

# STZ1W-L Series

## Silicon Zener Diodes

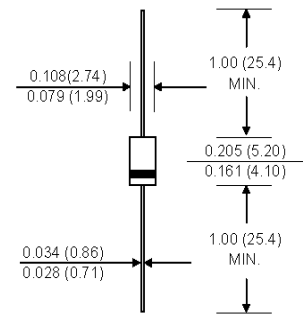
### Features

- Low zener impedance
- Excellent clamping capability

### Mechanical Data

- **Case:** DO-41 Molded plastic
- **Epoxy:** UL 94V-0 rate flame retardant
- **Terminals:** Axial leads, solderable per MIL-STD-750 method 2026 guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any

### DO - 41



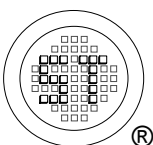
Dimensions in inches and ( millimeters )

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

| Parameter                      | Symbol    | Value         | Unit             |
|--------------------------------|-----------|---------------|------------------|
| Power Dissipation              | $P_D$     | 1             | W                |
| Operating Junction Temperature | $T_j$     | - 55 to + 150 | $^\circ\text{C}$ |
| Storage Temperature Range      | $T_{stg}$ | - 55 to + 150 | $^\circ\text{C}$ |

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Parameter                                   | Symbol | Max.       | Unit |
|---|--------|------------|------|
| Forward Voltage<br>at $I_F = 200\text{ mA}$ | $V_F$  | 1.2<br>2.4 | V    |



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Subsidiary of Sino-Tech International (BVI) Limited



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Characteristics at  $T_a = 25\text{ }^\circ\text{C}$

| Type        | Marking | Zener Voltage <sup>1)</sup> |          |          |                     | Dynamic Impedance             |                     | Reverse Leakage Current         |                 |
|-------------|---------|-----------------------------|----------|----------|---------------------|-------------------------------|---------------------|---------------------------------|-----------------|
|             |         | $V_{Znom}$<br>(V)           | $V_{ZT}$ |          | at $I_{ZT}$<br>(mA) | $Z_{ZT}$<br>Max. ( $\Omega$ ) | at $I_{ZT}$<br>(mA) | $I_R$<br>Max. ( $\mu\text{A}$ ) | at $V_R$<br>(V) |
|             |         |                             | Min. (V) | Max. (V) |                     |                               |                     |                                 |                 |
| STZ1W-L100B | ZL100B  | 100                         | 95       | 105      | 0.1                 | 2000                          | 1                   | 0.2                             | 86              |
| STZ1W-L110B | ZL110B  | 110                         | 104.5    | 115.5    | 0.1                 | 2000                          | 1                   | 0.2                             | 94              |
| STZ1W-L115B | ZL115B  | 115                         | 109.25   | 120.75   | 0.1                 | 2000                          | 1                   | 0.2                             | 98              |
| STZ1W-L120B | ZL120B  | 120                         | 114      | 126      | 0.1                 | 2000                          | 1                   | 0.2                             | 103             |
| STZ1W-L130B | ZL130B  | 130                         | 123.5    | 136.5    | 0.1                 | 2000                          | 1                   | 0.2                             | 111             |
| STZ1W-L140B | ZL140B  | 140                         | 133      | 147      | 0.1                 | 5000                          | 1                   | 0.2                             | 120             |
| STZ1W-L150B | ZL150B  | 150                         | 142.5    | 157.5    | 0.1                 | 5000                          | 1                   | 0.2                             | 128             |
| STZ1W-L160B | ZL160B  | 160                         | 152      | 168      | 0.1                 | 5000                          | 1                   | 0.2                             | 137             |
| STZ1W-L170B | ZL170B  | 170                         | 161.5    | 178.5    | 0.1                 | 5000                          | 1                   | 0.2                             | 145             |
| STZ1W-L180B | ZL180B  | 180                         | 171      | 189      | 0.1                 | 5000                          | 1                   | 0.2                             | 154             |
| STZ1W-L190B | ZL190B  | 190                         | 180.5    | 199.5    | 0.1                 | 5000                          | 1                   | 0.2                             | 162             |
| STZ1W-L200B | ZL200B  | 200                         | 190      | 210      | 0.1                 | 8000                          | 1                   | 0.2                             | 171             |
| STZ1W-L210B | ZL210B  | 210                         | 199.5    | 220.5    | 0.1                 | 9000                          | 1                   | 0.2                             | 180             |
| STZ1W-L220B | ZL220B  | 220                         | 209      | 231      | 0.1                 | 9000                          | 1                   | 0.2                             | 188             |
| STZ1W-L230B | ZL230B  | 230                         | 218.5    | 241.5    | 0.1                 | 9000                          | 1                   | 0.2                             | 197             |
| STZ1W-L240B | ZL240B  | 240                         | 228      | 252      | 0.1                 | 9000                          | 1                   | 0.2                             | 205             |
| STZ1W-L250B | ZL250B  | 250                         | 237.5    | 262.5    | 0.1                 | 9000                          | 1                   | 0.2                             | 214             |
| STZ1W-L260B | ZL260B  | 260                         | 247      | 273      | 0.1                 | 9000                          | 1                   | 0.2                             | 222             |
| STZ1W-L270B | ZL270B  | 270                         | 256.5    | 283.5    | 0.1                 | 9000                          | 1                   | 0.2                             | 231             |
| STZ1W-L280B | ZL280B  | 280                         | 266      | 294      | 0.1                 | 9000                          | 1                   | 0.2                             | 239             |
| STZ1W-L290B | ZL290B  | 290                         | 275.5    | 304.5    | 0.1                 | 9000                          | 1                   | 0.2                             | 248             |
| STZ1W-L300B | ZL300B  | 300                         | 285      | 315      | 0.1                 | 9000                          | 1                   | 0.2                             | 257             |
| STZ1W-L310B | ZL310B  | 310                         | 294.5    | 325.5    | 0.1                 | 9500                          | 1                   | 0.2                             | 265             |
| STZ1W-L320B | ZL320B  | 320                         | 304      | 336      | 0.1                 | 9500                          | 1                   | 0.2                             | 274             |
| STZ1W-L330B | ZL330B  | 330                         | 313.5    | 346.5    | 0.1                 | 9500                          | 1                   | 0.2                             | 282             |
| STZ1W-L340B | ZL340B  | 340                         | 323      | 357      | 0.1                 | 9500                          | 1                   | 0.2                             | 290             |
| STZ1W-L350B | ZL350B  | 350                         | 332.5    | 367.5    | 0.1                 | 9500                          | 1                   | 0.2                             | 299             |

