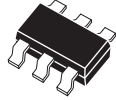


**CMXZ2V4TO  
THRU  
CMXZ47VTO**

**SURFACE MOUNT, TRIPLE, ISOLATED,  
OPPOSING SILICON ZENER DIODES  
2.4 VOLTS THRU 47 VOLTS  
5% TOLERANCE**

**SUPERmini™**



**SOT-26 CASE**

**Central™**  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMXZ2V4TO Series consists of three (3) Isolated Silicon Zener Diodes arranged in an alternating configuration and packaged in a surface mount SOT-26 case. These high quality voltage regulators are for use in industrial, commercial, entertainment and computer applications.

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

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

Power Dissipation  
Operating and Storage Temperature  
Thermal Resistance

**SYMBOL**

$P_D$  350  
 $T_J, T_{stg}$  -65 to +150  
 $\theta_{JA}$  357

**UNITS**

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

**ELECTRICAL CHARACTERISTICS PER DIODE:** ( $T_A=25^{\circ}\text{C}$ ),  $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$  FOR ALL TYPES.

| TYPE NO.   | ZENER VOLTAGE<br>V <sub>Z</sub> @ I <sub>ZT</sub> |       |       | TEST CURRENT    | MAXIMUM ZENER IMPEDANCE           |                                   |                                 | MAXIMUM REVERSE CURRENT |                 | MAXIMUM ZENER CURRENT | MAXIMUM ZENER VOLTAGE TEMP. COEFF. | MARKING 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> |                         | I <sub>ZM</sub> | θV <sub>Z</sub>       |                                    |              |
|            | VOLTS                                             | VOLTS | VOLTS | mA              | Ω                                 | Ω                                 | mA                              | μA                      | VOLTS           | mA                    | % / °C                             |              |
| CMXZ2V4TO* | 2.280                                             | 2.4   | 2.520 | 5.0             | 100                               | 600                               | 1.0                             | 50                      | 1.0             | 104                   | -0.06                              | CZ2V4        |
| CMXZ2V7TO* | 2.565                                             | 2.7   | 2.835 | 5.0             | 100                               | 600                               | 1.0                             | 20                      | 1.0             | 92                    | -0.06                              | CZ2V7        |
| CMXZ3V0TO* | 2.850                                             | 3.0   | 3.150 | 5.0             | 95                                | 600                               | 1.0                             | 10                      | 1.0             | 83                    | -0.06                              | CZ3V0        |
| CMXZ3V3TO* | 3.135                                             | 3.3   | 3.465 | 5.0             | 95                                | 600                               | 1.0                             | 5.0                     | 1.0             | 76                    | -0.06                              | CZ3V3        |
| CMXZ3V6TO* | 3.420                                             | 3.6   | 3.780 | 5.0             | 90                                | 600                               | 1.0                             | 5.0                     | 1.0             | 69                    | -0.06                              | CZ3V6        |
| CMXZ3V9TO* | 3.705                                             | 3.9   | 4.095 | 5.0             | 90                                | 600                               | 1.0                             | 3.0                     | 1.0             | 64                    | -0.06                              | CZ3V9        |
| CMXZ4V3TO* | 4.085                                             | 4.3   | 4.515 | 5.0             | 90                                | 600                               | 1.0                             | 3.0                     | 1.0             | 58                    | -0.05                              | CZ4V3        |
| CMXZ4V7TO* | 4.465                                             | 4.7   | 4.935 | 5.0             | 80                                | 500                               | 1.0                             | 3.0                     | 2.0             | 53                    | -0.03                              | CZ4V7        |
| CMXZ5V1TO* | 4.845                                             | 5.1   | 5.335 | 5.0             | 60                                | 480                               | 1.0                             | 2.0                     | 2.0             | 49                    | 0.02                               | CZ5V1        |
