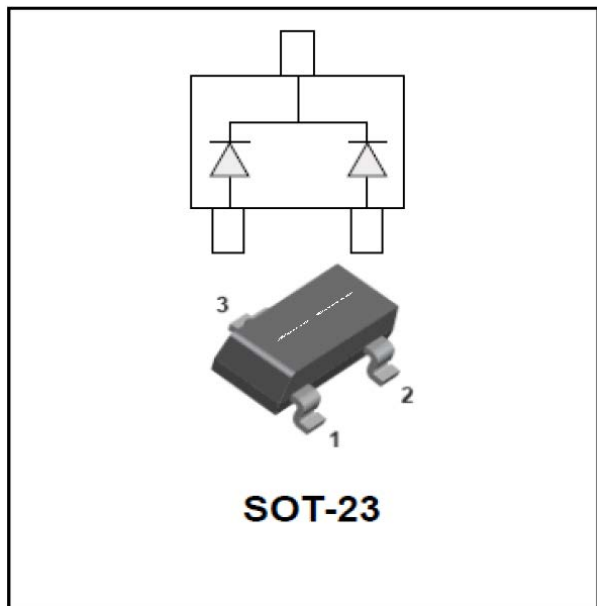


## Zener Diode



### Features

- High reliability
- Very sharp reverse characteristic
- Low reverse current level
- Zener Voltage 2.4V~47V

### Mechanical Data

- **Package:** SOT-23  
Molding compound meets UL 94 V-0 flammability rating, -compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

### ■Limiting Values (Absolute Maximum Rating, $T_A=25^{\circ}\text{C}$ Unless otherwise specified)

| Characteristic                              | Symbol        | Value    | Units                       |
|---------------------------------------------|---------------|----------|-----------------------------|
| Power Dissipation                           | PD            | 300      | mW                          |
| Thermal Resistance from Junction to Ambient | R $\theta$ JA | 417      | $^{\circ}\text{C}/\text{W}$ |
| Storage Temperature Range                   | TSTG          | -55~+150 | $^{\circ}\text{C}$          |
| Operation Temperature                       | TJ            | -55~+150 | $^{\circ}\text{C}$          |

### ■Ordering Information (Example)

| PREFERRED P/N    | PACKING CODE | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|------------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| DZ23C2V4-DZ23C47 | F2           | Approximate 0.009 | 3000                 | 30000                   | 120000                     | 7" reel       |

