



*DC COMPONENTS CO., LTD.*

RECTIFIER SPECIALISTS

CDZ55C2V0T  
THRU  
CDZ55C75T

TECHNICAL SPECIFICATIONS OF SILICON PLANAR POWER ZENER DIODES

**FEATURES**

- \* Voltage Range: 2.0V to 75V
- \* Also available various dimension included:  
0805C (CDZ55CxxS series)  
1206C (CDZ55Cxx series)

**MECHANICAL DATA**

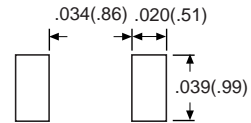
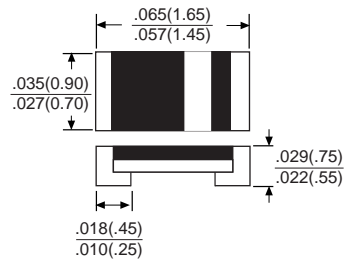
- \* Case: 0603C
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per  
MIL-STD-202E, Method 208 guaranteed
- \* Mounting position: Any
- \* Weight: 0.004 grams Approx.

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



0603C



Mounting Pad Layout

Dimensions in inches(millimeters)

|   | SYMBOL | VALUE                        | UNITS                         |
|---|--------|------------------------------|-------------------------------|
| Zener Current see Table "Characterisitcs"     |        |                              |                               |
| Power Dissipation at Tamb=25°C                | Ptot   | 200 <sup>(1)</sup>           | mW                            |
| Junction Temperature                          | Tj     | 150                          | °C                            |
| Storage Temperature Range                     | Tstg   | -55 to + 175                 | °C                            |
| Thermal Resistance<br>Junction to Ambient Air | RthA   | -<br>-<br>300 <sup>(1)</sup> | °C/W<br>Typ.<br>Min.<br>Max.  |
| Forward Voltage<br>at IF=200mA                | Vf     | -<br>-<br>1.5                | Volts<br>Typ.<br>Min.<br>Max. |

1)Valid Provided that leads are kept at ambient temperature.

NOTE: Normal Tolerance ± 5%

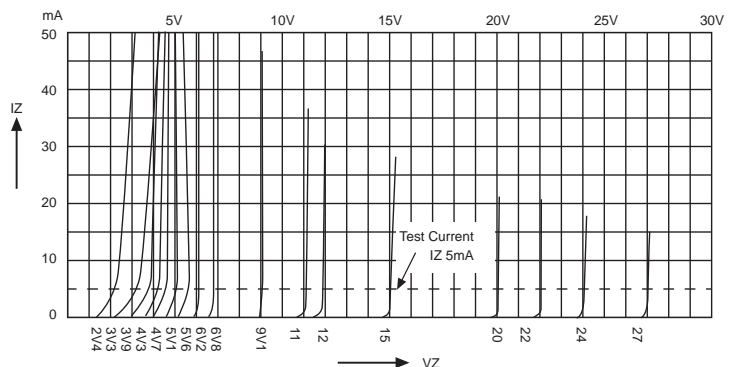
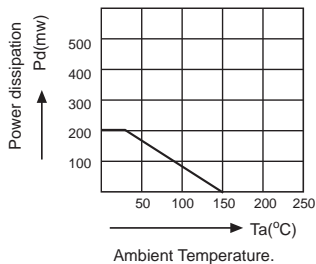
# RATING AND CHARACTERISTIC CURVES (CDZ55CxxT SERIES)

