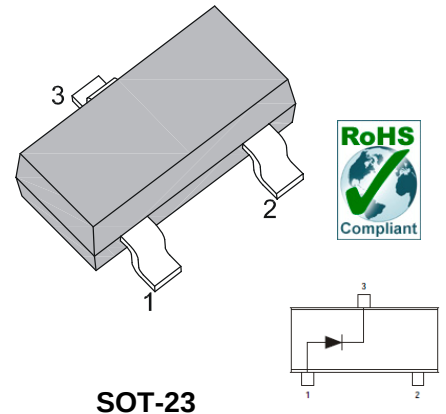


## 200mW Surface Mount Zener Diodes

### Features

- Constant Voltage Regulation Application
- 200mW Power Dissipation Rating
- Zener Voltages from 2.0~36V
- Reference Voltage Application
- Normal Voltage Tolerance about  $\pm 2.5\%$
- RoHS Compliant



### Mechanical Data

|                   |                                         |
|-------------------|-----------------------------------------|
| <b>Case:</b>      | SOT-23, Molded Plastic                  |
| <b>Terminals:</b> | Solderable per MIL-STD-750, Method 2026 |
| <b>Weight:</b>    | 0.008 grams                             |

### Maximum Ratings ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| Symbol                                | Description                             | Value       | Unit |
|---------------------------------------|-----------------------------------------|-------------|------|
| <b>P<sub>D</sub></b>                  | Power Dissipation                       | 200         | mW   |
| <b>T<sub>J</sub>, T<sub>stg</sub></b> | Operating and Storage Temperature Range | -55 to +150 | °C   |

