

HIGH-RELIABILITY PRODUCTS

Features

- Low dynamic impedance
- Hermetically sealed
- 5 Watt applications
- Low reverse leakage currents
- Small package

Specification

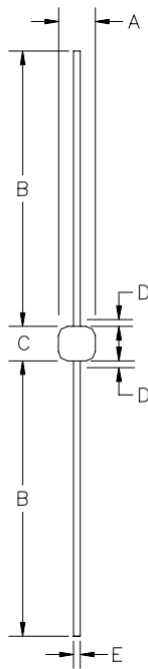
- Quick reference data

$V_R = 6.8V - 300V$
 $I_Z (MAX) = 15.6mA - 700mA$
 $Z_Z = 1\Omega - 950\Omega$
 $I_R = 2\mu A - 150\mu A$

Description

These products are qualified to MIL-PRF-19500/356.
 They can be supplied as JAN, JANTX, JANTXV and JANS grades.

Outline Drawing



| DIM | Dimensions | | | | Note |
|----------------|------------|-------|-------------|------|------|
| | Inches | | Millimeters | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.085 | 0.140 | 2.16 | 3.56 | - |
| B | 1.00 | 1.30 | 25.4 | 33.0 | - |
| C | 0.140 | 0.185 | 3.56 | 4.70 | - |
| D ¹ | - | 0.030 | - | 0.8 | 1 |
| E | 0.036 | 0.042 | 0.91 | 1.07 | - |

Notes:

(1): Lead diameter uncontrolled over this region.

Figure 1: Outline Dimensions

Electrical Characteristics (T_A=25°C unless otherwise specified)

| Device Types | V _Z Nom | V _Z Min | V _Z Max | I _Z Test Current T _A =+25°C | Z _Z Imped. | Z _K Knee Imped. | I _Z Max DC Current | V _Z (reg) Voltage Reg. | I _{ZSM} @ T _A =+25°C | V _R Reverse Voltage | I _R Reverse Current DC | αV _Z Temp Coeff. | I _R Reverse Current DC T _A =+150°C | I _{ZK} Test current |
|--------------|--------------------|--------------------|--------------------|--|-----------------------|----------------------------|-------------------------------|-----------------------------------|--|--------------------------------|-----------------------------------|-----------------------------|--|------------------------------|
| | V | V | V | mA | Ω | Ω | mA | V | A | V | μA | %/°C | μA | mA |
| 1N4954 | 6.8 | 6.46 | 7.14 | 175 | 1 | 1000 | 700 | 0.7 | 29.3 | 5.2 | 150 | 0.05 | 750 | 1 |
| 1N4955 | 7.5 | 7.13 | 7.87 | 175 | 1.5 | 800 | 630 | 0.7 | 26.4 | 5.7 | 100 | 0.06 | 500 | 1 |
| 1N4956 | 8.2 | 7.79 | 8.61 | 150 | 1.5 | 600 | 580 | 0.7 | 24 | 6.2 | 50 | 0.06 | 300 | 1 |
| 1N4957 | 9.1 | 8.65 | 9.55 | 150 | 2 | 400 | 520 | 0.7 | 22 | 6.9 | 25 | 0.06 | 200 | 1 |
| 1N4958 | 10 | 9.5 | 10.5 | 125 | 2 | 125 | 475 | 0.8 | 20 | 7.6 | 25 | 0.07 | 200 | 1 |
| 1N4959 | 11 | 10.45 | 11.55 | 125 | 2.5 | 130 | 430 | 0.8 | 19 | 8.4 | 10 | 0.07 | 150 | 1 |
| 1N4960 | 12 | 11.4 | 12.6 | 100 | 2.5 | 140 | 395 | 0.8 | 18 | 9.1 | 10 | 0.07 | 150 | 1 |
| 1N4961 | 13 | 12.35 | 13.65 | 100 | 3 | 145 | 365 | 0.9 | 16 | 9.9 | 10 | 0.08 | 150 | 1 |
| 1N4962 | 15 | 14.25 | 15.75 | 75 | 3.5 | 150 | 315 | 1 | 12 | 11.4 | 5 | 0.08 | 100 | 1 |
| 1N4963 | 16 | 15.2 | 16.8 | 75 | 3.5 | 155 | 294 | 1.1 | 10 | 12.2 | 5 | 0.08 | 100 | 1 |
| 1N4964 | 18 | 17.1 | 18.9 | 65 | 4 | 160 | 264 | 1.2 | 9 | 13.7 | 5 | 0.085 | 100 | 1 |
| 1N4965 | 20 | 19 | 21 | 65 | 4.5 | 165 | 237 | 1.5 | 8 | 15.2 | 2 | 0.085 | 100 | 1 |
| 1N4966 | 22 | 20.9 | 23.1 | 50 | 5 | 170 | 216 | 1.8 | 7 | 16.7 | 2 | 0.085 | 100 | 1 |
| 1N4967 | 24 | 22.8 | 25.2 | 50 | 5 | 175 | 198 | 2 | 6.5 | 18.2 | 2 | 0.09 | 100 | 1 |
| 1N4968 | 27 | 25.7 | 28.3 | 50 | 6 | 180 | 176 | 2 | 6 | 20.6 | 2 | 0.09 | 100 | 1 |
| 1N4969 | 30 | 28.5 | 31.5 | 40 | 8 | 190 | 158 | 2.5 | 5.5 | 22.8 | 2 | 0.09 | 100 | 1 |
| 1N4970 | 33 | 31.4 | 34.6 | 40 | 10 | 200 | 144 | 2.8 | 5 | 25.1 | 2 | 0.095 | 100 | 1 |
| 1N4971 | 36 | 34.2 | 37.8 | 30 | 11 | 220 | 132 | 3 | 4.5 | 27.4 | 2 | 0.095 | 100 | 1 |
| 1N4972 | 39 | 37.1 | 40.9 | 30 | 14 | 230 | 122 | 3 | 4 | 29.7 | 2 | 0.095 | 100 | 1 |
| 1N4973 | 43 | 40.9 | 45.1 | 30 | 20 | 240 | 110 | 3.3 | 3.5 | 32.7 | 2 | 0.095 | 100 | 1 |
| 1N4974 | 47 | 44.7 | 49.3 | 25 | 25 | 250 | 100 | 3.5 | 3.2 | 35.8 | 2 | 0.095 | 100 | 1 |
| 1N4975 | 51 | 48.5 | 53.5 | 25 | 27 | 270 | 92 | 4 | 3 | 38.8 | 2 | 0.095 | 100 | 1 |
| 1N4976 | 56 | 53.2 | 58.8 | 20 | 35 | 320 | 84 | 4.4 | 2.8 | 42.6 | 2 | 0.095 | 100 | 1 |
| 1N4977 | 62 | 58.9 | 65.1 | 20 | 42 | 400 | 76 | 5 | 2.5 | 47.1 | 2 | 0.1 | 100 | 1 |
| 1N4978 | 68 | 64.6 | 71.4 | 20 | 50 | 500 | 70 | 5.5 | 2.2 | 51.7 | 2 | 0.1 | 100 | 1 |
| 1N4979 | 75 | 71.3 | 78.7 | 20 | 55 | 620 | 63 | 6 | 2 | 56 | 2 | 0.1 | 100 | 1 |
| 1N4980 | 82 | 77.9 | 86.1 | 15 | 80 | 720 | 58 | 6.6 | 1.8 | 62.2 | 2 | 0.1 | 100 | 1 |
| 1N4981 | 91 | 86.5 | 95.5 | 15 | 90 | 760 | 52.5 | 7.5 | 1.6 | 69.2 | 2 | 0.1 | 100 | 1 |
| 1N4982 | 100 | 95 | 105 | 12 | 110 | 800 | 47.5 | 8 | 1.4 | 76 | 2 | 0.1 | 100 | 1 |
| 1N4983 | 110 | 104.5 | 115.5 | 12 | 125 | 1000 | 43 | 9 | 1.2 | 83.6 | 2 | 0.1 | 100 | 1 |
| 1N4984 | 120 | 114 | 126 | 10 | 170 | 1150 | 39.5 | 10 | 1 | 91.2 | 2 | 0.1 | 100 | 1 |
| 1N4985 | 130 | 123.5 | 136.5 | 10 | 190 | 1250 | 36.6 | 11 | 0.8 | 98.8 | 2 | 0.105 | 100 | 1 |
| 1N4986 | 150 | 142.5 | 157.5 | 8 | 330 | 1500 | 31.6 | 13 | 0.75 | 114 | 2 | 0.105 | 100 | 1 |
| 1N4987 | 160 | 152 | 168 | 8 | 350 | 1650 | 29.4 | 14 | 0.7 | 121.6 | 2 | 0.105 | 100 | 1 |
| 1N4988 | 180 | 171 | 189 | 5 | 450 | 1750 | 26.4 | 16 | 0.6 | 136.8 | 2 | 0.11 | 100 | 1 |
| 1N4989 | 200 | 190 | 210 | 5 | 500 | 1850 | 23.6 | 18 | 0.5 | 152 | 2 | 0.11 | 100 | 1 |

