25 | 2                            | 9.1 |
| CZRV5243B                     | 13                    | 12.35  | 13.65  | 13                   | 9.5 | 600               | 0.25 | 1                            | 9.9 |
| CZRV5245B                     | 15                    | 14.25  | 15.75  | 16                   | 8.5 | 600               | 0.25 | 0.5                          | 11  |
| CZRV5246B                     | 16                    | 15.2   | 16.8   | 17                   | 7.8 | 600               | 0.25 | 0.1                          | 12  |
| CZRV5248B                     | 18                    | 17.1   | 18.9   | 21                   | 7   | 600               | 0.25 | 0.1                          | 14  |
| CZRV5250B                     | 20                    | 19     | 21     | 25                   | 6.2 | 600               | 0.25 | 0.1                          | 15  |
| CZRV5251B                     | 22                    | 20.9   | 23.1   | 29                   | 5.6 | 600               | 0.25 | 0.1                          | 17  |
| CZRV5252B                     | 24                    | 22.8   | 25.2   | 33                   | 5.2 | 600               | 0.25 | 0.1                          | 18  |
| CZRV5254B                     | 27                    | 25.65  | 28.35  | 41                   | 5   | 600               | 0.25 | 0.1                          | 21  |
| CZRV5255B                     | 28                    | 26.6   | 29.4   | 44                   | 4.5 | 600               | 0.25 | 0.1                          | 21  |
| CZRV5256B                     | 30                    | 28.5   | 31.5   | 49                   | 4.2 | 600               | 0.25 | 0.1                          | 23  |
| CZRV5257B                     | 33                    | 31.35  | 34.65  | 58                   | 3.8 | 700               | 0.25 | 0.1                          | 25  |
| CZRV5258B                     | 36                    | 34.2   | 37.8   | 70                   | 3.4 | 700               | 0.25 | 0.1                          | 27  |
| CZRV5259B                     | 39                    | 37.05  | 40.95  | 80                   | 3.2 | 800               | 0.25 | 0.1                          | 30  |

### NOTE:

- Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$ .
- Specials Available Include:
  - Nominal zener voltages between the voltages shown and tighter voltage tolerances.
  - Matched sets.
- Zener Voltage ( $V_Z$ ) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature ( $T_L$ ) at  $300^{\circ}\text{C}$ , from the diode body.
- Zener Impedance ( $Z_Z$ ) Derivation. The zener impedance is derived from the 60 cycle ac voltage, which results when an AC current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed on  $I_{ZT}$  or  $I_{ZK}$ .
- Surge Current ( $I_R$ ) Non-Repetitive. The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of wave pulse of 1/120 second duration superimposed on the test current,  $I_{ZT}$ , per JEDEC registration; however, actual device capability is as described in Figure 5.

