

TECHNICAL DATA
DATA SHEET 5070, REV. B.1

Zener 5W Voltage Regulator

- Hermetic, non-cavity glass package
- Metallurgically bonded
- Operating and Storage Temperature: -65°C to +175°C
- All parts are 100% hot solder dipped
- JAN/ JANTX/ JANTXV available per MIL-PRF-19500/356
- JANS Plus removes atypical/out of family V_z

AVAILABLE AS
1N
JAN, JANTX, JANTXV
JANS
JAN EQUIVALENT*
SJ49XX*, SX49XX*, SV49XX*
SS49XX*

5W Zener Diodes

Qualified per MIL-PRF-19500/356

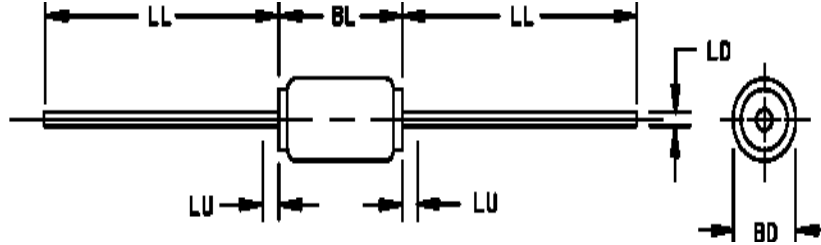
| SERIES TYPE | V_z NOM | TEST CURRENT I_z | MAX ZENER IMPEDANCE | | VOLTAGE REGULATION V_z | SURGE CURRENT I_{zSM} | MAX REVERSE LEAKAGE CURRENT@ V | | TEMP. COEFF α_{V_z} | MAX CONTINUOUS CURRENT I_{zM} |
|-------------|-----------|-----------------------|---------------------|----------|-----------------------------|----------------------------|--------------------------------|----------|-------------------------------|------------------------------------|
| | | | Z_z | Z_{zK} | | | V_R | I_{R1} | | |
| 5W | V | mA | Ω | Ω | V | A | V | μA | % /°C | mA |
| 1N4958/US | 10 | 125 | 2 | 125 | .8 | 20 | 7.6 | 25 | .07 | 475 |
| 1N4959/US | 11 | 125 | 2.5 | 130 | .8 | 19 | 8.4 | 10 | .07 | 430 |
| 1N4960/US | 12 | 100 | 2.5 | 140 | .8 | 18 | 9.1 | 10 | .07 | 395 |
| 1N4961/US | 13 | 100 | 3 | 145 | .9 | 16 | 9.9 | 10 | .08 | 365 |
| 1N4962/US | 15 | 75 | 3.5 | 150 | 1.0 | 12 | 11.4 | 5 | .08 | 315 |
| 1N4963/US | 16 | 75 | 3.5 | 155 | 1.1 | 10 | 12.2 | 5 | .08 | 294 |
| 1N4964/US | 18 | 65 | 4 | 160 | 1.2 | 9.0 | 13.7 | 5 | .085 | 264 |
| 1N4965/US | 20 | 65 | 4.5 | 165 | 1.5 | 8.0 | 15.2 | 2 | .085 | 237 |
| 1N4966/US | 22 | 50 | 5 | 170 | 1.8 | 7.0 | 16.7 | 2 | .085 | 216 |
| 1N4967/US | 24 | 50 | 5 | 175 | 2.0 | 6.5 | 18.2 | 2 | .09 | 198 |
| 1N4968/US | 27 | 50 | 6 | 180 | 2.0 | 6.0 | 20.6 | 2 | .09 | 176 |
| 1N4969/US | 30 | 40 | 8 | 190 | 2.5 | 5.5 | 22.8 | 2 | .09 | 158 |
| 1N4970/US | 33 | 40 | 10 | 200 | 2.8 | 5.0 | 25.1 | 2 | .095 | 144 |
| 1N4971/US | 36 | 30 | 11 | 220 | 3.0 | 4.5 | 27.4 | 2 | .095 | 132 |
| 1N4972/US | 39 | 30 | 14 | 230 | 3.0 | 4.0 | 29.7 | 2 | .095 | 122 |
| 1N4973/US | 43 | 30 | 20 | 240 | 3.3 | 3.5 | 32.7 | 2 | .095 | 110 |
| 1N4974/US | 47 | 25 | 25 | 250 | 3.5 | 3.2 | 35.8 | 2 | .095 | 100 |
| 1N4975/US | 51 | 25 | 27 | 270 | 4.0 | 3.0 | 38.8 | 2 | .095 | 92 |
| 1N4976/US | 56 | 20 | 35 | 320 | 4.4 | 2.8 | 42.6 | 2 | .095 | 84 |
| 1N4977/US | 62 | 20 | 42 | 400 | 5.0 | 2.5 | 47.1 | 2 | .100 | 76 |
| 1N4978/US | 68 | 20 | 50 | 500 | 5.5 | 2.2 | 51.7 | 2 | .100 | 70 |
| 1N4979/US | 75 | 20 | 55 | 620 | 6.0 | 2.0 | 56 | 2 | .100 | 63 |
| 1N4980/US | 82 | 15 | 80 | 720 | 6.6 | 1.8 | 62.2 | 2 | .100 | 58.0 |
| 1N4981/US | 91 | 15 | 90 | 760 | 7.5 | 1.6 | 69.2 | 2 | .100 | 52.5 |
| 1N4982/US | 100 | 12 | 110 | 800 | 8.0 | 1.4 | 76.0 | 2 | .100 | 47.5 |
| 1N4983/US | 110 | 12 | 125 | 1,000 | 9.0 | 1.2 | 83.6 | 2 | .100 | 43.0 |
| 1N4984/US | 120 | 10 | 170 | 1,150 | 10 | 1.0 | 91.2 | 2 | .100 | 39.5 |
| 1N4985/US | 130 | 10 | 190 | 1,250 | 11 | .8 | 98.8 | 2 | .105 | 36.6 |
| 1N4986/US | 150 | 8 | 330 | 1,500 | 13 | .75 | 114.0 | 2 | .105 | 31.6 |
| 1N4987/US | 160 | 8 | 350 | 1,650 | 14 | .70 | 121.6 | 2 | .105 | 29.4 |
| 1N4988/US | 180 | 5 | 450 | 1,750 | 16 | .60 | 136.8 | 2 | .110 | 26.4 |
| 1N4989/US | 200 | 5 | 500 | 1,850 | 18 | .50 | 152.0 | 2 | .110 | 23.6 |