# 200mW Surface Mount Zener Diodes

## TZT2.0W – TZT36W

### Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| Part NO. | Marking Code | Normal Zener Voltage @ I <sub>ZT</sub> |      |      | Test Current         | Max. Zener Impedance              |                                   |                      | Max. Reverse Leakage Current I <sub>R</sub> @ V <sub>R</sub> |                    |
|----------|--------------|----------------------------------------|------|------|----------------------|-----------------------------------|-----------------------------------|----------------------|--------------------------------------------------------------|--------------------|
|          |              | V <sub>Z</sub> (V)                     |      |      |                      | Z <sub>ZT</sub> @ I <sub>ZT</sub> | Z <sub>ZK</sub> @ I <sub>ZK</sub> | I <sub>ZK</sub> (mA) | I <sub>R</sub> (μA)                                          | V <sub>R</sub> (V) |
|          |              | Nom.                                   | Min. | Max. | I <sub>ZT</sub> (mA) |                                   |                                   |                      |                                                              |                    |
| TZT2.0W  | 2A           | 2.0                                    | 1.85 | 2.15 | 5.0                  | 100                               | 1000                              | 0.5                  | 120                                                          | 1.0                |
| TZT2.0XW | 2AX          |                                        | 1.85 | 2.05 |                      |                                   |                                   |                      |                                                              |                    |
| TZT2.0ZW | 2AZ          |                                        | 1.95 | 2.15 |                      |                                   |                                   |                      |                                                              |                    |
| TZT2.2W  | 2B           | 2.2                                    | 2.05 | 2.38 | 5.0                  | 100                               | 1000                              | 0.5                  | 120                                                          | 1.0                |
| TZT2.2XW | 2BX          |                                        | 2.05 | 2.26 |                      |                                   |                                   |                      |                                                              |                    |
| TZT2.2ZW | 2BZ          |                                        | 2.16 | 2.38 |                      |                                   |                                   |                      |                                                              |                    |
| TZT2.4W  | 2C           | 2.4                                    | 2.28 | 2.60 | 5.0                  | 100                               | 1000                              | 0.5                  | 120                                                          | 1.0                |
| TZT2.4XW | 2CX          |                                        | 2.28 | 2.50 |                      |                                   |                                   |                      |                                                              |                    |
| TZT2.4ZW | 2CZ          |                                        | 2.40 | 2.60 |                      |                                   |                                   |                      |                                                              |                    |
| TZT2.7W  | 2D           | 2.7                                    | 2.50 | 2.90 | 5.0                  | 110                               | 1000                              | 0.5                  | 120                                                          | 1.0                |
| TZT2.7XW | 2DX          |                                        | 2.50 | 2.75 |                      |                                   |                                   |                      |                                                              |                    |
| TZT2.7ZW | 2DZ          |                                        | 2.65 | 2.90 |                      |                                   |                                   |                      |                                                              |                    |
| TZT3.0W  | 30           | 3.0                                    | 2.80 | 3.20 | 5.0                  | 120                               | 1000                              | 0.5                  | 50                                                           | 1.0                |
| TZT3.0XW | 30X          |                                        | 2.80 | 3.05 |                      |                                   |                                   |                      |                                                              |                    |
| TZT3.0ZW | 30Z          |                                        | 2.95 | 3.20 |                      |                                   |                                   |                      |                                                              |                    |
| TZT3.3W  | 33           | 3.3                                    | 3.10 | 3.50 | 5.0                  | 130                               | 1000                              | 0.5                  | 20                                                           | 1.0                |
| TZT3.3XW | 33X          |                                        | 3.10 | 3.35 |                      |                                   |                                   |                      |                                                              |                    |
| TZT3.3ZW | 33Z          |                                        | 3.25 | 3.50 |                      |                                   |                                   |                      |                                                              |                    |
| TZT3.6W  | 36           | 3.6                                    | 3.40 | 3.80 | 5.0                  | 130                               | 1000                              | 0.5                  | 10                                                           | 1.0                |
| TZT3.6XW | 36X          |                                        | 3.40 | 3.65 |                      |                                   |                                   |                      |                                                              |                    |
| TZT3.6ZW | 36Z          |                                        | 3.55 | 3.80 |                      |                                   |                                   |                      |                                                              |                    |
| TZT3.9W  | 39           | 3.9                                    | 3.70 | 4.10 | 5.0                  | 130                               | 1000                              | 0.5                  | 10                                                           | 1.0                |
| TZT3.9XW | 39X          |                                        | 3.70 | 3.97 |                      |                                   |                                   |                      |                                                              |                    |
| TZT3.9ZW | 39Z          |                                        | 3.87 | 4.10 |                      |                                   |                                   |                      |                                                              |                    |
| TZT4.3W  | 4.3          | 4.3                                    | 4.00 | 4.50 | 5.0                  | 130                               | 1000                              | 0.5                  | 5                                                            | 1.0                |
| TZT4.3YW | 4.3Y         |                                        | 4.13 | 4.35 |                      |                                   |                                   |                      |                                                              |                    |
| TZT4.7W  | 4.7          | 4.7                                    | 4.40 | 4.90 | 5.0                  | 120                               | 1000                              | 0.5                  | 5                                                            | 1.0                |
| TZT4.7YW | 4.7Y         |                                        | 4.53 | 4.76 |                      |                                   |                                   |                      |                                                              |                    |
| TZT5.1W  | 5.1          | 5.1                                    | 4.80 | 5.40 | 5.0                  | 70                                | 1000                              | 0.5                  | 1                                                            | 1.5                |
| TZT5.1YW | 5.1Y         |                                        | 4.97 | 5.24 |                      |                                   |                                   |                      |                                                              |                    |
| TZT5.6W  | 5.6          | 5.6                                    | 5.30 | 6.00 | 5.0                  | 40                                | 900                               | 0.5                  | 1                                                            | 2.5                |
| TZT5.6YW | 5.6Y         |                                        | 5.43 | 5.81 |                      |                                   |                                   |                      |                                                              |                    |

