



# BZT52C2V7T THRU BZT52C75T

## Surface Mount Zener Voltage Regulators

### FEATURES

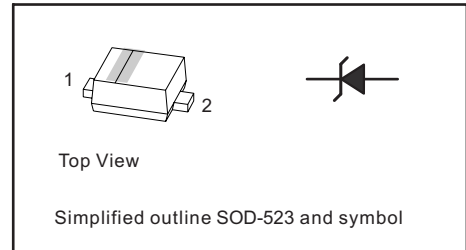
- Total power dissipation: Max. 0.35 W.
- Wide zener reverse voltage range 2.7V to 75V.
- Small plastic package suitable for surface mounted design.

### MECHANICAL DATA

- Case: SOD-523
- Terminals: Solderable per MIL-STD-750, Method 2026

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



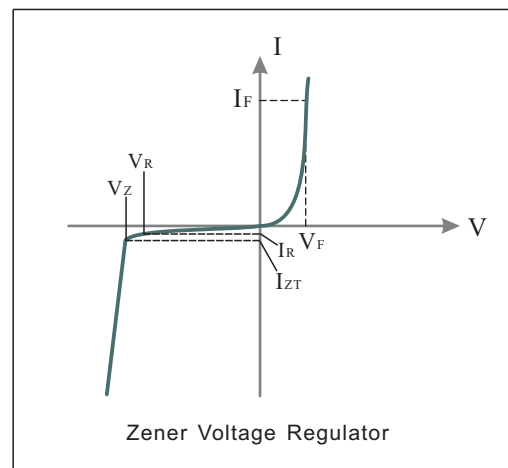
### Absolute Maximum Ratings And Characteristics ( Ta = 25 °C )

| Parameter                                     | Symbol    | Value      | Unit             |
|-----------------------------------------------|-----------|------------|------------------|
| Power Dissipation at $T_L = 75^\circ\text{C}$ | $P_D$     | 0.35       | W                |
| JUNCTION TEMPERATURE                          | $T_j$     | 125        | $^\circ\text{C}$ |
| STORAGE TEMPERATURE                           | $T_{stg}$ | -55 ~ +125 | $^\circ\text{C}$ |

### ELECTRICAL CHARACTERISTICS

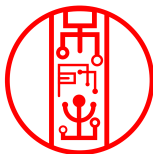
( $T_L = 30^\circ\text{C}$  unless otherwise noted,  $V_F = 0.90\text{ V Max.}$  @  $I_F = 10\text{ mA(DC)}$  for all types)

| Symbol   | Parameter                          |
|----------|------------------------------------|
| $V_Z$    | Reverse Zener Voltage @ $I_{ZT}$   |
| $I_{ZT}$ | Reverse Current                    |
| $Z_{ZT}$ | Maximum Zener Impedance @ $I_{ZT}$ |
| $I_{ZK}$ | Reverse Current                    |
| $Z_{ZK}$ | Maximum Zener Impedance @ $I_{ZK}$ |
| $I_R$    | Reverse Leakage Current @ $V_R$    |
| $V_R$    | Reverse Voltage                    |
| $I_F$    | Forward Current                    |
| $V_F$    | Forward Voltage @ $I_F$            |
| $I_{ZM}$ | Maximum DC Zener Current           |



### Notes On Page 3:

1. Tolerance and type number designation the type numbers listed indicate a tolerance of 5%
2. Zener voltage ( $V_Z$ ) measurement Nominal Zener voltage is measured with the device junction in thermal equilibrium with ambient temperature  $25^\circ\text{C}$
3. Zener impedance ( $Z_Z$ ) derivation :  $Z_{ZT}$  and  $Z_{ZK}$  are measured by dividing the AC voltage drop across the device by the AC current applied.  
The specified limits are for  $I_Z(\text{AC}) = 0.1 I_Z(\text{DC})$  with the AC frequency = 60 Hz



# BZT52C2V7T THRU BZT52C75T

BZT52C\*\*\* Series (VZ  $\pm 5.0\%$ )

