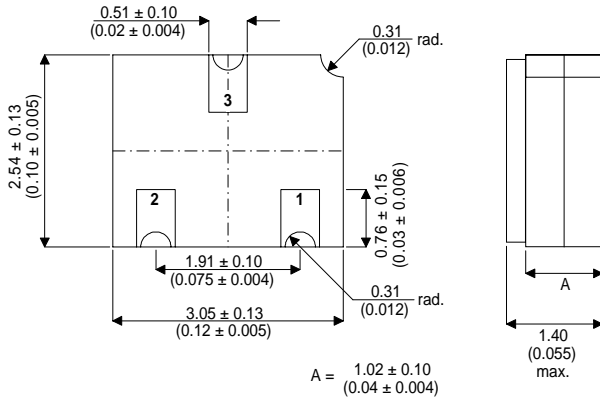


MECHANICAL DATA

Dimensions in mm(inches)



SOT23 CERAMIC (LCC1 PACKAGE)

Underside View

Pad 1 – Anode Pad 2 – N/C Pad 3 – Cathode

VOLTAGE REGULATOR DIODE IN A CERAMIC SURFACE MOUNT PACKAGE FOR HI-REL APPLICATIONS

FEATURES

- HERMETIC CERAMIC SURFACE MOUNT PACKAGE (SOT23 COMPATIBLE)
- VOLTAGE RANGE 2.4 TO 75V

ABSOLUTE MAXIMUM RATINGS

| | | | |
|-------------------|--|------------------------|---------------|
| P_{TOT} | Power Dissipation | $T_{MB} = 25^{\circ}C$ | 500mW |
| | Derate above 25°C | | 4mW/°C |
| T_{OP} | Maximum Operating Ambient Temperature | | -55 to +150°C |
| T_{STG} | Storage Temperature Range | | -65 to +175°C |
| T_{SOL} | Soldering Temperature | (5 seconds max.) | 260°C |
| $R_{\theta JA}$ | Thermal Resistance Junction to Ambient | | 336°C/W |
| $R_{\theta J-MB}$ | Thermal Resistance Junction to Mounting Base | | 140°C/W |

ELECTRICAL CHARACTERISTICS ($T_A = 25^{\circ}C$ unless otherwise stated)

| Parameter | Test Conditions | Min. | Typ. | Max. | Units |
|--|--|------------|------------|--------------------------|----------|
| V_Z Zener Voltage | For V_Z nom. $\leq 36V$, $I_Z = 5mA$ | V_Z min. | V_Z nom. | V_Z max. | V |
| | For V_Z nom. $\geq 39V$, $I_Z = 2.5mA$ | | | | |
| I_R Reverse Current | $V_R = V_R$ test | | | I_R max. | μA |
| | $V_R = V_R$ test $T_{AMB} = 150^{\circ}C$ | | | I_R max ⁽²⁾ | |
| Z_Z Small Signal Breakdown Impedance | $I_Z = I_Z$ test | | | Z_Z max. | Ω |
| Z_Z Small Signal Breakdown Impedance near breakdown knee | For V_Z nom. $\leq 36V$, $I_{ZK} = 1mA$ | | | Z_K max. | Ω |
| | For V_Z nom. $\geq 39V$, $I_{ZK} = 0.5mA$ | | | | |

See table 1 for type variants and test parameters.

