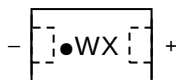




# BZT52C2V4LP THRU BZT52C39LP

## Features

- Ultra-Small Leadless Surface Mount Package
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Ideally Suited for Automated Assembly Processes
- Lead Free Finish/Rohs Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Halogen free available upon request by adding suffix "-HF"



## Absolute Maximum Ratings

| Symbol           | Rating                    | Rating      | Unit |
|------------------|---------------------------|-------------|------|
| P <sub>D</sub>   | Power dissipation         | 100         | mW   |
| T <sub>J</sub>   | Junction Temperature      | -65 to +150 | °C   |
| T <sub>STG</sub> | Storage Temperature Range | -65 to +150 | °C   |

## Absolute Maximum Ratings

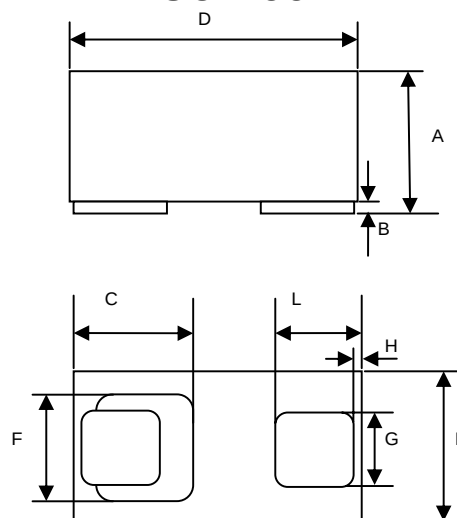
| Symbol            | Rating                                 | Rating | Unit |
|-------------------|----------------------------------------|--------|------|
| R <sub>thJA</sub> | Thermal Resistance Junction to Ambient | 1250   | °C/W |

## Electrical Characteristics

| Symbol         | Rating                                                           | Rating | Unit |
|----------------|------------------------------------------------------------------|--------|------|
| V <sub>F</sub> | Maximum Forward Voltage<br>(I <sub>F</sub> =10mA <sub>dc</sub> ) | 0.9    | V    |

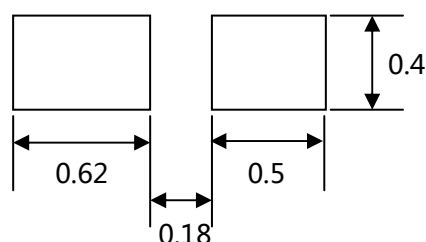
**100 mW  
Zener Diode  
2.4 to 39 Volts**

SOD-882



| DIM | INCHES     |       | MM         |      | NOTE |
|-----|------------|-------|------------|------|------|
|     | MIN        | MAX   | MIN        | MAX  |      |
| A   | 0.018      | 0.022 | 0.45       | 0.55 |      |
| B   | 0.000      | 0.003 | 0.01       | 0.07 |      |
| C   | 0.019 REF. |       | 0.470 REF. |      |      |
| D   | 0.037      | 0.041 | 0.95       | 1.05 |      |
| E   | 0.022      | 0.026 | 0.55       | 0.65 |      |
| F   | 0.017 REF. |       | 0.420 REF. |      |      |
| G   | 0.011      | 0.015 | 0.27       | 0.37 |      |
| H   | 0.001 REF. |       | 0.030 REF. |      |      |
| L   | 0.013      | 0.017 | 0.34       | 0.44 |      |

Suggested Solder  
Pad Layout (mm)