*Sensitron equivalent diodes are manufactured and screened to MIL-PRF-19500 flow and guidelines starting from wafer fabrication through assembly and testing using our specification 7700-4093.

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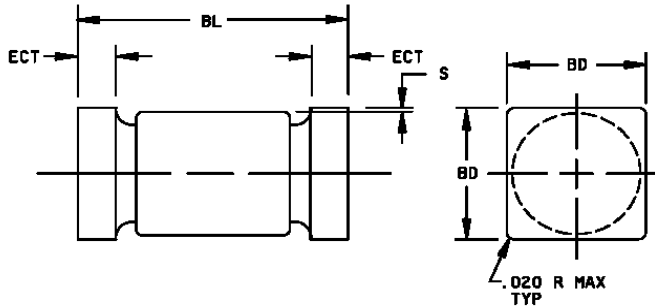
PACKAGE DIMENSIONS:

MECHANICAL DIMENSIONS
Zener 5W Package, AXIAL Version
In Inches / mm



| Dimensions | | | | | |
|------------|--------|-------|-------------|-------|-------|
| Ltr | Inches | | Millimeters | | Notes |
| | Min | Max | | | |
| BL | .130 | .300 | 3.30 | 4.95 | |
| BD | .090 | .145 | 2.92 | 4.70 | |
| LL | 1.00 | 1.300 | 25.40 | 33.02 | |
| LU | | .050 | | 1.27 | 4 |
| LD | .037 | .043 | 0.94 | 1.89 | 3 |

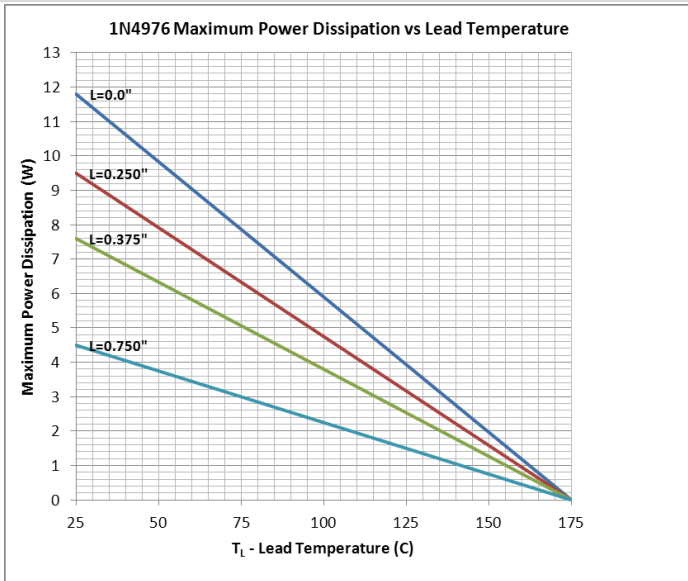
MECHANICAL DIMENSIONS
Zener 5W Package, MELF (/US version)
In Inches / mm



| Dimensions | | | | | |
|------------|--------|------|-------------|------|--|
| Ltr | Inches | | Millimeters | | |
| | Min | Max | Min | Max | |
| BL | .200 | .225 | 5.08 | 5.72 | |
| ECT | .019 | .028 | 0.48 | 0.71 | |
| S | .003 | --- | 0.08 | --- | |
| BD | .137 | .148 | 3.48 | 3.76 | |

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GRAPHS:



PART ORDERING INFORMATION

The following part numbers can be purchased in either axial or surface mount devices and screened and tested to the military screening flow. The parts are marked in accordance with the testing performed, example:

| Sensitron Screening Level | *Part Number-- Leaded Package (example for 1N4958) |
|---------------------------|--|
| 1N | 1N4958 |
| JAN | JAN1N4958 |
| JANTX | JANTX1N4958 |
| JANTXV | JANTXV1N4958 |
| JANS | JANS1N4958 |
| SJ | SJ4958 |
| SX | SX4958 |
| SV | SV4958 |
| SS | SS4958 |

*Parts can also be ordered Tape & Reel

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[1N5811USJANTX](#) [JANTX1N4487](#) [JANTX1N4468](#) [JANTX1N5550US](#) [JANS1N6328US](#) [JANS1N4469US](#) [JANS1N4479US](#) [JANTX1N4245](#)
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[JANTX1N5623US](#) [JANS1N5420US](#) [1N6622U](#) [JANS1N5809US](#) [1N5618JAN](#) [SDP610-025PA](#) [JAN1N4478US](#) [1N4942JANTX](#)
[SAL175UF3A](#) [1N6107AUSJANTX](#) [1N5552](#) [1N5806USJANTX](#) [1N5621](#) [1N6642USJANTX](#) [JANTX1N4972US](#) [JANS1N6640](#)
[1N5802USJANTXV](#) [JANTX1N5650A](#) [JANTX1N4963](#)