TABLE 1 – TYPE VARIANTS & TEST PARAMETERS

| Product | V _Z nom. (V) | V _Z min. (V) | V _Z max. (V) | I _Z max. (mA) | Z _Z max. (Ω) | V _R test (V) | I _R max. (μA) | T _{CVZ} | | Z _K max. (Ω) | I _R max ⁽²⁾ (μA) |
|-----------|----------------------------|----------------------------|----------------------------|-----------------------------|----------------------------|----------------------------|-----------------------------|------------------|----------------|----------------------------|---|
| | | | | | | | | min. (%/°C) | max. (%/°C) | | |
| BZX55C2V4 | 2.4 | 2.28 | 2.56 | 155 | 85 | 1.0 | 50 | -0.08 | -0.06 | 600 | 100 |
| BZX55C2V7 | 2.7 | 2.5 | 2.9 | 135 | 85 | 1.0 | 10 | -0.08 | -0.06 | 600 | 50 |
| BZX55C3V0 | 3.0 | 2.8 | 3.2 | 125 | 85 | 1.0 | 4.0 | -0.08 | -0.06 | 600 | 40 |
| BZX55C3V3 | 3.3 | 3.1 | 3.5 | 115 | 85 | 1.0 | 2.0 | -0.08 | -0.05 | 600 | 40 |
| BZX55C3V6 | 3.6 | 3.4 | 3.8 | 105 | 85 | 1.0 | 2.0 | -0.08 | -0.04 | 600 | 40 |
| BZX55C3V9 | 3.9 | 3.7 | 4.1 | 95 | 85 | 1.0 | 2.0 | -0.07 | -0.03 | 600 | 40 |
| BZX55C4V3 | 4.3 | 4.0 | 4.6 | 90 | 75 | 1.0 | 1.0 | -0.04 | -0.01 | 600 | 20 |
| BZX55C4V7 | 4.7 | 4.4 | 5.0 | 85 | 60 | 1.0 | 0.5 | -0.03 | +0.01 | 600 | 10 |
| BZX55C5V1 | 5.1 | 4.8 | 5.4 | 80 | 35 | 1.0 | 0.1 | -0.02 | +0.05 | 550 | 2.0 |
| BZX55C5V6 | 5.6 | 5.2 | 6.0 | 70 | 25 | 1.0 | 0.1 | -0.01 | +0.06 | 450 | 2.0 |
| BZX55C6V2 | 6.2 | 5.8 | 6.6 | 64 | 10 | 2.0 | 0.1 | 0 | +0.07 | 200 | 2.0 |
| BZX55C6V8 | 6.8 | 6.4 | 7.2 | 58 | 8.0 | 3.0 | 0.1 | +0.01 | +0.08 | 150 | 2.0 |
| BZX55C7V5 | 7.5 | 7.0 | 7.9 | 53 | 7.0 | 5.0 | 0.1 | +0.01 | +0.09 | 50 | 2.0 |
| BZX55C8V2 | 8.2 | 7.7 | 8.7 | 47 | 7.0 | 6.2 | 0.1 | +0.01 | +0.09 | 50 | 2.0 |
| BZX55C9V1 | 9.1 | 8.5 | 9.6 | 43 | 10 | 6.8 | 0.1 | +0.02 | +0.10 | 50 | 2.0 |
| BZX55C10 | 10 | 9.4 | 10.6 | 40 | 15 | 7.5 | 0.1 | +0.03 | +0.11 | 70 | 2.0 |
| BZX55C11 | 11 | 10.4 | 11.6 | 36 | 20 | 8.2 | 0.1 | +0.03 | +0.11 | 70 | 2.0 |
| BZX55C12 | 12 | 11.4 | 12.7 | 32 | 20 | 9.1 | 0.1 | +0.03 | +0.11 | 90 | 2.0 |
| BZX55C13 | 13 | 12.4 | 14.1 | 29 | 26 | 10 | 0.1 | +0.03 | +0.11 | 110 | 2.0 |
| BZX55C15 | 15 | 13.8 | 15.6 | 27 | 30 | 11 | 0.1 | +0.03 | +0.11 | 110 | 2.0 |
| BZX55C16 | 16 | 15.3 | 17.1 | 24 | 40 | 12 | 0.1 | +0.03 | +0.11 | 170 | 2.0 |
| BZX55C18 | 18 | 16.8 | 19.1 | 21 | 50 | 13 | 0.1 | +0.03 | +0.11 | 170 | 2.0 |
| BZX55C20 | 20 | 18.8 | 21.2 | 20 | 55 | 15 | 0.1 | +0.03 | +0.11 | 220 | 2.0 |
| BZX55C22 | 22 | 20.8 | 23.3 | 18 | 55 | 16 | 0.1 | +0.03 | +0.11 | 220 | 2.0 |
| BZX55C24 | 24 | 22.8 | 25.6 | 16 | 80 | 18 | 0.1 | +0.04 | +0.12 | 220 | 2.0 |
| BZX55C27 | 27 | 25.1 | 28.9 | 14 | 80 | 20 | 0.1 | +0.04 | +0.12 | 220 | 2.0 |
| BZX55C30 | 30 | 28 | 32 | 13 | 80 | 22 | 0.1 | +0.04 | +0.12 | 220 | 2.0 |
| BZX55C33 | 33 | 31 | 35 | 12 | 80 | 24 | 0.1 | +0.04 | +0.12 | 220 | 2.0 |
| BZX55C36 | 36 | 34 | 38 | 11 | 80 | 27 | 0.1 | +0.04 | +0.12 | 220 | 2.0 |
| BZX55C39 | 39 | 37 | 41 | 10 | 90 | 30 | 0.1 | +0.04 | +0.12 | 500 | 5.0 |
| BZX55C43 | 43 | 40 | 46 | 9.2 | 90 | 33 | 0.1 | +0.04 | +0.12 | 600 | 5.0 |
| BZX55C47 | 47 | 44 | 50 | 8.5 | 110 | 36 | 0.1 | +0.04 | +0.12 | 700 | 5.0 |
| BZX55C51 | 51 | 48 | 54 | 7.8 | 125 | 39 | 0.1 | +0.04 | +0.12 | 700 | 10 |
| BZX55C56 | 56 | 52 | 60 | 7.0 | 135 | 43 | 0.1 | +0.04 | +0.12 | 1000 | 10 |
| BZX55C62 | 62 | 58 | 66 | 6.4 | 150 | 47 | 0.1 | +0.04 | +0.12 | 1000 | 10 |
| BZX55C68 | 68 | 64 | 72 | 5.9 | 200 | 51 | 0.1 | +0.04 | +0.12 | 1000 | 10 |
| BZX55C75 | 75 | 70 | 80 | 5.3 | 250 | 56 | 0.1 | +0.04 | +0.12 | 1500 | 10 |