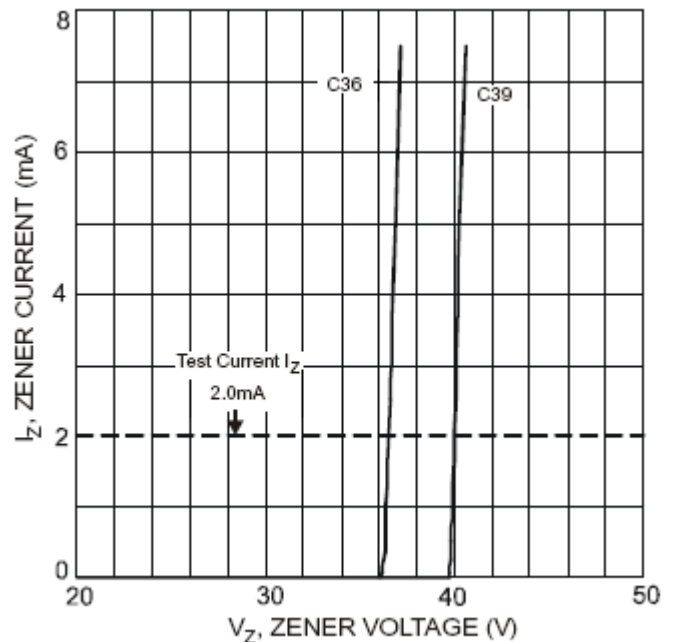
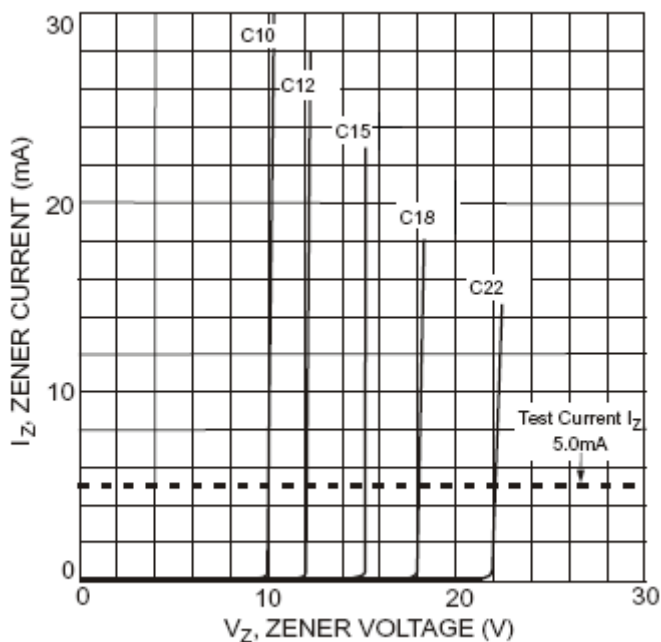
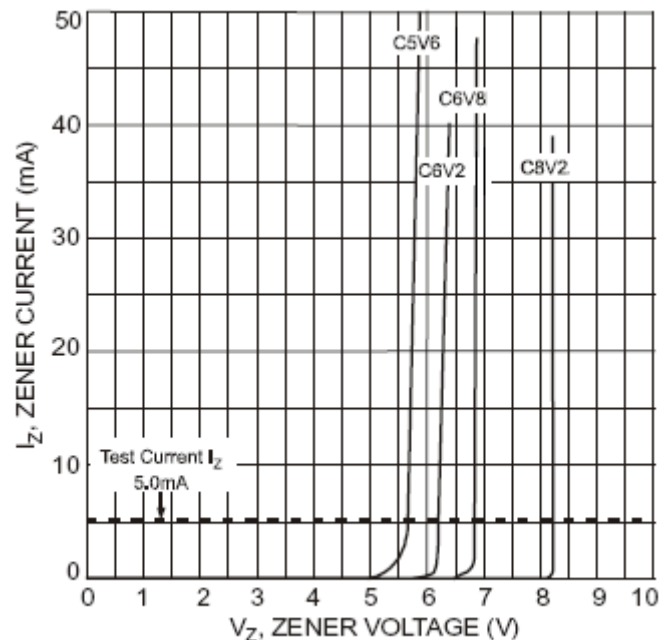
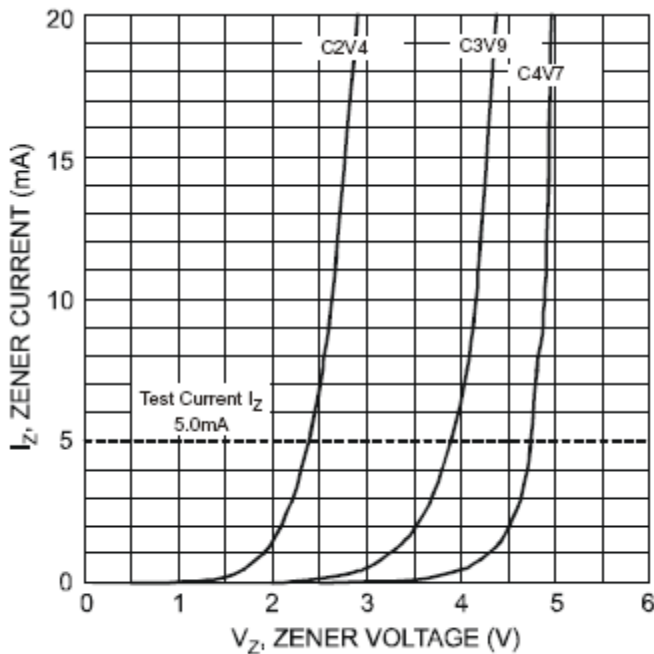
## ELECTRICAL CHARACTERISTICS @25°C