## DZ23C2V4 THRU DZ23C47

### ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

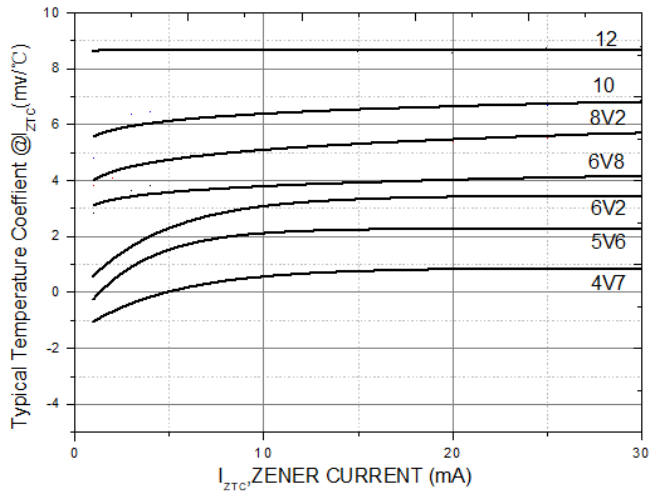
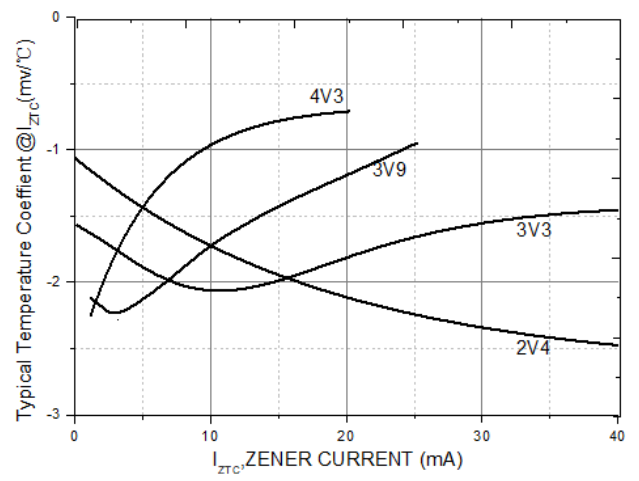
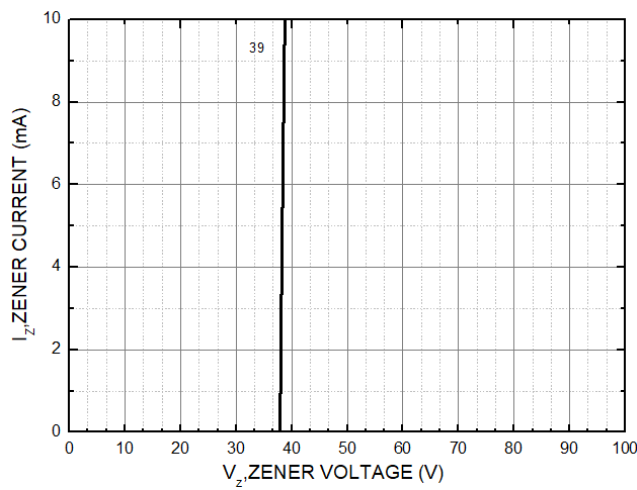
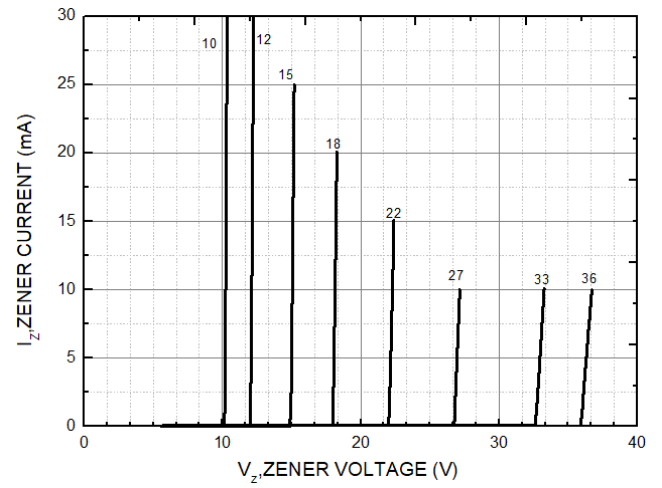
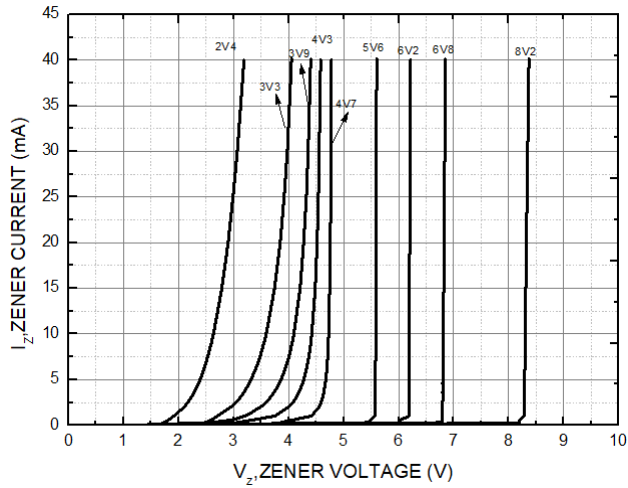
| Type Number | Marking Code | Nominal Zener Voltage               |      |       | Maximum Zener Impedance          |    |                                  |    | Maximum Reverse Leakage Current |     |
|-------------|--------------|-------------------------------------|------|-------|----------------------------------|----|----------------------------------|----|---------------------------------|-----|
|             |              | V <sub>Z</sub> (V)@ I <sub>ZT</sub> |      |       | Z <sub>zT</sub> @I <sub>zT</sub> |    | Z <sub>zK</sub> @I <sub>zK</sub> |    | I <sub>R</sub> @ V <sub>R</sub> |     |
|             |              | Min.                                | Typ. | Max.  | Ω                                | mA | Ω                                | mA | μA                              | V   |
| DZ23C2V4    | V0           | 2.28                                | 2.4  | 2.52  | 100                              | 5  | 600                              | 1  | 100                             | 1   |
| DZ23C2V7    | KV1          | 2.57                                | 2.7  | 2.84  | 100                              | 5  | 600                              | 1  | 75                              | 1   |
| DZ23C3V0    | KV2          | 2.85                                | 3.0  | 3.15  | 95                               | 5  | 600                              | 1  | 50                              | 1   |
| DZ23C3V3    | KV3          | 3.14                                | 3.3  | 3.47  | 95                               | 5  | 600                              | 1  | 25                              | 1   |
| DZ23C3V6    | KV4          | 3.42                                | 3.6  | 3.78  | 95                               | 5  | 600                              | 1  | 15                              | 1   |
| DZ23C3V9    | KV5          | 3.71                                | 3.9  | 4.1   | 95                               | 5  | 600                              | 1  | 10                              | 1   |
| DZ23C4V3    | KV6          | 4.09                                | 4.3  | 4.52  | 95                               | 5  | 600                              | 1  | 5                               | 1   |
| DZ23C4V7    | KV7          | 4.47                                | 4.7  | 4.94  | 78                               | 5  | 500                              | 1  | 5                               | 2   |
| DZ23C5V1    | KV8          | 4.85                                | 5.1  | 5.36  | 60                               | 5  | 480                              | 1  | 0.1                             | 0.8 |
| DZ23C5V6    | KV9          | 5.32                                | 5.6  | 5.88  | 40                               | 5  | 400                              | 1  | 0.1                             | 1   |
