

### FEATURES AND BENEFITS

| Product Summary |           |        |
|-----------------|-----------|--------|
| $P_D$           | 350mW     | @25 °C |
| $V_Z$           | 2.4 – 75V | @25 °C |
| $I_{ZT}$        | 2 / 5 mA  | @25 °C |

SOD-123



Cathode  Anode

- Constant Voltage control
- Wide Voltage Range Selection 2.4V to 75V
- RoHS Compliant / Green EMC UL Flammability Classification Rating 94V-0
- Matte Tin (Sn) Lead finish Solderable per MIL-STD-202, Method 208
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.01 grams (Approximate)

| Maximum Ratings (TA = 25 °C unless otherwise noted) |           |             |      |
|-----------------------------------------------------|-----------|-------------|------|
| PARAMETER                                           | SYMBOL    | VALUE       | UNIT |
| Power Dissipation                                   | $P_{TM}$  | 350         | mW   |
| Junction Temperature                                | $T_J$     | 150         | °C   |
| Storage Temperature                                 | $T_{STG}$ | -55 to +125 | °C   |

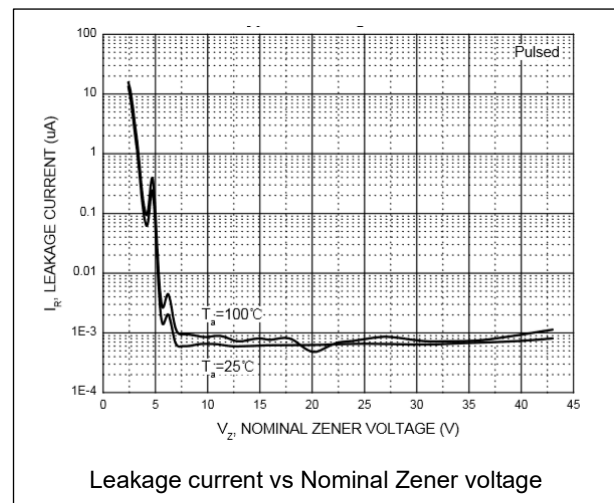
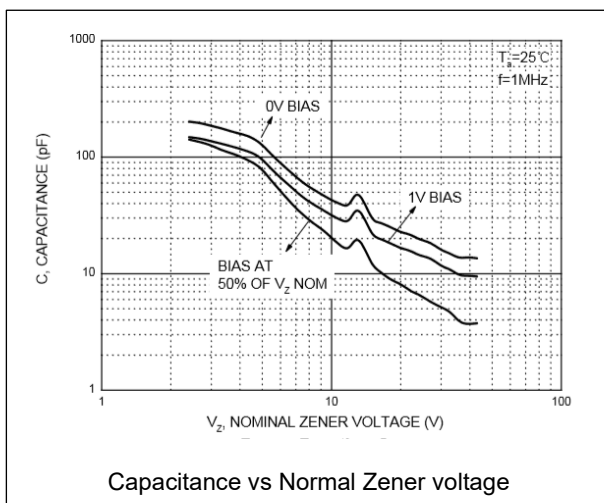
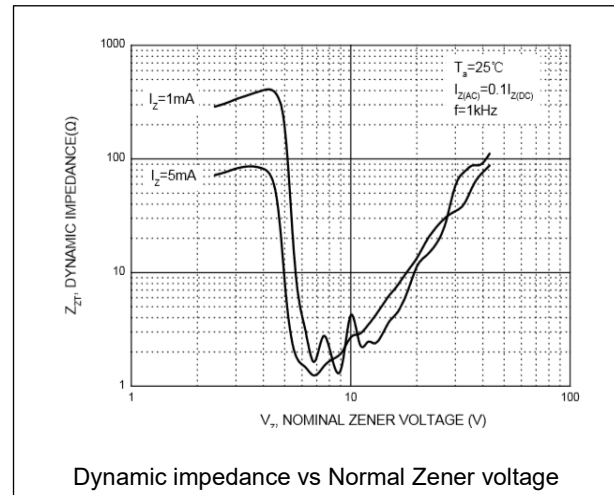
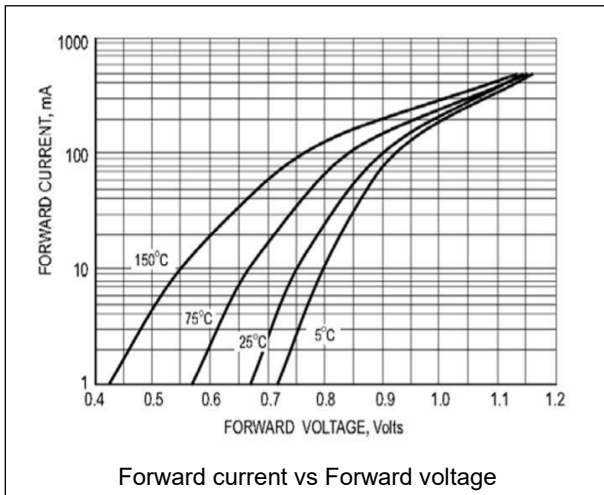
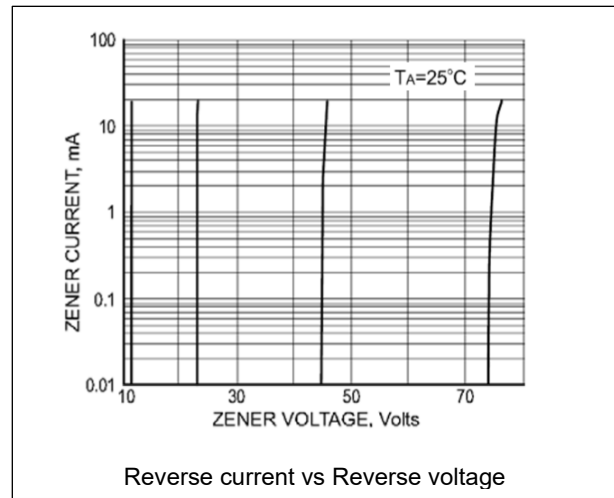
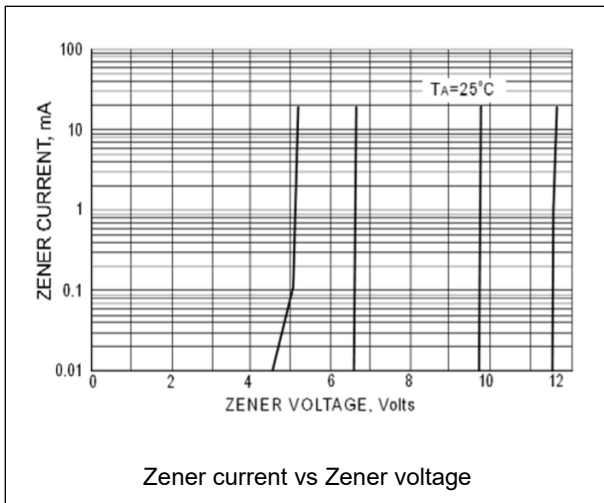
### ELECTRICAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)