| Type Number | Marking Code | ZENER VOLTAGE <sup>(1)</sup>     |     |      |                 | Maximum Zener Impedance <sup>(2)</sup> |                                   |                 | Maximum Reverse Current<br>I <sub>R</sub> (Max) @ V <sub>R</sub> |                | Typical Temperature Coefficient<br>@ I <sub>ZTC</sub> mV/°C |      | Test Current<br>I <sub>ZTC</sub> |
|-------------|--------------|----------------------------------|-----|------|-----------------|----------------------------------------|-----------------------------------|-----------------|------------------------------------------------------------------|----------------|-------------------------------------------------------------|------|----------------------------------|
|             |              | V <sub>Z</sub> @ I <sub>ZT</sub> |     |      | I <sub>ZT</sub> | Z <sub>ZT</sub> @ I <sub>ZT</sub>      | Z <sub>ZK</sub> @ I <sub>ZK</sub> | I <sub>ZK</sub> | I <sub>R</sub>                                                   | V <sub>R</sub> | Min                                                         | Max. |                                  |
|             |              | Min.                             | Nom | Max. | mA              | Ω                                      | mA                                | μA              | V                                                                | mA             |                                                             |      |                                  |
| BZT52C2V4LP | WX           | 2.2                              | 2.4 | 2.6  | 5               | 100                                    | 600                               | 1.0             | 50                                                               | 1.0            | -3.5                                                        | 0    | 5                                |
| BZT52C2V7LP | W1           | 2.5                              | 2.7 | 2.9  | 5               | 100                                    | 600                               | 1.0             | 20                                                               | 1.0            | -3.5                                                        | 0    | 5                                |
| BZT52C3V0LP | W2           | 2.8                              | 3.0 | 3.2  | 5               | 95                                     | 600                               | 1.0             | 10                                                               | 1.0            | -3.5                                                        | 0    | 5                                |
| BZT52C3V3LP | W3           | 3.1                              | 3.3 | 3.5  | 5               | 95                                     | 600                               | 1.0             | 5                                                                | 1.0            | -3.5                                                        | 0    | 5                                |
| BZT52C3V6LP | W4           | 3.4                              | 3.6 | 3.8  | 5               | 90                                     | 600                               | 1.0             | 5                                                                | 1.0            | -3.5                                                        | 0    | 5                                |
| BZT52C3V9LP | W5           | 3.7                              | 3.9 | 4.1  | 5               | 90                                     | 600                               | 1.0             | 3                                                                | 1.0            | -3.5                                                        | 0    | 5                                |
| BZT52C4V3LP | W6           | 4.0                              | 4.3 | 4.6  | 5               | 90                                     | 600                               | 1.0             | 3                                                                | 1.0            | -3.5                                                        | 0    | 5                                |
| BZT52C4V7LP | W7           | 4.4                              | 4.7 | 5.0  | 5               | 80                                     | 500                               | 1.0             | 3                                                                | 2.0            | -3.5                                                        | 0.2  | 5                                |
| BZT52C5V1LP | 9Y           | 4.8                              | 5.1 | 5.4  | 5               | 60                                     | 480                               | 1.0             | 2                                                                | 2.0            | -2.7                                                        | 1.2  | 5                                |
| BZT52C5V6LP | 9A           | 5.2                              | 5.6 | 6.0  | 5               | 40                                     | 400                               | 1.0             | 1                                                                | 2.0            | -2.0                                                        | 2.5  | 5                                |
| BZT52C6V2LP | 9B           | 5.8                              | 6.2 | 6.6  | 5               | 10                                     | 150                               | 1.0             | 3                                                                | 4.0            | 0.4                                                         | 3.7  | 5                                |
| BZT52C6V8LP | 9C           | 6.4                              | 6.8 | 7.2  | 5               | 15                                     | 80                                | 1.0             | 2                                                                | 4.0            | 1.2                                                         | 4.5  | 5                                |
