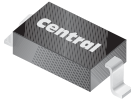


CMHZ5221B THRU CMHZ5267B

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



SOD-123 CASE



www.centrasemi.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
 θ_{JL} 150

UNIT

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

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 $V_Z @ I_{ZT}$ | | | TEST CURRENT I_{ZT} mA | MAXIMUM ZENER IMPEDANCE | | | MAXIMUM REVERSE CURRENT | | MAX. TEMP. COEFF. θ_{VZ} %/°C | MARKING CODE |
|-----------|---------------------------------|----------|----------|--------------------------------|-------------------------------|-------------------------------|------------------------------|-------------------------|-----|--|--------------|
| | MIN V | NOM V | MAX V | | $Z_{ZT} @ I_{ZT}$ Ω | $Z_{ZK} @ I_{ZK}$ Ω | $I_R @ V_R$ μA | V_R V | | | |
| | | | | | | | | | | | |
| 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 | ± 0.055 | CD4 |
| CMHZ5230B | 4.465 | 4.7 | 4.935 | 20 | 19 | 1900 | 0.25 | 5.0 | 2.0 | ± 0.030 | CD5 |
| CMHZ5231B | 4.845 | 5.1 | 5.355 | 20 | 17 | 1600 | 0.25 | 5.0 | 2.0 | ± 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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CMHZ5221B THRU CMHZ5267B

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

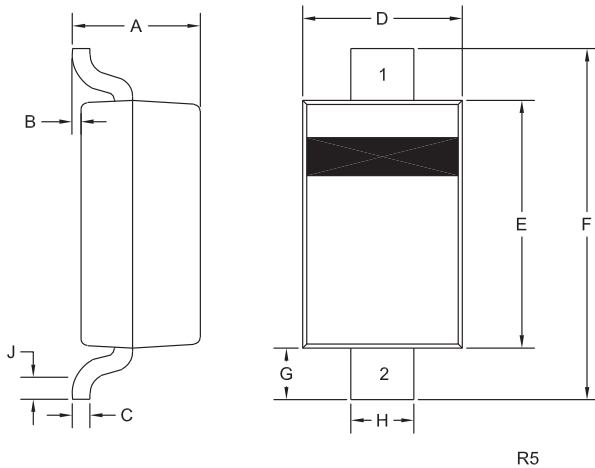


ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$), $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$ (for all types)

| TYPE | ZENER VOLTAGE $V_Z @ I_{ZT}$ | | | TEST CURRENT | MAXIMUM ZENER IMPEDANCE | | | MAXIMUM REVERSE CURRENT | | MAX. TEMP. COEFF. | MARKING CODE |
|-----------|---------------------------------|-----|-------|--------------|-------------------------|-------------------|---------------|-------------------------|----|-------------------|--------------|
| | MIN | NOM | MAX | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | $I_R @ V_R$ | θV_Z | | | |
| | V | V | V | mA | Ω | Ω | μA | %/°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



| SYMBOL | 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

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OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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