

TECHNICAL DATA
DATA SHEET 5102, REV. -

| |
|----|
| SJ |
| SX |
| SV |

ZENER 500mW VOLTAGE REGULATOR

PACKAGE STYLE: Zener 500mW (Suffix "US" denotes melf/surface mount packaging)

-All ratings are @ Tc = 25 °C unless otherwise specified.

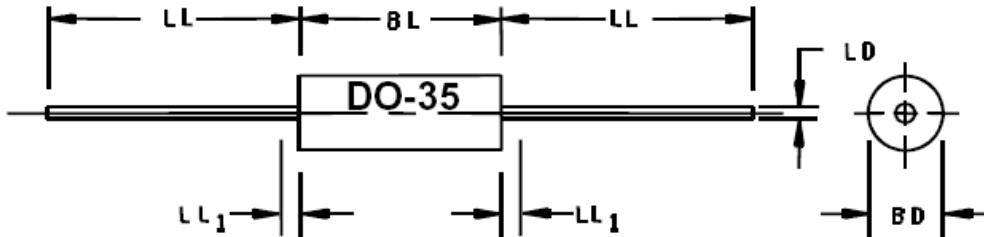
-Operating -55 °C to +175 °C and storage -65 °C to +175 °C

| Type | VZ2 nom at IZ2 | VZ1 IZ1 250 µA | IZ2 test current | ZZT at IZ2 | ZZK at 250 µA | IZM | VZ(reg) | VR | IR1 at +25°C | IR2 at TA = +150°C | avz |
|--------|----------------------|----------------------|------------------------|------------------|---------------------|------|---------|------|--------------------|--------------------------|---------------------|
| | V | minV | mA | Ω | Ω | mA | V | V | µA | µA | %/°C |
| 1N6309 | 2.4 | 1.1 | 20 | 30 | 1200 | 177 | 1.50 | 1.0 | 100 | 200 | -.085 |
| 1N6310 | 2.7 | 1.2 | 20 | 3029 | 1300 | 157 | 1.50 | 1.0 | 60 | 150 | -.080 |
| 1N6311 | 3.0 | 1.3 | 20 | 27 | 1400 | 141 | 1.50 | 1.0 | 30 | 100 | -.075 |
| 1N6312 | 3.3 | 1.5 | 20 | 25 | 1400 | 128 | 1.60 | 1.0 | 5 | 20 | -.070 |
| 1N6313 | 3.6 | 1.5 | 20 | 23 | 1400 | 117 | 1.60 | 1.0 | 3 | 12 | -.065 |
| 1N6314 | 3.9 | 1.8 | 20 | 20 | 1700 | 108 | 1.60 | 1.0 | 2 | 12 | -.060 |
| 1N6315 | 4.3 | 2.0 | 20 | 17 | 1700 | 99 | 0.90 | 1.0 | 2 | 12 | -.045 /+ .032 |
| 1N6316 | 4.7 | 2.4 | 20 | 14 | 1500 | 90 | 0.50 | 1.5 | 5 | 12 | -.028 /+ .032 |
| 1N6317 | 5.1 | 2.8 | 20 | 8 | 1300 | 83 | 0.40 | 2.0 | 5 | 12 | - .020/+ .035 |
| 1N6318 | 5.6 | 3.3 | 20 | 3 | 1200 | 76 | 0.40 | 2.5 | 5 | 10 | + .050 |
| 1N6319 | 6.2 | 4.3 | 20 | 3 | 800 | 68 | 0.30 | 3.5 | 5 | 10 | + .060 |
| 1N6320 | 6.8 | 6.0 | 20 | 3 | 400 | 63 | 0.35 | 4.0 | 2 | 50 | + .062 |
| 1N6321 | 7.5 | 6.6 | 20 | 4 | 400 | 57 | 0.40 | 5.0 | 2 | 30 | + .068 |
| 1N6322 | 8.2 | 7.5 | 20 | 5 | 400 | 52 | 0.40 | 6.0 | 1 | 10 | + .075 |
| 1N6323 | 9.1 | 8.4 | 20 | 6 | 500 | 47 | 0.50 | 7.0 | 1.00 | 10 | + .076 |
| 1N6324 | 10.0 | 9.1 | 20 | 6 | 500 | 43 | 0.50 | 8.0 | 1.00 | 10 | + .079 |
| 1N6325 | 11.0 | 10.0 | 20 | 7 | 550 | 39 | 0.50 | 8.5 | 1.00 | 10 | + .082 |
| 1N6326 | 12.0 | 11.0 | 20 | 7 | 550 | 35 | 0.55 | 9.0 | 1.00 | 10 | + .083 |
| 1N6327 | 13.0 | 11.9 | 9.5 | 8 | 550 | 33 | 0.55 | 9.9 | 0.05 | 10 | + .083 |
| 1N6328 | 15.0 | 13.8 | 8.5 | 10 | 600 | 28 | 0.70 | 11.0 | 0.05 | 10 | + .084 |
| 1N6329 | 16.0 | 14.7 | 7.8 | 12 | 600 | 27 | 0.75 | 12.0 | 0.05 | 10 | + .084 |
| 1N6330 | 18.0 | 16.6 | 7.0 | 14 | 600 | 24 | 0.85 | 14.0 | 0.05 | 10 | + .085 |
| 1N6331 | 20.0 | 18.5 | 6.2 | 18 | 500 | 21 | 0.95 | 15.0 | 0.05 | 10 | + .086 |
| 1N6332 | 22.0 | 20.4 | 5.6 | 20 | 500 | 19 | 1.05 | 17.0 | 0.05 | 10 | + .087 |
| 1N6333 | 24.0 | 22.3 | 5.2 | 24 | 500 | 18 | 1.15 | 18.0 | 0.05 | 10 | + .088 |
| 1N6334 | 27.0 | 25.2 | 4.6 | 27 | 500 | 16 | 1.30 | 21.0 | 0.05 | 10 | + .090 |
| 1N6335 | 30.0 | 28.0 | 4.2 | 32 | 500 | 14 | 1.45 | 23.0 | 0.05 | 10 | + .091 |
| 1N6336 | 33.0 | 30.9 | 3.8 | 40 | 600 | 13 | 1.60 | 25.0 | 0.05 | 10 | + .092 |
| 1N6337 | 36.0 | 33.7 | 3.4 | 50 | 600 | 12.0 | 1.75 | 27.0 | 0.05 | 10 | + .093 |
| 1N6338 | 39.0 | 36.6 | 3.2 | 55 | 700 | 11.0 | 1.90 | 30 | 0.05 | 10 | + .094 |
| 1N6339 | 43.0 | 40.4 | 3.0 | 65 | 800 | 9.9 | 2.10 | 33 | 0.05 | 10 | + .095 |
| 1N6340 | 47.0 | 44.2 | 2.7 | 75 | 900 | 9.0 | 2.25 | 36 | 0.05 | 10 | + .095 |