## 200mW Surface Mount Zener Diodes

### TZT2.0W – TZT36W

| Part NO. | Marking Code | Normal Zener Voltage @ I <sub>ZT</sub> |       |       | Test Current         | Max. Zener Impedance |     |     | Max. Reverse Leakage Current I <sub>R</sub> @ V <sub>R</sub> |                                   |
|----------|--------------|----------------------------------------|-------|-------|----------------------|----------------------|-----|-----|--------------------------------------------------------------|-----------------------------------|
|          |              | V <sub>Z</sub> (V)                     |       |       | I <sub>ZT</sub> (mA) |                      |     |     | I <sub>ZT</sub> @ I <sub>ZT</sub>                            | I <sub>ZK</sub> @ I <sub>ZK</sub> |
|          |              | Nom.                                   | Min.  | Max.  |                      |                      |     |     |                                                              |                                   |
| TZT6.2W  | 6.2          | 6.2                                    | 5.80  | 6.60  | 5.0                  | 30                   | 500 | 0.5 | 1                                                            | 3.0                               |
| TZT6.2YW | 6.2Y         |                                        | 6.00  | 6.39  |                      |                      |     |     |                                                              |                                   |
| TZT6.8W  | 6.8          | 6.8                                    | 6.40  | 7.20  | 5.0                  | 25                   | 150 | 0.5 | 0.5                                                          | 5.0                               |
| TZT6.8YW | 6.8Y         |                                        | 6.60  | 7.02  |                      |                      |     |     |                                                              |                                   |
| TZT7.5W  | 7.5          | 7.5                                    | 7.00  | 7.90  | 5.0                  | 23                   | 120 | 0.5 | 0.5                                                          | 6.0                               |
| TZT7.5YW | 7.5Y         |                                        | 7.23  | 7.66  |                      |                      |     |     |                                                              |                                   |
| TZT8.2W  | 8.2          | 8.2                                    | 7.70  | 8.70  | 5.0                  | 20                   | 120 | 0.5 | 0.5                                                          | 6.5                               |
| TZT8.2YW | 8.2Y         |                                        | 7.96  | 8.43  |                      |                      |     |     |                                                              |                                   |
| TZT9.1W  | 9.1          | 9.1                                    | 8.50  | 9.60  | 5.0                  | 18                   | 120 | 0.5 | 0.5                                                          | 7.0                               |
| TZT9.1YW | 9.1Y         |                                        | 8.80  | 9.30  |                      |                      |     |     |                                                              |                                   |
| TZT10W   | 10           | 10                                     | 9.40  | 10.60 | 5.0                  | 15                   | 120 | 0.5 | 0.5                                                          | 8.0                               |
| TZT10YW  | 10Y          |                                        | 9.73  | 10.26 |                      |                      |     |     |                                                              |                                   |
| TZT11W   | 11           | 11                                     | 10.40 | 11.60 | 5.0                  | 15                   | 120 | 0.5 | 0.5                                                          | 8.5                               |
| TZT11YW  | 11Y          |                                        | 10.73 | 11.26 |                      |                      |     |     |                                                              |                                   |
| TZT12W   | 12           | 12                                     | 11.40 | 12.60 | 5.0                  | 15                   | 110 | 0.5 | 0.5                                                          | 9.0                               |
| TZT12YW  | 12Y          |                                        | 11.73 | 12.26 |                      |                      |     |     |                                                              |                                   |
| TZT13W   | 13           | 13                                     | 12.40 | 14.10 | 5.0                  | 15                   | 110 | 0.5 | 0.5                                                          | 10                                |
| TZT13YW  | 13Y          |                                        | 12.88 | 13.57 |                      |                      |     |     |                                                              |                                   |
| TZT15W   | 15           | 15                                     | 13.80 | 15.60 | 5.0                  | 15                   | 110 | 0.5 | 0.5                                                          | 11                                |
| TZT15YW  | 15Y          |                                        | 14.33 | 15.11 |                      |                      |     |     |                                                              |                                   |
| TZT16W   | 16           | 16                                     | 15.30 | 17.10 | 5.0                  | 18                   | 150 | 0.5 | 0.5                                                          | 12                                |
| TZT16YW  | 16Y          |                                        | 15.80 | 16.60 |                      |                      |     |     |                                                              |                                   |
| TZT18W   | 18           | 18                                     | 16.80 | 19.10 | 5.0                  | 20                   | 150 | 0.5 | 0.5                                                          | 14                                |
| TZT18YW  | 18Y          |                                        | 17.46 | 18.43 |                      |                      |     |     |                                                              |                                   |
| TZT20W   | 20           | 20                                     | 18.80 | 21.20 | 5.0                  | 25                   | 200 | 0.5 | 0.5                                                          | 15                                |
| TZT20YW  | 20Y          |                                        | 19.48 | 20.46 |                      |                      |     |     |                                                              |                                   |
| TZT22W   | 22           | 22                                     | 20.80 | 23.30 | 5.0                  | 30                   | 200 | 0.5 | 0.5                                                          | 17                                |
| TZT22YW  | 22Y          |                                        | 21.48 | 22.56 |                      |                      |     |     |                                                              |                                   |
| TZT24W   | 24           | 24                                     | 22.80 | 25.60 | 5.0                  | 40                   | 200 | 0.5 | 0.5                                                          | 19                                |
| TZT24YW  | 24Y          |                                        | 23.61 | 24.92 |                      |                      |     |     |                                                              |                                   |
| TZT27W   | 27A          | 27                                     | 26.19 | 27.53 | 2.0                  | 150                  | 150 | 0.5 | 0.1                                                          | 21                                |
| TZT30W   | 30A          | 30                                     | 29.19 | 30.69 | 2.0                  | 200                  | 200 | 0.5 | 0.1                                                          | 23                                |
| TZT33W   | 33A          | 33                                     | 32.15 | 33.79 | 2.0                  | 250                  | 250 | 0.5 | 0.1                                                          | 25                                |
| TZT36W   | 36A          | 36                                     | 35.07 | 36.87 | 2.0                  | 300                  | 300 | 0.5 | 0.1                                                          | 27                                |