| DZ23C6V2    | KVA          | 5.89                                | 6.2  | 6.51  | 10                               | 5  | 150                              | 1  | 0.1                             | 2   |
| DZ23C6V8    | KVB          | 6.46                                | 6.8  | 7.14  | 8                                | 5  | 80                               | 1  | 0.1                             | 3   |
| DZ23C7V5    | KVC          | 7.13                                | 7.5  | 7.88  | 7                                | 5  | 80                               | 1  | 0.1                             | 5   |
| DZ23C8V2    | KVD          | 7.79                                | 8.2  | 8.61  | 7                                | 5  | 80                               | 1  | 0.1                             | 6   |
| DZ23C9V1    | KVE          | 8.65                                | 9.1  | 9.56  | 10                               | 5  | 100                              | 1  | 0.1                             | 7   |
| DZ23C10     | KVF          | 9.50                                | 10   | 10.50 | 15                               | 5  | 150                              | 1  | 0.1                             | 7.5 |
| DZ23C11     | KVG          | 10.45                               | 11   | 11.55 | 20                               | 5  | 150                              | 1  | 0.1                             | 8.5 |
| DZ23C12     | KVH          | 11.40                               | 12   | 12.60 | 20                               | 5  | 150                              | 1  | 0.1                             | 9   |
| DZ23C13     | KVI          | 12.35                               | 13   | 13.65 | 25                               | 5  | 170                              | 1  | 0.1                             | 10  |
| DZ23C15     | KVJ          | 14.25                               | 15   | 15.75 | 30                               | 5  | 200                              | 1  | 0.1                             | 11  |
| DZ23C16     | KVK          | 15.20                               | 16   | 16.80 | 40                               | 5  | 200                              | 1  | 0.1                             | 12  |
| DZ23C18     | KVL          | 17.10                               | 18   | 18.90 | 50                               | 5  | 225                              | 1  | 0.1                             | 14  |
| DZ23C20     | KVM          | 19.00                               | 20   | 21.00 | 50                               | 5  | 225                              | 1  | 0.1                             | 15  |
| DZ23C22     | KVN          | 20.90                               | 22   | 23.10 | 55                               | 5  | 250                              | 1  | 0.1                             | 17  |
| DZ23C24     | KVO          | 22.80                               | 24   | 25.20 | 80                               | 5  | 250                              | 1  | 0.1                             | 18  |
| DZ23C27     | KVP          | 25.65                               | 27   | 28.35 | 80                               | 5  | 300                              | 1  | 0.1                             | 20  |

