

**CMZ5334B THRU CMZ5388B**

**SURFACE MOUNT  
HIGH POWER SILICON ZENER DIODE  
10 WATT, 3.6 THRU 200 VOLTS  
5% TOLERANCE**



**SMC CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMZ5334B series silicon Zener diode is a high quality voltage regulator, manufactured in an epoxy molded surface mount package, and designed for use in industrial, commercial, entertainment and computer applications.

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

**MAXIMUM RATINGS:** ( $T_A=25^{\circ}\text{C}$ )

Power Dissipation ( $T_L=100^{\circ}\text{C}$ )

Operating and Storage Junction Temperature

Thermal Resistance

Thermal Resistance

**SYMBOL**

|                |             |
|----------------|-------------|
| $P_D$          | 10          |
| $T_J, T_{stg}$ | -65 to +200 |
| $\theta_{JL}$  | 10          |
| $\theta_{JA}$  | 87.5        |

**UNITS**

|                      |
|----------------------|
| W                    |
| $^{\circ}\text{C}$   |
| $^{\circ}\text{C/W}$ |
| $^{\circ}\text{C/W}$ |

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)  $V_F=1.2\text{V MAX @ } I_F=1.0\text{A}$  (for all types)

| TYPE     | ZENER VOLTAGE                    |     |       | TEST CURRENT | MAXIMUM ZENER IMPEDANCE           |                                   |     | MAXIMUM REVERSE CURRENT         |      | MAXIMUM SURGE CURRENT (Note 1) | MAXIMUM VOLTAGE REGULATION (Note 2) | MAXIMUM REGULATOR CURRENT | MARKING CODE |
|----------|----------------------------------|-----|-------|--------------|-----------------------------------|-----------------------------------|-----|---------------------------------|------|--------------------------------|-------------------------------------|---------------------------|--------------|
|          | V <sub>Z</sub> @ I <sub>ZT</sub> |     |       |              | Z <sub>ZT</sub> @ I <sub>ZT</sub> | Z <sub>ZK</sub> @ I <sub>ZK</sub> |     | I <sub>R</sub> @ V <sub>R</sub> |      |                                |                                     |                           |              |
|          | MIN                              | NOM | MAX   |              | I <sub>ZT</sub>                   | Ω                                 | Ω   | mA                              | μA   |                                |                                     |                           |              |
|          | V                                | V   | V     | mA           | Ω                                 | Ω                                 | mA  | μA                              | V    | A                              | V                                   | mA                        |              |
| CMZ5334B | 3.420                            | 3.6 | 3.780 | 350          | 3.0                               | 500                               | 1.0 | 150                             | 1.0  | 18.7                           | 0.80                                | 1320                      | C5334B       |
| CMZ5335B | 3.705                            | 3.9 | 4.095 | 320          | 2.0                               | 500                               | 1.0 | 50                              | 1.0  | 17.6                           | 0.54                                | 1220                      | C5335B       |
| CMZ5336B | 4.085                            | 4.3 | 4.515 | 290          | 2.0                               | 500                               | 1.0 | 10                              | 1.0  | 16.4                           | 0.49                                | 1100                      | C5336B       |
| CMZ5337B | 4.465                            | 4.7 | 4.935 | 264          | 2.0                               | 450                               | 1.0 | 10                              | 1.0  | 15.3                           | 0.44                                | 1010                      | C5337B       |
| CMZ5338B | 4.845                            | 5.1 | 5.355 | 240          | 2.0                               | 400                               | 1.0 | 10                              | 1.0  | 14.4                           | 0.39                                | 930                       | C5338B       |
| CMZ5339B | 5.320                            | 5.6 | 5.880 | 220          | 1.0                               | 400                               | 1.0 | 10                              | 2.0  | 13.4                           | 0.25                                | 865                       | C5339B       |
| CMZ5340B | 5.700                            | 6.0 | 6.300 | 200          | 1.0                               | 300                               | 1.0 | 10                              | 3.0  | 12.7                           | 0.25                                | 790                       | C5340B       |
| CMZ5342B | 6.460                            | 6.8 | 7.140 | 175          | 1.0                               | 200                               | 1.0 | 100                             | 5.2  | 11.5                           | 0.15                                | 700                       | C5342B       |
