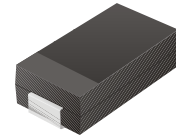


## CZRB5926 - CZRB5956

Voltage: 11- 200 Volts  
Power: 1.5 Watts

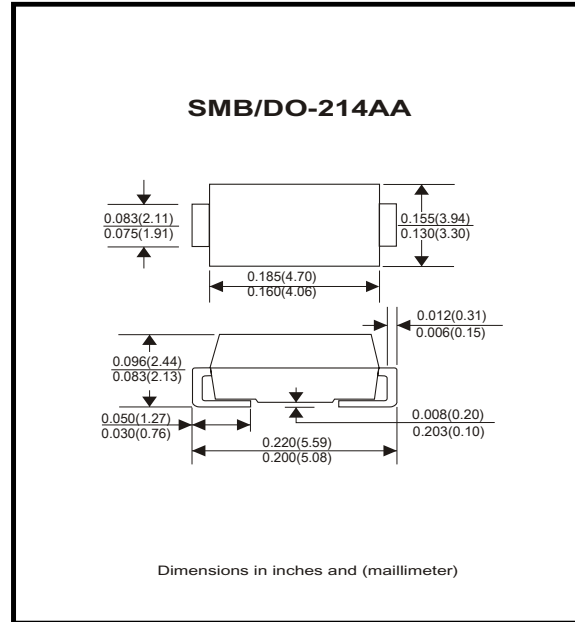


### Feature

- For surf ace mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O

### Mechanical data

- Case: JEDEC DO-214AA Molded plastic over
- Terminals: Solder Plated, solderable per Flammability Classification 94V-O MIL-STD-750, method 2026
- Weight:0.003 ounce, 0.093 gram



### Maximum Ratings and Electrical Characteristics

| Parameter   | Symbol         | Value       | Units          |
|---|----------------|-------------|----------------|
| DC Power Dissipation @ TL=75, Measure at Zero Lead Length(Note 1, Fig.)<br>Derate above 75 °C               | $P_D$          | 1.5<br>15   | Watts<br>mW/°C |
| Peak forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) (Note 1,2) | $I_{FSM}$      | 10          | Amps           |
| Operating Junction and Storage Temperature Range  | $T_J, T_{STG}$ | -55 to +150 | °C             |

#### NOTES:

1. Mounted on 5.0mm<sup>2</sup>(.013mm thick) land areas.
2. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.
3. ZENER VOLTAGE ( $V_Z$ ) MEASUREMENT Nominal zener voltage is measured with the device function in thermal equilibrium with ambient temperature at 25 °C.
4. ZENER IMPEDANCE ( $Z_Z$ ) DERIVATION ZZT and ZZK are measured by dividing the ac voltage drop across the device by the accurent applied. The specified limits are for  $I_Z(ac) = 0.1 I_Z, (dc)$  with the ac frequency = 60Hz.