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| Type | VZ2 nom at IZ2 | VZ1 IZ1 250 μ A | IZ2 test current | ZZT at IZ2 | ZZK at 250 μ A | IZM | VZ(reg) | VR | IR1 at +25°C | IR2 at TA= +150°C | α_{vz} |
|--------|----------------------|---------------------------|------------------------|------------------|--------------------------|-----|---------|-----|--------------------|-------------------------|---------------|
| | V | minV | mA | Ω | Ω | mA | V | V | μ A | μ A | %/°C |
| 1N6341 | 51.0 | 48.0 | 2.5 | 85 | 1,000 | 8.3 | 2.50 | 39 | 0.05 | 10 | +0.096 |
| 1N6342 | 56.0 | 52.7 | 2.2 | 100 | 1,200 | 7.6 | 2.70 | 43 | 0.05 | 10 | +0.097 |
| 1N6343 | 62.0 | 58.4 | 2.0 | 125 | 1,300 | 6.8 | 2.90 | 47 | 0.05 | 10 | +0.099 |
| 1N6344 | 68.0 | 64.1 | 1.8 | 155 | 1,500 | 6.3 | 3.20 | 52 | 0.05 | 10 | +0.101 |
| 1N6345 | 75.0 | 70.8 | 1.7 | 180 | 1,600 | 5.7 | 3.40 | 56 | 0.05 | 10 | +0.103 |
| 1N6346 | 82.0 | 77.4 | 1.5 | 220 | 1,800 | 5.2 | 3.80 | 62 | 0.05 | 10 | +0.105 |
| 1N6347 | 91.0 | 86.0 | 1.4 | 270 | 2,100 | 4.7 | 4.20 | 69 | 0.05 | 10 | +0.108 |
| 1N6348 | 100.0 | 94.5 | 1.3 | 340 | 2,400 | 4.3 | 4.40 | 76 | 0.05 | 10 | +0.110 |
| 1N6349 | 110.0 | 104.0 | 1.1 | 500 | 2,800 | 3.9 | 4.80 | 84 | 0.05 | 10 | +0.110 |
| 1N6350 | 120.0 | 113.0 | 1.0 | 600 | 3,200 | 3.5 | 5.20 | 91 | 0.05 | 10 | +0.110 |
| 1N6351 | 130.0 | 122 | 0.95 | 850 | 4,100 | 3.3 | 5.60 | 99 | 0.05 | 10 | +0.110 |
| 1N6352 | 150.0 | 141 | 0.85 | 1,000 | 4,500 | 2.8 | 7.00 | 114 | 0.05 | 10 | +0.110 |
| 1N6353 | 160.0 | 151 | 0.80 | 1,200 | 5,000 | 2.7 | 7.50 | 122 | 0.05 | 10 | +0.110 |
| 1N6354 | 180.0 | 170 | 0.68 | 1,500 | 5,600 | 2.4 | 9.00 | 137 | 0.05 | 10 | +0.110 |
| 1N6355 | 200.0 | 189 | 0.65 | 1,800 | 6,500 | 2.1 | 12.00 | 152 | 0.05 | 10 | +0.110 |