| CMZ5343B | 7.125                            | 7.5 | 7.875 | 175          | 1.5                               | 200                               | 1.0 | 100                             | 5.7  | 10.7                           | 0.15                                | 630                       | C5343B       |
| CMZ5344B | 7.790                            | 8.2 | 8.610 | 150          | 1.5                               | 200                               | 1.0 | 100                             | 6.2  | 10.0                           | 0.20                                | 580                       | C5344B       |
| CMZ5345B | 8.265                            | 8.7 | 9.135 | 150          | 2.0                               | 200                               | 1.0 | 100                             | 6.6  | 7.5                            | 0.20                                | 545                       | C5345B       |
| CMZ5346B | 8.645                            | 9.1 | 9.555 | 150          | 2.0                               | 150                               | 1.0 | 7.5                             | 6.9  | 9.2                            | 0.22                                | 520                       | C5346B       |
| CMZ5347B | 9.500                            | 10  | 10.50 | 125          | 2.0                               | 125                               | 1.0 | 5.0                             | 7.6  | 8.6                            | 0.22                                | 475                       | C5347B       |
| CMZ5348B | 10.45                            | 11  | 11.55 | 125          | 2.5                               | 125                               | 1.0 | 5.0                             | 8.4  | 8.0                            | 0.25                                | 430                       | C5348B       |
| CMZ5349B | 11.40                            | 12  | 12.60 | 100          | 2.5                               | 125                               | 1.0 | 2.0                             | 9.1  | 7.5                            | 0.25                                | 395                       | C5349B       |
| CMZ5350B | 12.35                            | 13  | 13.65 | 100          | 2.5                               | 100                               | 1.0 | 1.0                             | 9.9  | 7.0                            | 0.25                                | 365                       | C5350B       |
| CMZ5351B | 13.30                            | 14  | 14.70 | 100          | 2.5                               | 75                                | 1.0 | 1.0                             | 10.6 | 6.7                            | 0.25                                | 340                       | C5351B       |
| CMZ5352B | 14.25                            | 15  | 15.75 | 75           | 2.5                               | 75                                | 1.0 | 1.0                             | 11.5 | 6.3                            | 0.25                                | 315                       | C5352B       |
| CMZ5353B | 15.20                            | 16  | 16.80 | 75           | 2.5                               | 75                                | 1.0 | 1.0                             | 12.2 | 6.0                            | 0.30                                | 295                       | C5353B       |
| CMZ5354B | 16.15                            | 17  | 17.85 | 70           | 2.5                               | 75                                | 1.0 | 0.5                             | 12.9 | 5.8                            | 0.35                                | 280                       | C5354B       |
| CMZ5355B | 17.10                            | 18  | 18.90 | 65           | 2.5                               | 75                                | 1.0 | 0.5                             | 13.7 | 5.5                            | 0.40                                | 264                       | C5355B       |
| CMZ5356B | 18.05                            | 19  | 19.95 | 65           | 3.0                               | 75                                | 1.0 | 0.5                             | 14.4 | 5.3                            | 0.40                                | 250                       | C5356B       |
| CMZ5357B | 19.00                            | 20  | 21.00 | 65           | 3.0                               | 75                                | 1.0 | 0.5                             | 15.2 | 5.1                            | 0.40                                | 237                       | C5357B       |
| CMZ5358B | 20.90                            | 22  | 23.10 | 50           | 3.5                               | 75                                | 1.0 | 0.5                             | 16.7 | 4.7                            | 0.45                                | 216                       | C5358B       |

R9 (8-February 2012)

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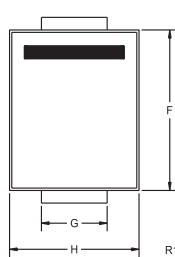
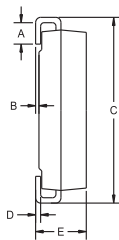
**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^\circ\text{C}$ )  $V_F=1.2\text{V MAX @ } I_F=1.0\text{A}$  (for all types)