VF(@10mA) Max. 0.90V for all Types

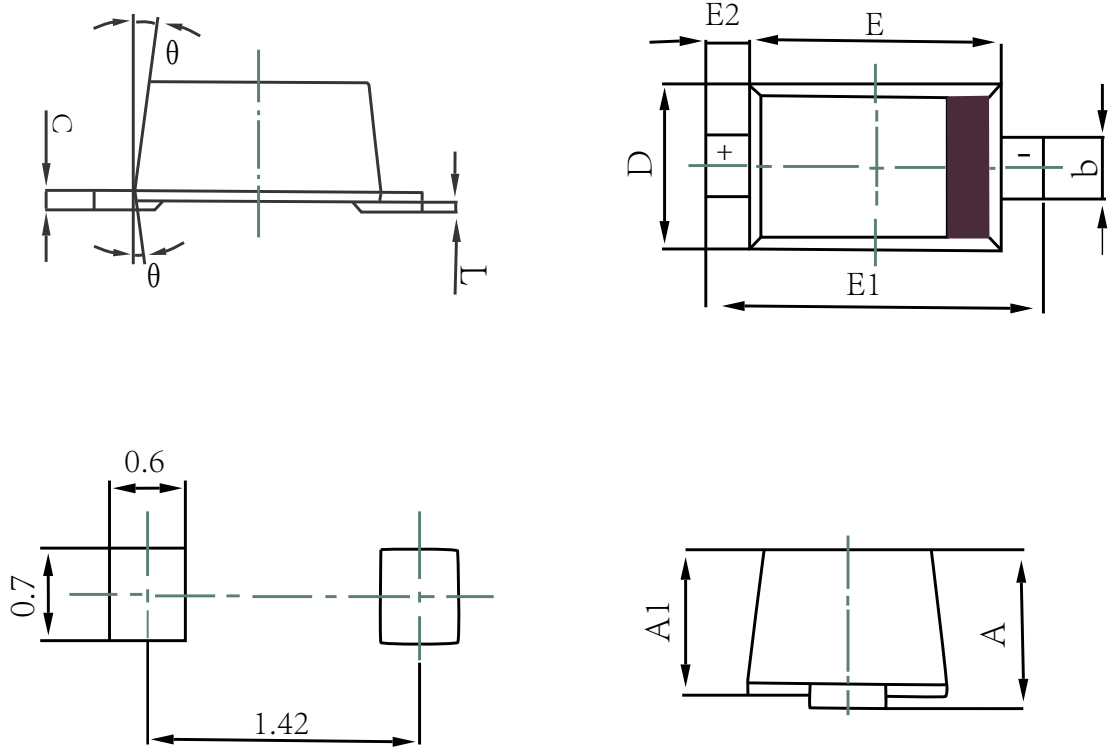
| Type       | Marking | VZ (V) |      |      |        | IR ( $\mu$ A) |       | ZZT (ohm) |        | ZZK (ohm) |        |
|------------|---------|--------|------|------|--------|---------------|-------|-----------|--------|-----------|--------|
|            |         | Nom    | MIN  | MAX  | Iz(mA) | MAX           | VR(V) | MAX       | Iz(mA) | MAX       | Iz(mA) |
| BZT52C2V7T | W1      | 2.7    | 2.5  | 2.9  | 5      | 20            | 1     | 100       | 5      | 600       | 1.0    |
| BZT52C3V0T | W2      | 3.0    | 2.8  | 3.2  | 5      | 10            | 1     | 95        | 5      | 600       | 1.0    |
| BZT52C3V3T | W3      | 3.3    | 3.1  | 3.5  | 5      | 5             | 1     | 95        | 5      | 600       | 1.0    |
| BZT52C3V6T | W4      | 3.6    | 3.4  | 3.8  | 5      | 5             | 1     | 90        | 5      | 600       | 1.0    |
| BZT52C3V9T | W5      | 3.9    | 3.7  | 4.1  | 5      | 3             | 1     | 90        | 5      | 600       | 1.0    |
| BZT52C4V3T | W6      | 4.3    | 4.0  | 4.6  | 5      | 3             | 1     | 90        | 5      | 600       | 1.0    |
| BZT52C4V7T | W7      | 4.7    | 4.4  | 5.0  | 5      | 3             | 2     | 80        | 5      | 500       | 1.0    |
| BZT52C5V1T | W8      | 5.1    | 4.8  | 5.4  | 5      | 2             | 2     | 60        | 5      | 480       | 1.0    |
| BZT52C5V6T | W9      | 5.6    | 5.2  | 6.0  | 5      | 1             | 2     | 40        | 5      | 400       | 1.0    |
| BZT52C6V2T | WA      | 6.2    | 5.8  | 6.6  | 5      | 3             | 4     | 10        | 5      | 150       | 1.0    |
| BZT52C6V8T | WB      | 6.8    | 6.4  | 7.2  | 5      | 2             | 4     | 15        | 5      | 80        | 1.0    |
| BZT52C7V5T | WC      | 7.5    | 7.0  | 7.9  | 5      | 1             | 5     | 15        | 5      | 80        | 1.0    |
| BZT52C8V2T | WD      | 8.2    | 7.7  | 8.7  | 5      | 0.7           | 5     | 15        | 5      | 80        | 1.0    |
| BZT52C9V1T | WE      | 9.1    | 8.5  | 9.6  | 5      | 0.5           | 6     | 15        | 5      | 100       | 1.0    |
| BZT52C10T  | WF      | 10     | 9.4  | 10.6 | 5      | 0.2           | 7     | 20        | 5      | 150       | 1.0    |
| BZT52C11T  | WG      | 11     | 10.4 | 11.6 | 5      | 0.1           | 8     | 20        | 5      | 150       | 1.0    |
| BZT52C12T  | WH      | 12     | 11.4 | 12.7 | 5      | 0.1           | 8     | 25        | 5      | 150       | 1.0    |
| BZT52C13T  | WI      | 13     | 12.4 | 14.1 | 5      | 0.1           | 8     | 30        | 5      | 170       | 1.0    |