| CMXZ5V6TO* | 5.320                                             | 5.6   | 5.880 | 5.0             | 40                                | 400                               | 1.0                             | 1.0                     | 2.0             | 45                    | 0.03                               | CZ5V6        |
| CMXZ6V2TO* | 5.890                                             | 6.2   | 6.510 | 5.0             | 10                                | 150                               | 1.0                             | 3.0                     | 4.0             | 40                    | 0.04                               | CZ6V2        |
| CMXZ6V8TO* | 6.460                                             | 6.8   | 7.140 | 5.0             | 15                                | 80                                | 1.0                             | 2.0                     | 4.0             | 37                    | 0.05                               | CZ6V8        |
| CMXZ7V5TO* | 7.125                                             | 7.5   | 7.875 | 5.0             | 15                                | 80                                | 1.0                             | 1.0                     | 5.0             | 33                    | 0.05                               | CZ7V5        |
| CMXZ8V2TO* | 7.790                                             | 8.2   | 8.610 | 5.0             | 15                                | 80                                | 1.0                             | 0.7                     | 5.0             | 30                    | 0.06                               | CZ8V2        |
| CMXZ9V1TO* | 8.645                                             | 9.1   | 9.555 | 5.0             | 15                                | 100                               | 1.0                             | 0.5                     | 6.0             | 27                    | 0.06                               | CZ9V1        |
| CMXZ10VTO* | 9.50                                              | 10.0  | 10.50 | 5.0             | 20                                | 150                               | 1.0                             | 0.2                     | 7.0             | 25                    | 0.07                               | CZ10V        |
| CMXZ11VTO* | 10.45                                             | 11.0  | 11.55 | 5.0             | 20                                | 150                               | 1.0                             | 0.1                     | 8.0             | 23                    | 0.07                               | CZ11V        |
| CMXZ12VTO* | 11.40                                             | 12.0  | 12.60 | 5.0             | 25                                | 150                               | 1.0                             | 0.1                     | 8.0             | 21                    | 0.07                               | CZ12V        |
| CMXZ13VTO* | 12.35                                             | 13.0  | 13.65 | 5.0             | 30                                | 170                               | 1.0                             | 0.1                     | 8.0             | 19                    | 0.08                               | CZ13V        |
| CMXZ15VTO* | 14.25                                             | 15.0  | 15.75 | 5.0             | 30                                | 200                               | 1.0                             | 0.05                    | 10.5            | 17                    | 0.08                               | CZ15V        |
| CMXZ16VTO* | 15.20                                             | 16.0  | 16.80 | 5.0             | 40                                | 200                               | 1.0                             | 0.05                    | 11.2            | 16                    | 0.08                               | CZ16V        |
| CMXZ18VTO* | 17.10                                             | 18.0  | 18.90 | 5.0             | 45                                | 225                               | 1.0                             | 0.05                    | 12.6            | 14                    | 0.08                               | CZ18V        |
| CMXZ20VTO* | 19.0                                              | 20.0  | 21.0  | 5.0             | 55                                | 225                               | 1.0                             | 0.05                    | 14.0            | 12                    | 0.08                               | CZ20V        |