| TYPE     | ZENER VOLTAGE<br>$V_Z @ I_{ZT}$ |     |       | TEST CURRENT | MAXIMUM ZENER IMPEDANCE |                   |             | MAXIMUM REVERSE CURRENT |      | MAXIMUM SURGE CURRENT<br>(Note 1) | MAXIMUM VOLTAGE REGULATION<br>(Note 2) | MAXIMUM REGULATOR CURRENT | MARKING CODE |
|----------|---------------------------------|-----|-------|--------------|-------------------------|-------------------|-------------|-------------------------|------|-----------------------------------|----------------------------------------|---------------------------|--------------|
|          | MIN                             | NOM | MAX   | $I_{ZT}$     | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ | $I_R @ V_R$ |                         |      | $I_r$                             | $\Delta V_Z$                           | $I_{ZM}$                  |              |
|          | V                               | V   | V     | mA           | $\Omega$                | $\Omega$          | mA          | $\mu\text{A}$           | V    | A                                 | V                                      | mA                        |              |
| CMZ5359B | 22.80                           | 24  | 25.20 | 50           | 3.5                     | 100               | 1.0         | 0.5                     | 18.2 | 4.4                               | 0.55                                   | 198                       | C5359B       |
| CMZ5360B | 23.75                           | 25  | 26.25 | 50           | 4.0                     | 110               | 1.0         | 0.5                     | 19.0 | 4.3                               | 0.55                                   | 190                       | C5360B       |
| CMZ5361B | 25.65                           | 27  | 28.35 | 50           | 5.0                     | 120               | 1.0         | 0.5                     | 20.6 | 4.1                               | 0.60                                   | 176                       | C5361B       |
| CMZ5362B | 26.60                           | 28  | 29.40 | 50           | 6.0                     | 130               | 1.0         | 0.5                     | 21.2 | 3.9                               | 0.60                                   | 170                       | C5362B       |
| CMZ5363B | 28.50                           | 30  | 31.50 | 40           | 8.0                     | 140               | 1.0         | 0.5                     | 22.8 | 3.7                               | 0.60                                   | 158                       | C5363B       |
| CMZ5364B | 31.35                           | 33  | 34.65 | 40           | 10                      | 150               | 1.0         | 0.5                     | 25.1 | 3.5                               | 0.65                                   | 144                       | C5364B       |
| CMZ5365B | 34.20                           | 36  | 37.80 | 30           | 11                      | 160               | 1.0         | 0.5                     | 27.4 | 3.3                               | 0.65                                   | 132                       | C5365B       |
| CMZ5366B | 37.05                           | 39  | 40.95 | 30           | 14                      | 170               | 1.0         | 0.5                     | 29.7 | 3.1                               | 0.65                                   | 122                       | C5366B       |
| CMZ5367B | 40.85                           | 43  | 45.15 | 30           | 20                      | 190               | 1.0         | 0.5                     | 32.7 | 2.8                               | 0.70                                   | 110                       | C5367B       |
| CMZ5368B | 44.65                           | 47  | 49.35 | 25           | 25                      | 210               | 1.0         | 0.5                     | 35.8 | 2.7                               | 0.80                                   | 100                       | C5368B       |
| CMZ5369B | 48.45                           | 51  | 53.55 | 25           | 27                      | 230               | 1.0         | 0.5                     | 38.8 | 2.5                               | 0.90                                   | 93.0                      | C5369B       |
| CMZ5370B | 53.20                           | 56  | 58.80 | 20           | 35                      | 280               | 1.0         | 0.5                     | 42.6 | 2.3                               | 1.00                                   | 86.0                      | C5370B       |
| CMZ5371B | 57.00                           | 60  | 63.00 | 20           | 40                      | 350               | 1.0         | 0.5                     | 45.5 | 2.2                               | 1.20                                   | 79.0                      | C5371B       |
| CMZ5372B | 58.90                           | 62  | 65.10 | 20           | 42                      | 400               | 1.0         | 0.5                     | 47.1 | 2.1                               | 1.35                                   | 76.0                      | C5372B       |
| CMZ5373B | 64.60                           | 68  | 71.40 | 20           | 44                      | 500               | 1.0         | 0.5                     | 51.7 | 2.0                               | 1.50                                   | 70.0                      | C5373B       |
| CMZ5374B | 71.25                           | 75  | 78.75 | 20           | 45                      | 620               | 1.0         | 0.5                     | 56.0 | 1.9                               | 1.60                                   | 63.0                      | C5374B       |
| CMZ5375B | 77.90                           | 82  | 86.10 | 15           | 65                      | 720               | 1.0         | 0.5                     | 62.2 | 1.8                               | 1.80                                   | 58.0                      | C5375B       |
| CMZ5376B | 82.65                           | 87  | 91.35 | 15           | 75                      | 760               | 1.0         | 0.5                     | 66.0 | 1.7                               | 2.00                                   | 54.5                      | C5376B       |
| CMZ5377B | 86.45                           | 91  | 95.55 | 15           | 75                      | 760               | 1.0         | 0.5                     | 69.2 | 1.6                               | 2.20                                   | 52.5                      | C5377B       |
| CMZ5378B | 95.00                           | 100 | 105.0 | 12           | 90                      | 800               | 1.0         | 0.5                     | 76.0 | 1.5                               | 2.50                                   | 47.5                      | C5378B       |
| CMZ5379B | 104.5                           | 110 | 115.5 | 12           | 125                     | 1000              | 1.0         | 0.5                     | 83.6 | 1.4                               | 2.50                                   | 43.0                      | C5379B       |
| CMZ5380B | 114.0                           | 120 | 126.0 | 10           | 170                     | 1150              | 1.0         | 0.5                     | 91.2 | 1.3                               | 2.50                                   | 39.5                      | C5380B       |
| CMZ5381B | 123.5                           | 130 | 136.5 | 10           | 190                     | 1250              | 1.0         | 0.5                     | 98.8 | 1.2                               | 2.50                                   | 36.6                      | C5381B       |
| CMZ5382B | 133.0                           | 140 | 147.0 | 8.0          | 230                     | 1500              | 1.0         | 0.5                     | 106  | 1.2                               | 2.50                                   | 34.0                      | C5382B       |
| CMZ5383B | 142.5                           | 150 | 157.5 | 8.0          | 330                     | 1500              | 1.0         | 0.5                     | 114  | 1.1                               | 3.00                                   | 31.6                      | C5383B       |
| CMZ5384B | 152.0                           | 160 | 168.0 | 8.0          | 350                     | 1650              | 1.0         | 0.5                     | 122  | 1.1                               | 3.00                                   | 29.4                      | C5384B       |
| CMZ5385B | 161.5                           | 170 | 178.5 | 8.0          | 380                     | 1750              | 1.0         | 0.5                     | 129  | 1.0                               | 3.00                                   | 28.0                      | C5385B       |
| CMZ5386B | 171.0                           | 180 | 189.0 | 5.0          | 430                     | 1750              | 1.0         | 0.5                     | 137  | 1.0                               | 4.00                                   | 26.4                      | C5386B       |
| CMZ5387B | 180.5                           | 190 | 199.5 | 5.0          | 450                     | 1850              | 1.0         | 0.5                     | 144  | 0.9                               | 5.00                                   | 25.0                      | C5387B       |
| CMZ5388B | 190.0                           | 200 | 210.0 | 5.0          | 480                     | 1850              | 1.0         | 0.5                     | 152  | 0.9                               | 5.00                                   | 23.6                      | C5388B       |

