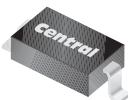


CMHZ5221B THRU CMHZ5267B

**SURFACE MOUNT  
SILICON ZENER DIODE  
2.4 VOLTS THRU 75 VOLTS  
500mW, 5% TOLERANCE**



**SOD-123 CASE**



[www.centralemi.com](http://www.centralemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMHZ5221B Series Silicon Zener Diode is a high quality voltage regulator, manufactured in a surface mount package, designed for use in industrial, commercial, entertainment and computer applications.

**MARKING CODE: SEE MARKING CODE ON ELECTRICAL CHARACTERISTIC TABLE**

**MAXIMUM RATINGS:**

Power Dissipation (@ $T_L=75^\circ\text{C}$ )  
Maximum Operating Junction Temperature  
Storage Temperature  
Thermal Resistance

**SYMBOL**

$P_D$  500  
 $T_J$  +150  
 $T_{stg}$  -65 to +175  
 $\theta_{JL}$  150

**UNIT**

mW  
 $^\circ\text{C}$   
 $^\circ\text{C}$   
 $^\circ\text{C/W}$

Note:  $V_Z$  Tolerance "B" suffix =  $\pm 5\%$ ,  $V_Z$  Tolerance "C" suffix =  $\pm 2\%$ ,  $V_Z$  Tolerance "D" suffix =  $\pm 1\%$

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$ ),  $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$  (for all types)