<sup>1)</sup> Tested with pulses  $t_p = 20\text{ ms}$ . Suffix "A" indicates  $\pm 10\%$  tolerance, Suffix "B" indicates  $\pm 5\%$  tolerance.

Fig. 1 - POWER DISSIPATION CHARACTERISTIC

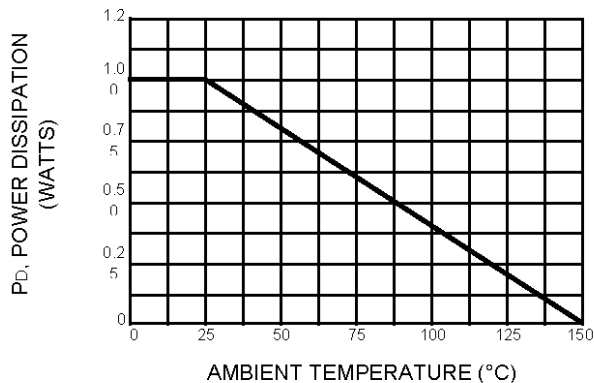
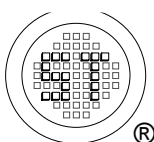
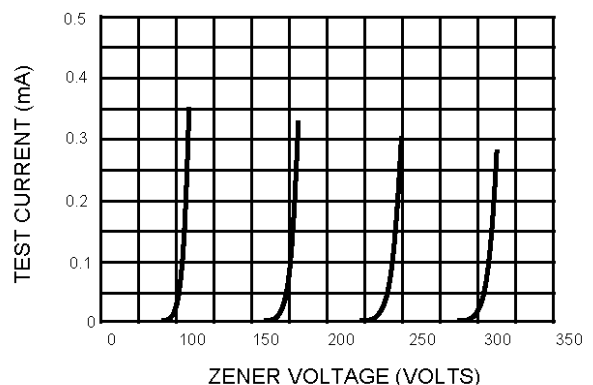


Fig. 2 - TYPICAL ZENER VOLTAGE CHARACTERISTIC



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