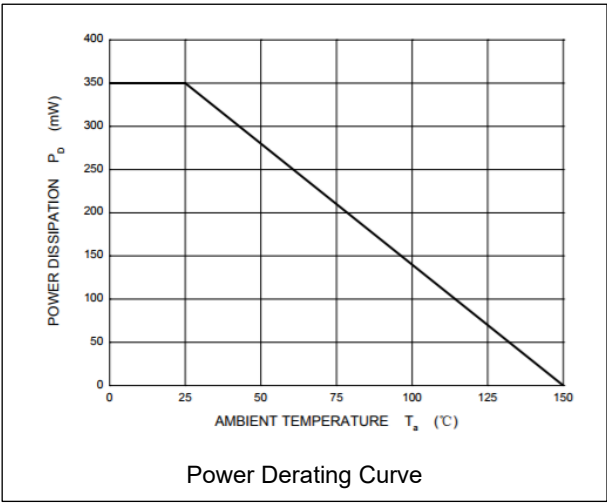
\*1 Pulse width = 10 ms

| Type<br>Number | Device<br>Marking | Vz (V) *1 |        |        | IzT | ZzT@IzT | ZzK@IzK | Izk<br>(mA) | I <sub>R</sub><br>(uA) | V <sub>R</sub><br>(V) |
|----------------|-------------------|-----------|--------|--------|-----|---------|---------|-------------|------------------------|-----------------------|
|                |                   | Nom(V)    | Min(V) | Max(V) | mA  | Ω       |         |             |                        |                       |
| BZT52B2V4      | 2WX               | 2.4       | 2.35   | 2.45   | 5   | 100     | 600     | 1.0         | 50                     | 1.0                   |
| BZT52B2V7      | 2W1               | 2.7       | 2.65   | 2.75   | 5   | 100     | 600     | 1.0         | 20                     | 1.0                   |
| BZT52B3V0      | 2W2               | 3.0       | 2.94   | 3.06   | 5   | 95      | 600     | 1.0         | 10                     | 1.0                   |
| BZT52B3V3      | 2W3               | 3.3       | 3.23   | 3.37   | 5   | 95      | 600     | 1.0         | 5                      | 1.0                   |
| BZT52B3V6      | 2W4               | 3.6       | 3.53   | 3.67   | 5   | 90      | 600     | 1.0         | 5                      | 1.0                   |
| BZT52B3V9      | 2W5               | 3.9       | 3.82   | 3.98   | 5   | 90      | 600     | 1.0         | 3                      | 1.0                   |
| BZT52B4V3      | 2W6               | 4.3       | 4.21   | 4.39   | 5   | 90      | 600     | 1.0         | 3                      | 1.0                   |
| BZT52B4V7      | 2W7               | 4.7       | 4.61   | 4.79   | 5   | 80      | 500     | 1.0         | 3                      | 2.0                   |
| BZT52B5V1      | 2W8               | 5.1       | 5.00   | 5.20   | 5   | 60      | 480     | 1.0         | 2                      | 2.0                   |
| BZT52B5V6      | 2W9               | 5.6       | 5.49   | 5.71   | 5   | 40      | 400     | 1.0         | 1                      | 2.0                   |
| BZT52B6V2      | 2WA               | 6.2       | 6.08   | 6.32   | 5   | 10      | 150     | 1.0         | 3                      | 4.0                   |