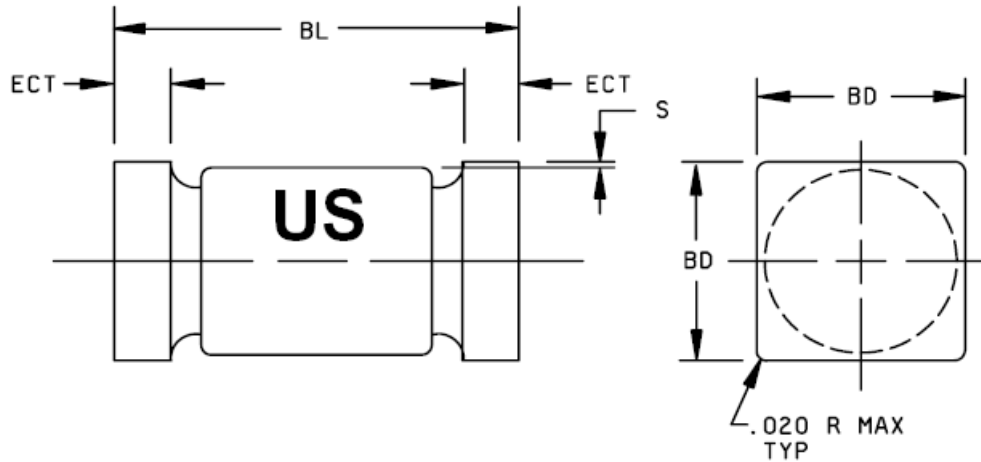
MECHANICAL DIMENSIONS: Zener 500mW Package: In Inches / mm



| Ltr | Dimensions | | | | Notes |
|-----------------|------------|-------|-------------|-------|-------|
| | Inches | | Millimeters | | |
| | Min | Max | Min | Max | |
| BD | .060 | .090 | 1.52 | 2.29 | |
| BL | .120 | .200 | 3.05 | 5.08 | 5 |
| LD | .018 | .022 | 0.46 | 0.56 | |
| LL | 1.000 | 1.500 | 25.40 | 38.10 | |
| LL ₁ | | .050 | | 1.27 | 3 |

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MECHANICAL DIMENSIONS: Zener 500mW MELF Package: In Inches / mm



| Symbol | Dimensions | | | |
|--------|------------|------|-------------|------|
| | Inches | | Millimeters | |
| | Min | Max | Min | Max |
| BD | .070 | .085 | 1.78 | 2.16 |
| BL | .165 | .195 | 4.19 | 4.95 |
| ECT | .019 | .028 | 0.48 | 0.71 |
| S | .003 min | | 0.08 min | |

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