| TYPE       | Nominal Zener Voltage |       | Zener Test Current $I_{ZT}$ | Maximum Zener Impedance |                   | $I_{ZK}$ | Maximum Reverse Leakage Current |       |
|------------|-----------------------|-------|-----------------------------|-------------------------|-------------------|----------|---------------------------------|-------|
|            | $V_Z @ I_{ZT}$        |       |                             | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ |          | $I_R @ V_R$                     |       |
|            | Min.                  | Max.  | mA                          | Ohms                    | Ohms              | mA       | $\mu A$                         | Volts |
| CDZ55C2V0T | 1.90                  | 2.10  | 5                           | 85                      | 600               | 1        | 100                             | 1     |
| CDZ55C2V2T | 2.09                  | 2.31  | 5                           | 85                      | 600               | 1        | 75                              | 1     |
| CDZ55C2V4T | 2.28                  | 2.52  | 5                           | 85                      | 600               | 1        | 50                              | 1     |
| CDZ55C2V7T | 2.57                  | 2.84  | 5                           | 85                      | 600               | 1        | 10                              | 1     |
| CDZ55C3V0T | 2.85                  | 3.15  | 5                           | 85                      | 600               | 1        | 4                               | 1     |
| CDZ55C3V3T | 3.14                  | 3.47  | 5                           | 85                      | 600               | 1        | 2                               | 1     |
| CDZ55C3V6T | 3.42                  | 3.78  | 5                           | 85                      | 600               | 1        | 2                               | 1     |
| CDZ55C3V9T | 3.71                  | 4.10  | 5                           | 85                      | 600               | 1        | 2                               | 1     |
| CDZ55C4V3T | 4.09                  | 4.52  | 5                           | 80                      | 600               | 1        | 1                               | 1     |
| CDZ55C4V7T | 4.47                  | 4.61  | 5                           | 70                      | 600               | 1        | 0.5                             | 1     |
| CDZ55C5V1T | 4.85                  | 5.36  | 5                           | 50                      | 550               | 1        | 0.1                             | 1     |
| CDZ55C5V6T | 5.32                  | 5.88  | 5                           | 30                      | 450               | 1        | 0.1                             | 1     |
| CDZ55C6V2T | 5.89                  | 6.51  | 5                           | 10                      | 200               | 1        | 0.1                             | 2     |
| CDZ55C6V8T | 6.46                  | 7.14  | 5                           | 8                       | 150               | 1        | 0.1                             | 3     |
| CDZ55C7V5T | 7.13                  | 7.88  | 5                           | 7                       | 50                | 1        | 0.1                             | 5     |
| CDZ55C8V2T | 7.79                  | 8.61  | 5                           | 7                       | 50                | 1        | 0.1                             | 6.2   |
| CDZ55C9V1T | 8.65                  | 9.56  | 5                           | 10                      | 50                | 1        | 0.1                             | 6.8   |
| CDZ55C10T  | 9.50                  | 10.50 | 5                           | 15                      | 70                | 1        | 0.1                             | 7.5   |
| CDZ55C11T  | 10.45                 | 11.55 | 5                           | 20                      | 70                | 1        | 0.1                             | 8.2   |
| CDZ55C12T  | 11.40                 | 12.60 | 5                           | 20                      | 90                | 1        | 0.1                             | 9.1   |
| CDZ55C13T  | 12.35                 | 13.65 | 5                           | 26                      | 110               | 1        | 0.1                             | 10    |
| CDZ55C15T  | 14.25                 | 15.75 | 5                           | 30                      | 110               | 1        | 0.1                             | 11    |
| CDZ55C16T  | 15.20                 | 16.80 | 5                           | 40                      | 170               | 1        | 0.1                             | 12    |
| CDZ55C18T  | 17.10                 | 18.90 | 5                           | 50                      | 170               | 1        | 0.1                             | 13    |
| CDZ55C20T  | 19.00                 | 21.00 | 5                           | 55                      | 220               | 1        | 0.1                             | 15    |
| CDZ55C22T  | 20.90                 | 23.10 | 5                           | 55                      | 220               | 1        | 0.1                             | 16    |
| CDZ55C24T  | 22.80                 | 25.20 | 5                           | 80                      | 220               | 1        | 0.1                             | 18    |
| CDZ55C27T  | 25.65                 | 28.35 | 5                           | 80                      | 220               | 1        | 0.1                             | 20    |
| CDZ55C30T  | 28.50                 | 31.50 | 5                           | 80                      | 220               | 1        | 0.1                             | 22    |
| CDZ55C33T  | 31.35                 | 34.65 | 5                           | 80                      | 220               | 1        | 0.1                             | 24    |
| CDZ55C36T  | 34.20                 | 37.80 | 5                           | 80                      | 220               | 1        | 0.1                             | 27    |
| CDZ55C39T  | 37.05                 | 40.95 | 2.5                         | 90                      | 500               | 0.5      | 0.1                             | 29.3  |
| CDZ55C43T  | 40.85                 | 45.15 | 2.5                         | 90                      | 600               | 0.5      | 0.1                             | 32.3  |
| CDZ55C47T  | 44.65                 | 49.35 | 2.5                         | 110                     | 700               | 0.5      | 0.1                             | 35.3  |
| CDZ55C51T  | 48.45                 | 53.55 | 2.5                         | 125                     | 700               | 0.5      | 0.1                             | 38.3  |
| CDZ55C56T  | 53.20                 | 58.80 | 2.5                         | 135                     | 1000              | 0.5      | 0.1                             | 42    |
| CDZ55C62T  | 58.90                 | 65.10 | 2.5                         | 150                     | 1000              | 0.5      | 0.1                             | 46.5  |
| CDZ55C68T  | 64.60                 | 71.40 | 2.5                         | 200                     | 1000              | 0.5      | 0.1                             | 51    |
| CDZ55C75T  | 71.25                 | 78.75 | 2.5                         | 250                     | 1500              | 0.5      | 0.1                             | 56.3  |

## Breakdown characteristics

CDZ55xxT-SERIES

changes in the power dissipation due to the ambient temperature.



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