**DZ23C2V4 THRU DZ23C47**

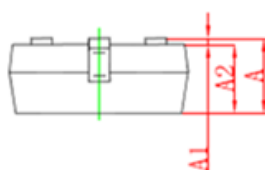
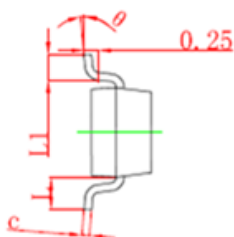
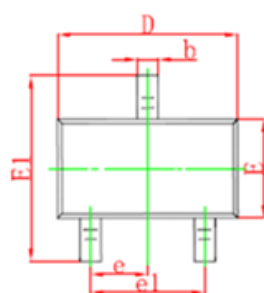
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|         |     |       |    |       |     |   |     |   |     |      |
|---------|-----|-------|----|-------|-----|---|-----|---|-----|------|
| DZ23C30 | KVQ | 28.50 | 30 | 31.50 | 80  | 5 | 300 | 1 | 0.1 | 22.5 |
| DZ23C33 | KVR | 31.35 | 33 | 34.65 | 80  | 5 | 325 | 1 | 0.1 | 25   |
| DZ23C36 | KVS | 34.20 | 36 | 37.80 | 90  | 5 | 350 | 1 | 0.1 | 27   |
| DZ23C39 | KVT | 37.05 | 39 | 40.95 | 90  | 5 | 350 | 1 | 0.1 | 29   |
| DZ23C43 | KVU | 40.85 | 43 | 45.15 | 100 | 5 | 700 | 1 | 0.1 | 32   |
| DZ23C47 | KVV | 44.65 | 47 | 49.35 | 100 | 5 | 750 | 1 | 0.1 | 35   |

■ Characteristics(Typical)

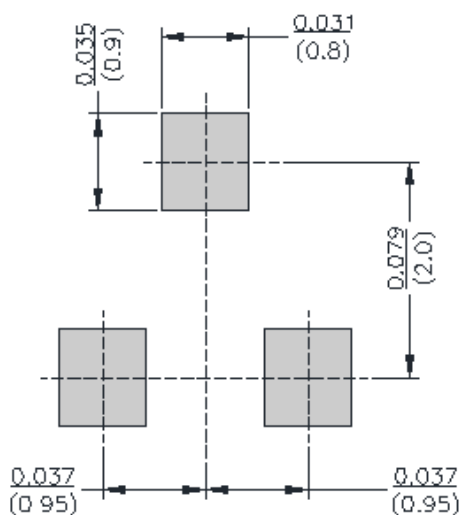


■SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.050 | 0.035                | 0.041 |
| b      | 0.300                     | 0.500 | 0.012                | 0.020 |
| c      | 0.100                     | 0.200 | 0.004                | 0.008 |
| D      | 2.800                     | 3.000 | 0.110                | 0.118 |
| E      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                     | 2.550 | 0.089                | 0.100 |
| e      | 0.950TYP                  |       | 0.037TYP             |       |
| e1     | 1.800                     | 2.000 | 0.071                | 0.079 |
| L      | 0.550REF                  |       | 0.022REF             |       |
| L1     | 0.300                     | 0.500 | 0.012                | 0.020 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

■SOT-23Suggested Pad Layout



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