



CMZ5342B  
THRU  
CMZ5388B

HIGH POWER ZENER DIODE  
6.8 VOLTS THRU 200 VOLTS  
5.0W, 5% TOLERANCE



SMC CASE

**Central**<sup>TM</sup>  
Semiconductor Corp.

# DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMZ5342B Series Silicon Zener Diode is a high quality voltage regulator, manufactured in an epoxy molded surface mount package, designed for use in industrial, commercial, entertainment and computer applications.

## ABSOLUTE MAXIMUM RATINGS:

Power Dissipation (@T<sub>A</sub>=25°C)  
Operating and Storage Temperature

## SYMBOL

PD  
T<sub>J</sub>, T<sub>stg</sub>

5.0

-65 to +150

## UNITS

W  
°C

## ELECTRICAL CHARACTERISTICS: (T<sub>A</sub>=25°C), V<sub>F</sub>=1.2V MAX @ I<sub>F</sub>=1.0A FOR ALL TYPES.

| TYPE NO.  | ZENER<br>VOLTAGE<br>V <sub>Z</sub> @I <sub>ZT</sub> |       |       | TEST<br>CURRENT | MAXIMUM<br>ZENER<br>IMPEDANCE |                                  |                                   | MAXIMUM<br>REVERSE<br>CURRENT   |      | MAXIMUM<br>SURGE<br>CURRENT<br>(Note 1) | MAXIMUM<br>VOLTAGE<br>REGULATION<br>(Note 2) | MAXIMUM<br>REGULATOR<br>CURRENT | MARKING<br>CODE |
|-----------|-----------------------------------------------------|-------|-------|-----------------|-------------------------------|----------------------------------|-----------------------------------|---------------------------------|------|-----------------------------------------|----------------------------------------------|---------------------------------|-----------------|
|           | MIN                                                 | NOM   | MAX   |                 | 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> |      |                                         |                                              |                                 |                 |
|           | VOLT                                                | VOLTS | VOLTS |                 | mA                            | Ω                                | Ω                                 | mA                              | μA   |                                         |                                              |                                 |                 |
| CMZ5342B* | 6.460                                               | 6.8   | 7.140 | 175             | 1.0                           | 200                              | 1.0                               | 10                              | 5.2  | 11.5                                    | 0.15                                         | 700                             | C5342B          |
| CMZ5343B* | 7.125                                               | 7.5   | 7.875 | 175             | 1.5                           | 200                              | 1.0                               | 10                              | 5.7  | 10.7                                    | 0.15                                         | 630                             | C5343B          |
| CMZ5344B* | 7.790                                               | 8.2   | 8.610 | 150             | 1.5                           | 200                              | 1.0                               | 10                              | 6.2  | 10.0                                    | 0.20                                         | 580                             | C5344B          |
| CMZ5345B* | 8.265                                               | 8.7   | 9.135 | 150             | 2.0                           | 200                              | 1.0                               | 10                              | 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 | 6.00                                    | 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          |
| 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          |

\* Available on special order only, please consult factory.

**ELECTRICAL CHARACTERISTICS:** (TA=25°C), VF=1.2V MAX @ IF=1.0A FOR ALL TYPES.

| TYPE NO. | ZENER<br>VOLTAGE<br>V <sub>Z</sub> @I <sub>ZT</sub> |       |       | TEST<br>CURRENT<br>I <sub>ZT</sub> | MAXIMUM<br>ZENER<br>IMPEDANCE    |                                  |                                | MAXIMUM<br>REVERSE<br>CURRENT |       | MAXIMUM<br>SURGE<br>CURRENT<br>(Note 1) | MAXIMUM<br>VOLTAGE<br>REGULATION<br>(Note 2) | MAXIMUM<br>REGULATOR<br>CURRENT<br>I <sub>ZM</sub> | MARKING<br>CODE |
|----------|-----------------------------------------------------|-------|-------|------------------------------------|----------------------------------|----------------------------------|--------------------------------|-------------------------------|-------|-----------------------------------------|----------------------------------------------|----------------------------------------------------|-----------------|
|          | MIN                                                 | NOM   | MAX   |                                    | Z <sub>ZT</sub> @I <sub>ZT</sub> | Z <sub>ZK</sub> @I <sub>ZK</sub> | I <sub>R</sub> @V <sub>R</sub> |                               |       |                                         |                                              |                                                    |                 |
|          | VOLTS                                               | VOLTS | VOLTS |                                    | Ω                                | Ω                                | mA                             | μA                            | VOLTS |                                         | A                                            | VOLTS                                              |                 |
| 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          |

Note 1. Surge Current (i<sub>p</sub>) - Maximum allowable peak, non-recurrent square wave current (PW=8.3ms).

Note 2. Voltage Regulation (ΔV<sub>Z</sub>) - V<sub>Z</sub> Measurements are made at 10% and then at 50% of the I<sub>Z</sub> max value listed in the electrical characteristics table. The test current time duration for each V<sub>Z</sub> measurement is 40±10ms (T<sub>A</sub>=25°C).

All Dimensions in Inches (mm).