# 200mW Surface Mount Zener Diodes

## TZT2.0W – TZT36W

### Characteristics Curves

Fig.1 P<sub>D</sub> - T<sub>a</sub>

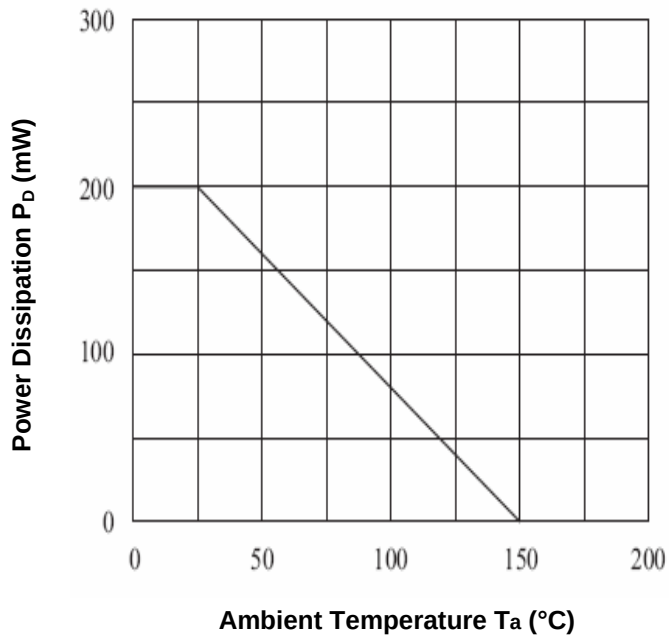
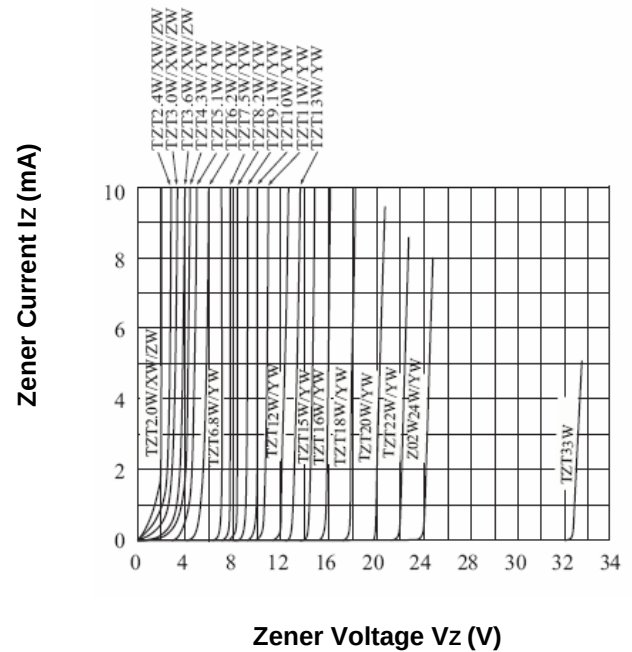
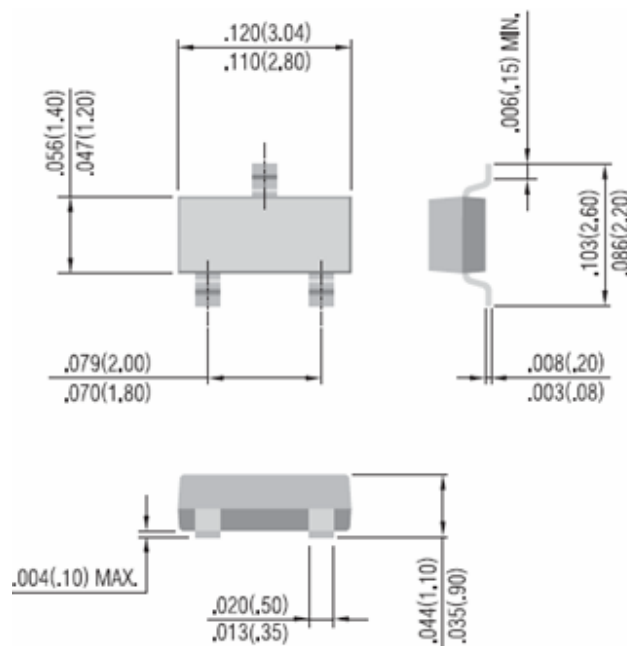