| TYPE      | ZENER VOLTAGE<br>$V_Z @ I_{ZT}$ |     |       | TEST CURRENT<br>$I_{ZT}$ | MAXIMUM ZENER IMPEDANCE |                   |          | MAXIMUM REVERSE CURRENT |     | MAX. TEMP. COEFF.<br>$\theta V_Z$ | MARKING CODE |
|-----------|---------------------------------|-----|-------|--------------------------|-------------------------|-------------------|----------|-------------------------|-----|-----------------------------------|--------------|
|           | MIN                             | NOM | MAX   |                          | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ |          | $I_R @ V_R$             |     |                                   |              |
|           | V                               | V   | V     |                          |                         | $\Omega$          | $\Omega$ |                         | mA  |                                   |              |
| CMHZ5221B | 2.280                           | 2.4 | 2.520 | 20                       | 30                      | 1200              | 0.25     | 100                     | 1.0 | -0.085                            | CC1          |
| CMHZ5222B | 2.375                           | 2.5 | 2.625 | 20                       | 30                      | 1250              | 0.25     | 100                     | 1.0 | -0.085                            | CC2          |
| CMHZ5223B | 2.565                           | 2.7 | 2.835 | 20                       | 30                      | 1300              | 0.25     | 75                      | 1.0 | -0.080                            | CC3          |
| CMHZ5224B | 2.660                           | 2.8 | 2.940 | 20                       | 30                      | 1400              | 0.25     | 75                      | 1.0 | -0.080                            | CC4          |
| CMHZ5225B | 2.850                           | 3.0 | 3.150 | 20                       | 30                      | 1600              | 0.25     | 50                      | 1.0 | -0.075                            | CC5          |
| CMHZ5226B | 3.135                           | 3.3 | 3.465 | 20                       | 28                      | 1600              | 0.25     | 25                      | 1.0 | -0.070                            | CD1          |
| CMHZ5227B | 3.420                           | 3.6 | 3.780 | 20                       | 24                      | 1700              | 0.25     | 15                      | 1.0 | -0.065                            | CD2          |
| CMHZ5228B | 3.705                           | 3.9 | 4.095 | 20                       | 23                      | 1900              | 0.25     | 10                      | 1.0 | -0.060                            | CD3          |
| CMHZ5229B | 4.085                           | 4.3 | 4.515 | 20                       | 22                      | 2000              | 0.25     | 5.0                     | 1.0 | $\pm 0.055$                       | CD4          |
| CMHZ5230B | 4.465                           | 4.7 | 4.935 | 20                       | 19                      | 1900              | 0.25     | 5.0                     | 2.0 | $\pm 0.030$                       | CD5          |
| CMHZ5231B | 4.845                           | 5.1 | 5.355 | 20                       | 17                      | 1600              | 0.25     | 5.0                     | 2.0 | $\pm 0.030$                       | CE1          |
| CMHZ5232B | 5.320                           | 5.6 | 5.880 | 20                       | 11                      | 1600              | 0.25     | 5.0                     | 3.0 | +0.038                            | CE2          |
| CMHZ5233B | 5.700                           | 6.0 | 6.300 | 20                       | 7.0                     | 1600              | 0.25     | 5.0                     | 3.5 | +0.038                            | CE3          |
| CMHZ5234B | 5.890                           | 6.2 | 6.510 | 20                       | 7.0                     | 1000              | 0.25     | 5.0                     | 4.0 | +0.045                            | CE4          |
| CMHZ5235B | 6.460                           | 6.8 | 7.140 | 20                       | 5.0                     | 750               | 0.25     | 3.0                     | 5.0 | +0.050                            | CE5          |
| CMHZ5236B | 7.125                           | 7.5 | 7.875 | 20                       | 6.0                     | 500               | 0.25     | 3.0                     | 6.0 | +0.058                            | CF1          |
| CMHZ5237B | 7.790                           | 8.2 | 8.610 | 20                       | 8.0                     | 500               | 0.25     | 3.0                     | 6.5 | +0.062                            | CF2          |
| CMHZ5238B | 8.265                           | 8.7 | 9.135 | 20                       | 8.0                     | 600               | 0.25     | 3.0                     | 6.5 | +0.065                            | CF3          |
| CMHZ5239B | 8.645                           | 9.1 | 9.555 | 20                       | 10                      | 600               | 0.25     | 3.0                     | 7.0 | +0.068                            | CF4          |
| CMHZ5240B | 9.500                           | 10  | 10.50 | 20                       | 17                      | 600               | 0.25     | 3.0                     | 8.0 | +0.075                            | CF5          |
| CMHZ5241B | 10.45                           | 11  | 11.55 | 20                       | 22                      | 600               | 0.25     | 2.0                     | 8.4 | +0.076                            | CH1          |
| CMHZ5242B | 11.40                           | 12  | 12.60 | 20                       | 30                      | 600               | 0.25     | 1.0                     | 9.1 | +0.077                            | CH2          |
| CMHZ5243B | 12.35                           | 13  | 13.65 | 9.5                      | 13                      | 600               | 0.25     | 0.5                     | 9.9 | +0.079                            | CH3          |
| CMHZ5244B | 13.30                           | 14  | 14.70 | 9.0                      | 15                      | 600               | 0.25     | 0.1                     | 10  | +0.082                            | CH4          |
| CMHZ5245B | 14.25                           | 15  | 15.75 | 8.5                      | 16                      | 600               | 0.25     | 0.1                     | 11  | +0.082                            | CH5          |
| CMHZ5246B | 15.20                           | 16  | 16.80 | 7.8                      | 17                      | 600               | 0.25     | 0.1                     | 12  | +0.083                            | CJ1          |
| CMHZ5247B | 16.15                           | 17  | 17.85 | 7.4                      | 19                      | 600               | 0.25     | 0.1                     | 13  | +0.084                            | CJ2          |
| CMHZ5248B | 17.10                           | 18  | 18.90 | 7.0                      | 21                      | 600               | 0.25     | 0.1                     | 14  | +0.085                            | CJ3          |
| CMHZ5249B | 18.05                           | 19  | 19.95 | 6.6                      | 23                      | 600               | 0.25     | 0.1                     | 14  | +0.086                            | CJ4          |
| CMHZ5250B | 19.00                           | 20  | 21.00 | 6.2                      | 25                      | 600               | 0.25     | 0.1                     | 15  | +0.086                            | CJ5          |
| CMHZ5251B | 20.90                           | 22  | 23.10 | 5.6                      | 29                      | 600               | 0.25     | 0.1                     | 17  | +0.087                            | CK1          |
| CMHZ5252B | 22.80                           | 24  | 25.20 | 5.2                      | 33                      | 600               | 0.25     | 0.1                     | 18  | +0.087                            | CK2          |
| CMHZ5253B | 23.75                           | 25  | 26.25 | 5.0                      | 35                      | 600               | 0.25     | 0.1                     | 19  | +0.089                            | CK3          |

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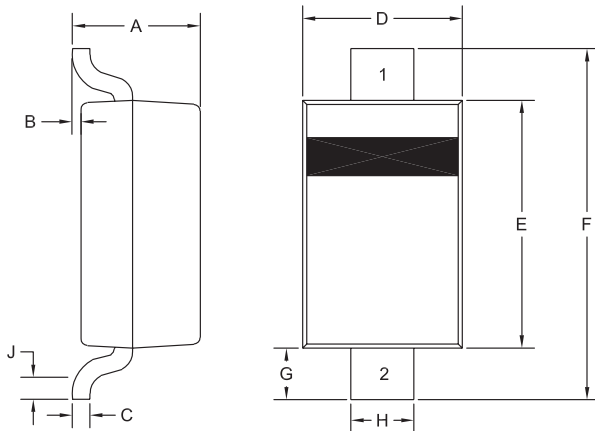