| <b>ELECTRICAL CHARACTERISTICS</b>   |   |                              |                                   |                                   |                 |                             |                |                                      |
|---|---|------------------------------|-----------------------------------|-----------------------------------|-----------------|-----------------------------|----------------|--------------------------------------|
| (T <sub>L</sub> =30°C unless otherwise noted) (V <sub>F</sub> =1.5Volts Max @ I <sub>F</sub> =200mAdc for all types.) |   |                              |                                   |                                   |                 |                             |                |                                      |
| Device  | Nominal Zener Voltage V <sub>Z</sub> @ I <sub>ZT</sub> (Note 1) | Test current I <sub>ZT</sub> | Maximum Zener Impedance (Note 2)  |                                   |                 | Max Reverse Leakage Current |                | Max DC Zener Current I <sub>ZM</sub> |
|   |   |                              | Z <sub>ZT</sub> @ I <sub>ZT</sub> | Z <sub>ZK</sub> @ I <sub>ZK</sub> | I <sub>ZK</sub> | I <sub>R</sub>              | V <sub>R</sub> |                                      |
|   |   |                              | (Ohms)                            | (Ohms)                            | (mA)            | (uA)                        | (Volts)        |                                      |
|   | (Volts)   | (mA)                         | (Ohms)                            | (Ohms)                            | (mA)            | (uA)                        | (Volts)        | (mAdc)                               |
| CZRB5926  | 11  | 34.1                         | 5.5                               | 550                               | 0.25            | 1                           | 8.4            | 136                                  |
| CZRB5927  | 12  | 31.2                         | 6.5                               | 550                               | 0.25            | 1                           | 9.1            | 125                                  |
| CZRB5928  | 13  | 28.8                         | 7                                 | 550                               | 0.25            | 1                           | 9.9            | 115                                  |
| CZRB5929  | 15  | 25                           | 9                                 | 600                               | 0.25            | 1                           | 11.4           | 100                                  |
| CZRB5930  | 16  | 23.4                         | 10                                | 600                               | 0.25            | 1                           | 12.2           | 93                                   |
| CZRB5931  | 18  | 20.8                         | 12                                | 650                               | 0.25            | 1                           | 13.7           | 83                                   |
| CZRB5932  | 20  | 18.7                         | 14                                | 650                               | 0.25            | 1                           | 15.2           | 75                                   |
| CZRB5933  | 22  | 17                           | 17.5                              | 650                               | 0.25            | 1                           | 16.7           | 68                                   |
| CZRB5934  | 24  | 15.6                         | 19                                | 700                               | 0.25            | 1                           | 18.2           | 62                                   |
| CZRB5935  | 27  | 13.9                         | 23                                | 700                               | 0.25            | 1                           | 20.6           | 55                                   |
| CZRB5936  | 30  | 12.5                         | 26                                | 750                               | 0.25            | 1                           | 22.8           | 50                                   |
| CZRB5937  | 33  | 11.4                         | 33                                | 800                               | 0.25            | 1                           | 25.1           | 45                                   |
| CZRB5938  | 36  | 10.4                         | 38                                | 850                               | 0.25            | 1                           | 27.4           | 41                                   |
| CZRB5939  | 39  | 9.6                          | 45                                | 900                               | 0.25            | 1                           | 29.7           | 38                                   |
| CZRB5940  | 43  | 8.7                          | 53                                | 950                               | 0.25            | 1                           | 32.7           | 34                                   |
| CZRB5941  | 47  | 8                            | 67                                | 1000                              | 0.25            | 1                           | 35.8           | 31                                   |
| CZRB5942  | 51  | 7.3                          | 70                                | 1100                              | 0.25            | 1                           | 38.8           | 29                                   |
| CZRB5943  | 56  | 6.7                          | 86                                | 1300                              | 0.25            | 1                           | 42.6           | 26                                   |
| CZRB5944  | 62  | 6                            | 100                               | 1500                              | 0.25            | 1                           | 47.1           | 24                                   |
| CZRB5945  | 68  | 5.5                          | 120                               | 1700                              | 0.25            | 1                           | 51.7           | 22                                   |
| CZRB5946  | 75  | 5                            | 140                               | 2000                              | 0.25            | 1                           | 56             | 20                                   |
| CZRB5947  | 82  | 4.6                          | 160                               | 2500                              | 0.25            | 1                           | 62.2           | 18                                   |
| CZRB5948  | 91  | 4.1                          | 200                               | 3000                              | 0.25            | 1                           | 69.2           | 16                                   |
| CZRB5949  | 100   | 3.7                          | 250                               | 3100                              | 0.25            | 1                           | 76             | 15                                   |
| CZRB5950  | 110   | 3.4                          | 300                               | 4000                              | 0.25            | 1                           | 83.6           | 13                                   |
| CZRB5951  | 120   | 3.1                          | 380                               | 4500                              | 0.25            | 1                           | 91.2           | 12                                   |
| CZRB5952  | 130   | 2.9                          | 450                               | 5000                              | 0.25            | 1                           | 98.8           | 11                                   |
| CZRB5953  | 150   | 2.5                          | 600                               | 6000                              | 0.25            | 1                           | 114            | 10                                   |
| CZRB5954  | 160   | 2.3                          | 700                               | 6500                              | 0.25            | 1                           | 121.6          | 9                                    |
| CZRB5955  | 180   | 2.1                          | 900                               | 7000                              | 0.25            | 1                           | 136.8          | 8                                    |
| CZRB5956  | 200   | 1.9                          | 1200                              | 8000                              | 0.25            | 1                           | 152            | 7                                    |