| BZT52C7V5LP | 9D           | 7.0                              | 7.5 | 7.9  | 5               | 15                                     | 80                                | 1.0             | 1                                                                | 5.0            | 2.5                                                         | 5.3  | 5                                |
| BZT52C8V2LP | 9E           | 7.7                              | 8.2 | 8.7  | 5               | 15                                     | 80                                | 1.0             | 0.7                                                              | 5.0            | 3.2                                                         | 6.2  | 5                                |
| BZT52C9V1LP | 9F           | 8.5                              | 9.1 | 9.6  | 5               | 15                                     | 100                               | 1.0             | 0.5                                                              | 6.0            | 3.8                                                         | 7.0  | 5                                |
| BZT52C10LP  | 9G           | 9.4                              | 10  | 10.6 | 5               | 20                                     | 150                               | 1.0             | 0.2                                                              | 7.0            | 4.5                                                         | 8.0  | 5                                |
| BZT52C11LP  | 9H           | 10.4                             | 11  | 11.6 | 5               | 20                                     | 150                               | 1.0             | 0.1                                                              | 8.0            | 5.4                                                         | 9.0  | 5                                |
| BZT52C12LP  | 9J           | 11.4                             | 12  | 12.7 | 5               | 25                                     | 150                               | 1.0             | 0.1                                                              | 8.0            | 6.0                                                         | 10.0 | 5                                |
| BZT52C13LP  | 9K           | 12.4                             | 13  | 14.1 | 5               | 30                                     | 170                               | 1.0             | 0.1                                                              | 8.0            | 7.0                                                         | 11.0 | 5                                |
| BZT52C15LP  | 9L           | 13.8                             | 15  | 15.6 | 5               | 30                                     | 200                               | 1.0             | 0.1                                                              | 10.5           | 9.2                                                         | 13.0 | 5                                |
| BZT52C16LP  | 9M           | 15.3                             | 16  | 17.1 | 5               | 40                                     | 200                               | 1.0             | 0.1                                                              | 11.2           | 10.4                                                        | 14.0 | 5                                |
| BZT52C18LP  | 9N           | 16.8                             | 18  | 19.1 | 5               | 45                                     | 225                               | 1.0             | 0.1                                                              | 12.6           | 12.4                                                        | 16.0 | 5                                |
| BZT52C20LP  | 9P           | 18.8                             | 20  | 21.2 | 5               | 55                                     | 225                               | 1.0             | 0.1                                                              | 14.0           | 14.4                                                        | 18.0 | 5                                |
| BZT52C22LP  | 9R           | 20.8                             | 22  | 23.3 | 5               | 55                                     | 250                               | 1.0             | 0.1                                                              | 15.4           | 16.4                                                        | 20.0 | 5                                |
| BZT52C24LP  | 9S           | 22.8                             | 24  | 25.6 | 5               | 70                                     | 250                               | 1.0             | 0.1                                                              | 16.8           | 18.4                                                        | 22.0 | 5                                |
| BZT52C36LP  | 9W           | 34                               | 36  | 38   | 2               | 90                                     | 350                               | 0.5             | 0.1                                                              | 25.2           | 36.5                                                        | 45.5 | 5                                |
| BZT52C39LP  | 9X           | 37                               | 39  | 41   | 2               | 130                                    | 350                               | 0.5             | 0.1                                                              | 27.3           | 36.8                                                        | 49.8 | 5                                |

(1) Short duration pulse test used to minimize self-heating effect.

(2) f=1KHz

## Typical characteristics



## Ordering Information :

| Device         | Packing                |
|----------------|------------------------|
| Part Number-TP | Tape&Reel: 10Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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