| Device Types | V _Z Nom | V _Z Min | V _Z Max | I _Z Test Current T _A =+25°C | Z _Z Imped. | Z _K Knee Imped. | I _Z Max DC Current | V _Z (reg) Voltage Reg. | I _{ZSM} @ T _A =+25°C | V _R Reverse Voltage | I _R Reverse Current DC | αV _Z Temp Coeff. | I _R Reverse Current DC T _A =+150°C | I _{ZK} Test current |
|--------------|--------------------|--------------------|--------------------|--|-----------------------|----------------------------|-------------------------------|-----------------------------------|--|--------------------------------|-----------------------------------|-----------------------------|--|------------------------------|
| | V | V | V | mA | Ω | Ω | mA | V | A | V | μA | %/°C | μA | mA |
| 1N4990 | 220 | 209 | 231 | 5 | 550 | 2000 | 21.6 | 19 | 0.5 | 167 | 2 | 0.115 | 100 | 1 |
| 1N4991 | 240 | 228 | 252 | 5 | 650 | 2050 | 19.8 | 22 | 0.4 | 182 | 2 | 0.115 | 100 | 1 |
| 1N4992 | 270 | 257 | 283 | 5 | 800 | 2100 | 17.5 | 25 | 0.35 | 206 | 2 | 0.12 | 100 | 1 |
| 1N4993 | 300 | 285 | 315 | 4 | 950 | 2150 | 15.6 | 28 | 0.3 | 228 | 2 | 0.12 | 100 | 1 |

Notes:

(1): Operating Temperature: -55°C to 175°C

(2): Storage Temperature: -65°C to 175°C

Ordering Information

| Part Number | Description |
|--------------------|---|
| 1N4954 THRU 1N4993 | Axial leaded hermetically sealed ⁽¹⁾ |

Notes:

(1): Available in bulk or tape and reel packaging. Please consult factory for quantities.



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