Notes: (1) Surge Current ( $i_r$ ) - Maximum allowable peak, non-recurrent square wave current ( $t_p=8.3\text{ms}$ ).

(2) Voltage Regulation ( $\Delta V_Z$ ) -  $V_Z$  Measurements are made at 10% and then at 50% of the  $I_Z$  max value listed in the electrical characteristics table. The test current time duration for each  $V_Z$  measurement is  $40\pm 10\text{ms}$  ( $T_A=25^\circ\text{C}$ ).

## SMC CASE - MECHANICAL OUTLINE



| SYMBOL | DIMENSIONS |             | MIN  | MAX  |
|--------|------------|-------------|------|------|
|        | INCHES     | MILLIMETERS |      |      |
| A      | 0.030      | 0.060       | 0.76 | 1.52 |
| B      | 0.004      | 0.008       | 0.10 | 0.20 |
| C      | 0.305      | 0.320       | 7.75 | 8.13 |
| D      | 0.006      | 0.012       | 0.15 | 0.31 |
| E      | 0.079      | 0.103       | 2.00 | 2.62 |
| F      | 0.260      | 0.280       | 6.60 | 7.11 |
| G      | 0.108      | 0.124       | 2.75 | 3.15 |
| H      | 0.220      | 0.245       | 5.59 | 6.22 |

SMC (REV: R1)

R9 (8-February 2012)



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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