| BZT52C15T  | WJ      | 15     | 13.8 | 15.6 | 5      | 0.05          | 10.5  | 30        | 5      | 200       | 1.0    |
| BZT52C16T  | WK      | 16     | 15.3 | 17.1 | 5      | 0.05          | 11.2  | 40        | 5      | 200       | 1.0    |
| BZT52C18T  | WL      | 18     | 16.8 | 19.1 | 5      | 0.05          | 12.6  | 45        | 5      | 225       | 1.0    |
| BZT52C20T  | WM      | 20     | 18.8 | 21.2 | 5      | 0.05          | 14.0  | 55        | 5      | 225       | 1.0    |
| BZT52C22T  | WN      | 22     | 20.8 | 23.3 | 5      | 0.05          | 15.4  | 55        | 5      | 250       | 1.0    |
| BZT52C24T  | WO      | 24     | 22.8 | 25.6 | 5      | 0.05          | 16.8  | 70        | 5      | 250       | 1.0    |
| BZT52C27T  | WP      | 27     | 25.1 | 28.9 | 2      | 0.05          | 18.9  | 80        | 2      | 300       | 0.5    |
| BZT52C30T  | WQ      | 30     | 28.0 | 32.0 | 2      | 0.05          | 21.0  | 80        | 2      | 300       | 0.5    |
| BZT52C33T  | WR      | 33     | 31.0 | 35.0 | 2      | 0.05          | 23.1  | 80        | 2      | 325       | 0.5    |
| BZT52C36T  | WS      | 36     | 34.0 | 38.0 | 2      | 0.05          | 25.2  | 90        | 2      | 350       | 0.5    |
| BZT52C39T  | WT      | 39     | 37.0 | 41.0 | 2      | 0.05          | 27.3  | 130       | 2      | 350       | 0.5    |
| BZT52C43T  | WU      | 43     | 40.0 | 46.0 | 2      | 0.05          | 30.1  | 150       | 2      | 375       | 0.5    |
| BZT52C47T  | WV      | 47     | 44.0 | 50.0 | 2      | 0.05          | 32.9  | 170       | 2      | 375       | 0.5    |
| BZT52C51T  | WW      | 51     | 48.0 | 54.0 | 2      | 0.05          | 35.7  | 180       | 2      | 400       | 0.5    |
| BZT52C56T  | WX1     | 56     | 52.0 | 60.0 | 2      | 0.05          | 39.2  | 200       | 2      | 425       | 0.5    |
| BZT52C62T  | WY      | 62     | 58.0 | 66.0 | 2      | 0.05          | 43.4  | 215       | 2      | 450       | 0.5    |
| BZT52C68T  | WZ      | 68     | 64.0 | 72.0 | 2      | 0.05          | 47.6  | 240       | 2      | 475       | 0.5    |
| BZT52C75T  | WZ1     | 75     | 70.0 | 79.0 | 2      | 0.05          | 52.5  | 255       | 2      | 500       | 0.5    |



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Package Dimensions

SOD-523



| Unit | A    | A1   | b    | c    | D    | E    | E1   | E2   | L    | θ    |
|------|------|------|------|------|------|------|------|------|------|------|
| Max. | 0.77 | 0.70 | 0.35 | 0.15 | 0.85 | 1.30 | 1.70 | 0.20 | 0.07 | 7°   |
| Min. | 0.51 | 0.50 | 0.25 | 0.08 | 0.75 | 1.10 | 1.50 | REF. | 0.01 | REF. |