**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$ ),  $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$  (for all types)

| TYPE      | ZENER VOLTAGE<br>$V_Z @ I_{ZT}$ |     |       | TEST CURRENT | MAXIMUM ZENER IMPEDANCE |                   |               | MAXIMUM REVERSE CURRENT |    | MAX. TEMP. COEFF. | MARKING CODE |
|-----------|---------------------------------|-----|-------|--------------|-------------------------|-------------------|---------------|-------------------------|----|-------------------|--------------|
|           | MIN                             | NOM | MAX   | $I_{ZT}$     | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ | $I_R @ V_R$   | $\theta V_Z$            |    |                   |              |
|           | V                               | V   | V     | mA           | $\Omega$                | $\Omega$          | $\mu\text{A}$ | $\%^\circ\text{C}$      |    |                   |              |
| CMHZ5254B | 25.65                           | 27  | 28.35 | 4.6          | 41                      | 600               | 0.25          | 0.1                     | 21 | +0.090            | CK4          |
| CMHZ5255B | 26.60                           | 28  | 29.40 | 4.5          | 44                      | 600               | 0.25          | 0.1                     | 21 | +0.091            | CK5          |
| CMHZ5256B | 28.50                           | 30  | 31.50 | 4.2          | 49                      | 600               | 0.25          | 0.1                     | 23 | +0.091            | CM1          |
| CMHZ5257B | 31.35                           | 33  | 34.65 | 3.8          | 58                      | 700               | 0.25          | 0.1                     | 25 | +0.092            | CM2          |
| CMHZ5258B | 34.20                           | 36  | 37.80 | 3.4          | 70                      | 700               | 0.25          | 0.1                     | 27 | +0.093            | CM3          |
| CMHZ5259B | 37.05                           | 39  | 40.95 | 3.2          | 80                      | 800               | 0.25          | 0.1                     | 30 | +0.094            | CM4          |
| CMHZ5260B | 40.85                           | 43  | 45.15 | 3.0          | 93                      | 900               | 0.25          | 0.1                     | 33 | +0.095            | CM5          |
| CMHZ5261B | 44.65                           | 47  | 49.35 | 2.7          | 105                     | 1000              | 0.25          | 0.1                     | 36 | +0.095            | CN1          |
| CMHZ5262B | 48.45                           | 51  | 53.55 | 2.5          | 125                     | 1100              | 0.25          | 0.1                     | 39 | +0.096            | CN2          |
| CMHZ5263B | 53.20                           | 56  | 58.80 | 2.2          | 150                     | 1300              | 0.25          | 0.1                     | 43 | +0.096            | CN3          |
| CMHZ5264B | 57.00                           | 60  | 63.00 | 2.1          | 170                     | 1400              | 0.25          | 0.1                     | 46 | +0.097            | CN4          |
| CMHZ5265B | 58.90                           | 62  | 65.10 | 2.0          | 185                     | 1400              | 0.25          | 0.1                     | 47 | +0.097            | CN5          |
| CMHZ5266B | 64.60                           | 68  | 71.40 | 1.8          | 230                     | 1600              | 0.25          | 0.1                     | 52 | +0.097            | CP1          |
| CMHZ5267B | 71.25                           | 75  | 78.75 | 1.7          | 270                     | 1700              | 0.25          | 0.1                     | 56 | +0.098            | CP2          |

Higher Zener voltages may be available upon request. Please consult factory.

**SOD-123 CASE - MECHANICAL OUTLINE**



R5

| SYMBOL | DIMENSIONS |       | DIMENSIONS  |      |
|--------|------------|-------|-------------|------|
|        | INCHES     |       | MILLIMETERS |      |
|        | MIN        | MAX   | MIN         | MAX  |
| A      | 0.037      | 0.053 | 0.95        | 1.35 |
| B      | 0.000      | 0.005 | 0.00        | 0.12 |
| C      | -          | 0.008 | -           | 0.20 |
| D      | 0.055      | 0.071 | 1.40        | 1.80 |
| E      | 0.098      | 0.110 | 2.50        | 2.80 |
| F      | 0.142      | 0.154 | 3.60        | 3.90 |
| G      | 0.016      | -     | 0.40        | -    |
| H      | 0.020      | 0.028 | 0.50        | 0.70 |
| J      | 0.010      | -     | 0.25        | -    |

SOD-123 (REV:R5)

**LEAD CODE:**

- 1) Cathode
- 2) Anode

R10 (18-January 2024)