\* TOLERANCE AND VOLTAGE DESIGNATION Tolerance designation - The type numbers listed indicate a tolerance of ± 5%

## RATING AND CHARACTERISTIC CURVES (CZRB5926-5956)

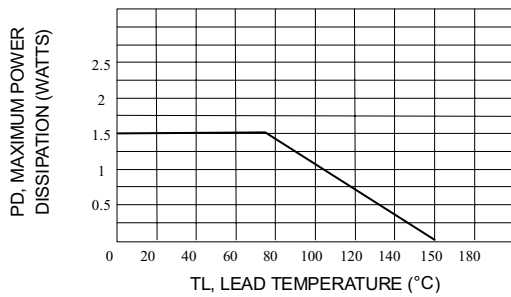


Fig.1 - STEADY STATE POWER DERATING

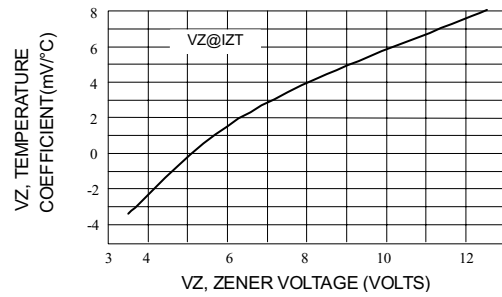


Fig.2 - ZENER VOLTAGE-TO 12 VOLTS

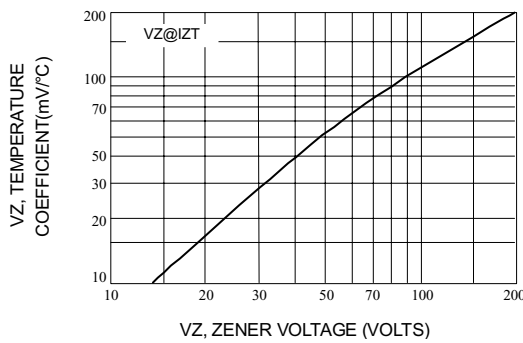


Fig.3 - ZENER VOLTAGE-10 TO 200 VOLTS

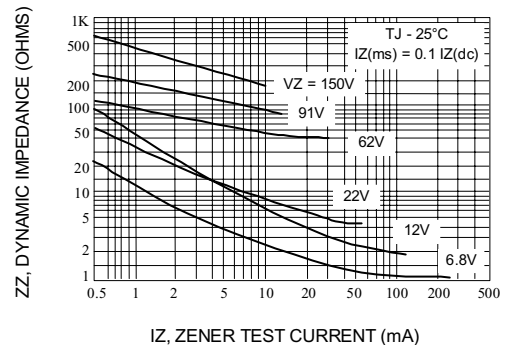


Fig.4 - EFFECT OF ZENER CURRENT

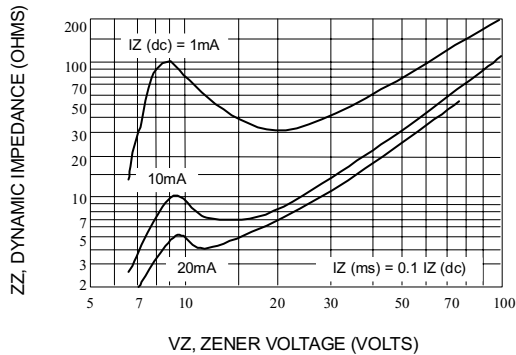


Fig.5 - VZ = 6.8 THRU 10 VOLTS

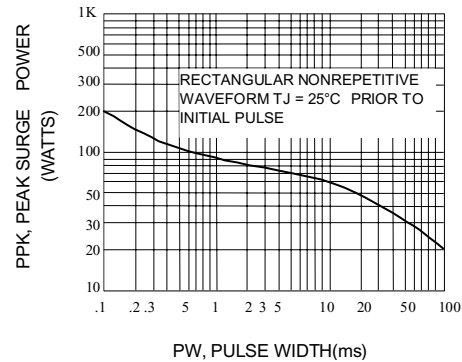


Fig.6 - VZ = 12 THRU 82 VOLTS