| Type<br>Number | Device<br>Marking | V <sub>z</sub> (V) *1 |        |        | I <sub>zT</sub> | Z <sub>ZT</sub> @I <sub>zT</sub> | Z <sub>ZK</sub> @I <sub>zK</sub> | I <sub>zk</sub><br>(mA) | I <sub>R</sub><br>(uA) | V <sub>R</sub><br>(V) |
|----------------|-------------------|-----------------------|--------|--------|-----------------|----------------------------------|----------------------------------|-------------------------|------------------------|-----------------------|
|                |                   | Nom(V)                | Min(V) | Max(V) | mA              | Ω                                |                                  |                         |                        |                       |
| BZT52B6V8      | 2WB               | 6.8                   | 6.66   | 6.94   | 5               | 15                               | 80                               | 1.0                     | 2                      | 4.0                   |
| BZT52B7V5      | 2WC               | 7.5                   | 7.35   | 7.65   | 5               | 15                               | 80                               | 1.0                     | 1                      | 5.0                   |
| BZT52B8V2      | 2WD               | 8.2                   | 8.04   | 8.36   | 5               | 15                               | 80                               | 1.0                     | 0.7                    | 5.0                   |
| BZT52B9V1      | 2WE               | 9.1                   | 8.92   | 9.28   | 5               | 15                               | 100                              | 1.0                     | 0.5                    | 6.0                   |
| BZT52B10       | 2WF               | 10                    | 9.80   | 10.20  | 5               | 20                               | 150                              | 1.0                     | 0.2                    | 7.0                   |
| BZT52B11       | 2WG               | 11                    | 10.78  | 11.22  | 5               | 20                               | 150                              | 1.0                     | 0.1                    | 8.0                   |
| BZT52B12       | 2WH               | 12                    | 11.76  | 12.24  | 5               | 25                               | 150                              | 1.0                     | 0.1                    | 8.0                   |
| BZT52B13       | 2WI               | 13                    | 12.74  | 13.26  | 5               | 30                               | 170                              | 1.0                     | 0.1                    | 8.0                   |
| BZT52B14       | 2WY               | 14                    | 13.72  | 14.28  | 5               | 25                               | 110                              | 1.0                     | 0.1                    | 10.5                  |
| BZT52B15       | 2WJ               | 15                    | 14.70  | 15.30  | 5               | 30                               | 200                              | 1.0                     | 0.1                    | 10.5                  |
| BZT52B16       | 2WK               | 16                    | 15.68  | 16.32  | 5               | 40                               | 200                              | 1.0                     | 0.1                    | 11.2                  |
| BZT52B18       | 2WL               | 18                    | 17.64  | 18.36  | 5               | 45                               | 225                              | 1.0                     | 0.1                    | 12.6                  |
| BZT52B20       | 2WM               | 20                    | 19.60  | 20.40  | 5               | 55                               | 225                              | 1.0                     | 0.1                    | 14.0                  |
| BZT52B22       | 2WN               | 22                    | 21.56  | 22.44  | 5               | 55                               | 250                              | 1.0                     | 0.1                    | 15.4                  |
| BZT52B24       | 2WO               | 24                    | 23.52  | 24.48  | 5               | 70                               | 250                              | 1.0                     | 0.1                    | 16.8                  |
| BZT52B27       | 2WP               | 27                    | 26.46  | 27.54  | 2               | 80                               | 300                              | 0.5                     | 0.1                    | 18.9                  |
| BZT52B30       | 2WQ               | 30                    | 29.40  | 30.60  | 2               | 80                               | 300                              | 0.5                     | 0.1                    | 21.0                  |
| BZT52B33       | 2WR               | 33                    | 32.34  | 33.66  | 2               | 80                               | 325                              | 0.5                     | 0.1                    | 23.1                  |
| BZT52B36       | 2WS               | 36                    | 35.28  | 36.72  | 2               | 90                               | 350                              | 0.5                     | 0.1                    | 25.2                  |
| BZT52B39       | 2WT               | 39                    | 38.22  | 39.78  | 2               | 130                              | 350                              | 0.5                     | 0.1                    | 27.3                  |
| BZT52B43       | 2WU               | 43                    | 42.14  | 43.86  | 2               | 130                              | 350                              | 0.5                     | 0.1                    | 29.4                  |
| BZT52B47       | 2WV               | 47                    | 45.83  | 48.17  | 2               | 170                              | 1000                             | 0.25                    | 0.1                    | 36                    |
| BZT52B51       | 2X1               | 51                    | 49.73  | 52.27  | 2               | 180                              | 1300                             | 0.25                    | 0.1                    | 39                    |
| BZT52B56       | 2X2               | 56                    | 54.60  | 57.40  | 2               | 200                              | 1400                             | 0.25                    | 0.1                    | 43                    |
| BZT52B62       | 2X3               | 62                    | 60.45  | 63.55  | 2               | 225                              | 1400                             | 0.25                    | 0.1                    | 47                    |
| BZT52B68       | 2X4               | 68                    | 66.30  | 69.70  | 2               | 240                              | 1600                             | 0.25                    | 0.1                    | 52                    |
| BZT52B75       | 2X5               | 75                    | 73.13  | 76.87  | 2               | 265                              | 1700                             | 0.25                    | 0.1                    | 56                    |