\* Available on special order, consult factory.

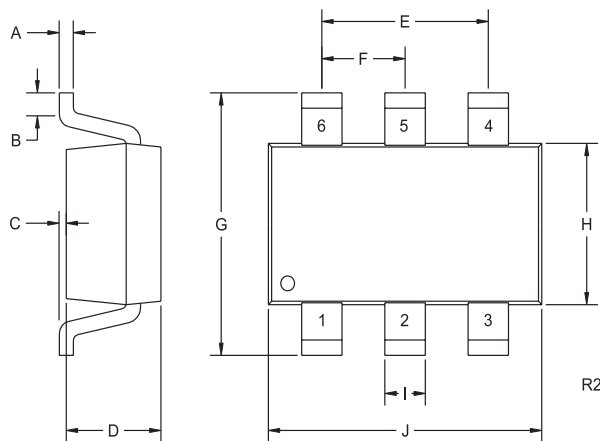
R1 (1-December 2003)

SURFACE MOUNT, TRIPLE, ISOLATED,  
OPPOSING SILICON ZENER DIODES  
2.4 VOLTS THRU 47 VOLTS  
5% TOLERANCE

| TYPE NO.   | ZENER VOLTAGE<br>$V_Z @ I_{ZT}$ |       |       | TEST CURRENT | MAXIMUM ZENER IMPEDANCE |                   |     | MAXIMUM REVERSE CURRENT |       | MAXIMUM ZENER CURRENT | MAXIMUM ZENER VOLTAGE TEMP. COEFF. | MARKING CODE |
|------------|---------------------------------|-------|-------|--------------|-------------------------|-------------------|-----|-------------------------|-------|-----------------------|------------------------------------|--------------|
|            | MIN                             | NOM   | MAX   | $I_{ZT}$     | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ |     | $I_R @ V_R$             |       | $I_{ZM}$              | $\theta_{VZ}$                      |              |
|            | VOLTS                           | VOLTS | VOLTS | mA           | $\Omega$                | $\Omega$          | mA  | $\mu A$                 | VOLTS | mA                    | % / °C                             |              |
| CMXZ22VTO* | 20.90                           | 22.0  | 23.10 | 5.0          | 55                      | 250               | 1.0 | 0.05                    | 15.4  | 11                    | 0.09                               | CZ22V        |
| CMXZ24VTO* | 22.80                           | 24.0  | 25.20 | 5.0          | 70                      | 250               | 1.0 | 0.05                    | 16.8  | 10                    | 0.09                               | CZ24V        |
| CMXZ27VTO* | 25.65                           | 27.0  | 28.35 | 2.0          | 80                      | 300               | 0.5 | 0.05                    | 18.9  | 9                     | 0.09                               | CZ27V        |
| CMXZ30VTO  | 28.50                           | 30.0  | 31.50 | 2.0          | 80                      | 300               | 0.5 | 0.05                    | 21.0  | 8                     | 0.09                               | CZ30V        |
| CMXZ33VTO* | 31.35                           | 33.0  | 34.65 | 2.0          | 80                      | 325               | 0.5 | 0.05                    | 23.1  | 7                     | 0.09                               | CZ33V        |
| CMXZ36VTO* | 34.20                           | 36.0  | 37.80 | 2.0          | 90                      | 350               | 0.5 | 0.05                    | 25.2  | 6.9                   | 0.09                               | CZ36V        |
| CMXZ39VTO* | 37.05                           | 39.0  | 40.95 | 2.0          | 130                     | 350               | 0.5 | 0.05                    | 27.3  | 6.4                   | 0.09                               | CZ39V        |
| CMXZ43VTO* | 40.85                           | 43.0  | 45.15 | 2.0          | 150                     | 375               | 0.5 | 0.05                    | 30.1  | 5.8                   | 0.10                               | CZ43V        |
| CMXZ47VTO* | 44.65                           | 47.0  | 49.35 | 2.0          | 170                     | 375               | 0.5 | 0.05                    | 32.9  | 5.3                   | 0.10                               | CZ47V        |

\* Available on special order, consult factory.

## SOT-26 CASE - MECHANICAL OUTLINE

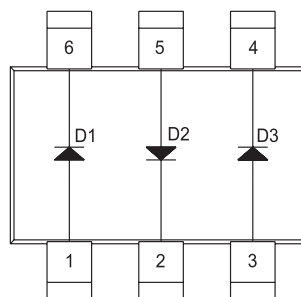


| SYMBOL | DIMENSIONS |       | DIMENSIONS |      |
|--------|------------|-------|------------|------|
|        | MIN        | MAX   | MIN        | MAX  |
| A      | 0.004      | 0.007 | 0.11       | 0.19 |
| B      | 0.016      | -     | 0.40       | -    |
| C      | -          | 0.004 | -          | 0.10 |
| D      | 0.039      | 0.047 | 1.00       | 1.20 |
| E      | 0.074      | 0.075 | 1.88       | 1.92 |
| F      | 0.037      | 0.038 | 0.93       | 0.97 |
| G      | 0.102      | 0.118 | 2.60       | 3.00 |
| H      | 0.059      | 0.067 | 1.50       | 1.70 |
| I      | 0.016      | -     | 0.41       | -    |
| J      | 0.110      | 0.118 | 2.80       | 3.00 |

SOT-26 (REV: R2)

## LEAD CODE:

- 1) ANODE D1
- 2) CATHODE D2
- 3) ANODE D3
- 4) CATHODE D3
- 5) ANODE D2
- 6) CATHODE D1



R1 (1-December 2003)