Fig.2 I<sub>Z</sub> - V<sub>Z</sub>



### Dimensions in inch (mm)

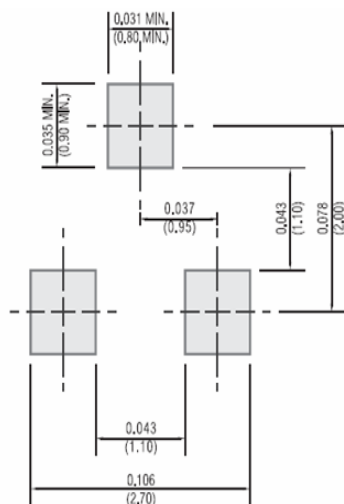


**TAITRON**  
components incorporated

## 200mW Surface Mount Zener Diodes

TZT2.0W – TZT36W

### Mounting Pad Layout



**SOT-23**

### How to contact us:

#### **US HEADQUARTERS**

28040 WEST HARRISON PARKWAY, VALENCIA, CA 91355-4162

Tel: (800) TAITRON (800) 824-8766 (661) 257-6060

Fax: (800) TAITFAX (800) 824-8329 (661) 257-6415

Email: [taitron@taitroncomponents.com](mailto:taitron@taitroncomponents.com)

Http://[www.taitroncomponents.com](http://www.taitroncomponents.com)

#### **TAITRON COMPONENTS MEXICO, S.A .DE C.V.**

BOULEVARD CENTRAL 5000 INTERIOR 5 PARQUE INDUSTRIAL ATITALAQUIA, HIDALGO C.P.  
42970 MEXICO

Tel: +52-55-5560-1519

Fax: +52-55-5560-2190

#### **TAITRON COMPONETS INCORPORATED E REPRESENTAÇÕES DO BRASIL LTDA**

RUA DOMINGOS DE MORAIS, 2777, 2.ANDAR, SALA 24 SAÚDE - SÃO PAULO-SP 04035-001  
BRAZIL

Tel: +55-11-5574-7949

Fax: +55-11-5572-0052

#### **TAITRON COMPONETS INCORPORATED, SHANGHAI REPRESENTATIVE OFFICE**

METROBANK PLAZA, 1160 WEST YAN' AN ROAD, SUITE 1503, SHANGHAI, 200052, CHINA

Tel: +86-21-5424-9942

Fax: +86-21-5424-9931