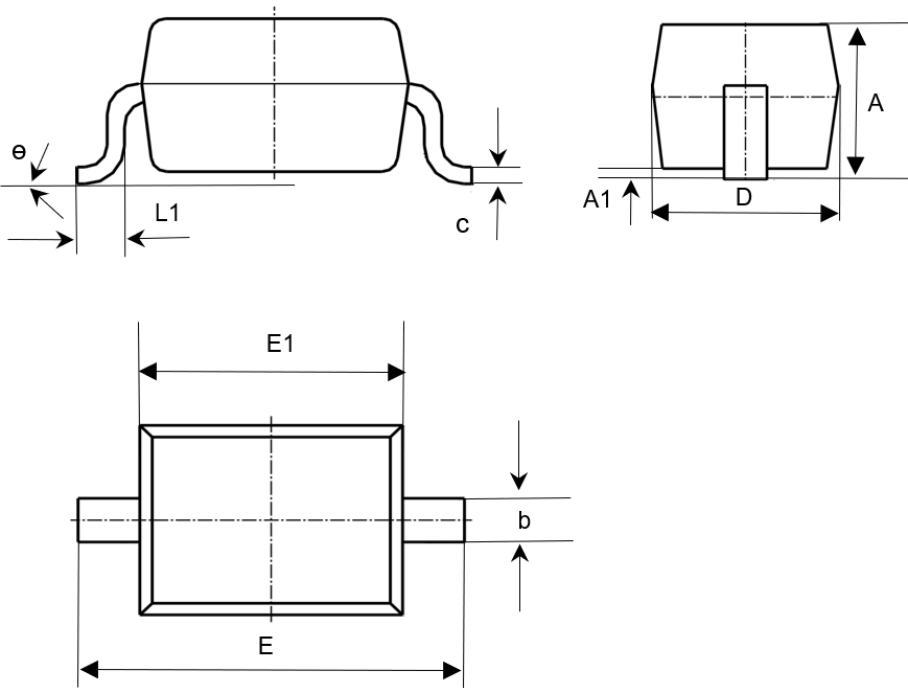
### RATING AND CHARACTERISTICS CURVES





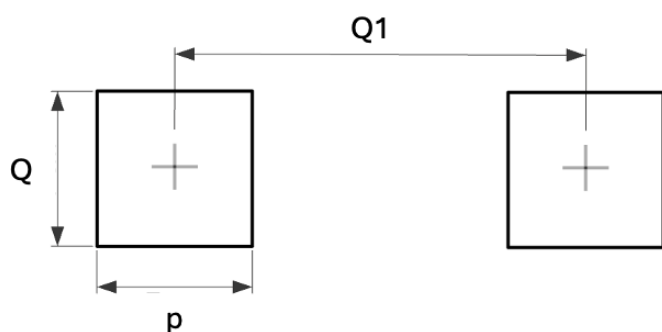
**PACKAGE OUTLINE DIMENSIONS**

**SOD-123**



| Symbol   | MIN  | MAX  |
|----------|------|------|
| A        | 1.05 | 1.25 |
| A1       | 0.00 | 0.10 |
| b        | 0.45 | 0.65 |
| c        | 0.08 | 0.15 |
| D        | 1.50 | 1.70 |
| E        | 3.55 | 3.85 |
| E1       | 2.60 | 2.80 |
| L1       | 0.25 | 0.45 |
| $\theta$ | 0°   | 8°   |
| Unit: mm |      |      |

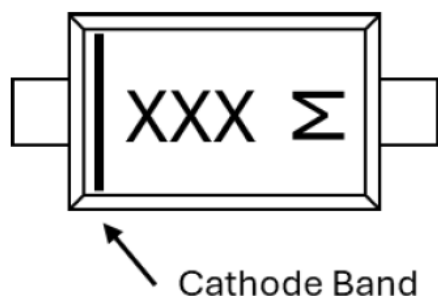
### SUGGESTED PAD LAYOUT



| Symbol   | Typ  |
|----------|------|
| Q1       | 3.24 |
| Q        | 1.0  |
| p        | 0.8  |
| Unit: mm |      |

### DEVICE MARKING CODE AND ORDERING INFORMATION

| DEVICE        | Marking                 | Quantity    | Packing     |
|---------------|-------------------------|-------------|-------------|
| BZT52B series | Refer to Device Marking | 3000/7"Reel | Tape & Reel |



XXX: Product Marking Code

Σ : Date Code (Rotate 90° counterclockwise)

| Odd Year | Even Year |
|----------|-----------|
| 1        | E         |
| 2        | F         |
| 3        | H         |
| 4        | J         |
| 5        | K         |
| 6        | L         |
| 7        | N         |
| 8        | P         |
| 9        | U         |
| T        | X         |
| V        | Y         |
| C        | Z         |

#### NOTICE:

AZUREMOTO'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS COMPONENTS IN ANY LIFE SUPPORT DEVICES OR SYSTEMS.

AZUREMOTO RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY OR RUGGEDNESS.