



NTE5061A thru NTE5105A (Includes NTE134A thru NTE151A) Zener Diode, 1 Watt ±5% Tolerance

Features:

- Zener Voltage 110V to 200V
- Low Cost
- Low Zener Impedance
- Excellent Clamping
- Easily Cleaned with Freon, Alcohol, Chloroethene, and Similar Solvents

Maximum Ratings and Electrical Characteristics: ($T_C = +25^\circ\text{C}$, unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load, for capacitive load, derate current by 20%)

| NTE Type Number | Nominal Zener Voltage $V_z @ I_{zt}$ | Zener Test Current (I_{zt}) | Maximum Dynamic Impedance | | | Maximum Leakage Current $I_R @ V_R$ | | Max DC Zener Current (I_{zm}) | Max Forward Voltage $V_F @ I_F$ | | |
|-----------------|--------------------------------------|---------------------------------|---------------------------|-------------------|------|-------------------------------------|-------|-----------------------------------|---------------------------------|-------|----|
| | | | $Z_{zt} @ I_{zt}$ | $Z_{zk} @ I_{zk}$ | | μA | Volts | | mA | Volts | mA |
| | | | Ω | Ω | mA | μA | Volts | | | | |
| NTE5061A | 2.4 | 20.0 | 30 | 1200 | 0.25 | 100 | 1.0 | – | 1.1 | 200 | |
| NTE5062A | 2.5 | 20.0 | 30 | 1250 | 0.25 | 100 | 1.0 | – | 1.1 | 200 | |
| NTE5063A | 2.7 | 20.0 | 30 | 1300 | 0.25 | 75 | 1.0 | – | 1.1 | 200 | |
| NTE5064A | 2.8 | 20.0 | 30 | 1400 | 0.25 | 75 | 1.0 | – | 1.1 | 200 | |
| NTE5065A | 3.0 | 20.0 | 30 | 1600 | 0.25 | 50 | 1.0 | – | 1.1 | 200 | |
| NTE5066A | 3.3 | 76.0 | 10 | 400 | 1.0 | 100 | 1.0 | – | 1.2 | 200 | |
| NTE134A | 3.6 | 69.0 | 10 | 400 | 1.0 | 100 | 1.0 | – | 1.2 | 200 | |
| NTE5067A | 3.9 | 64.0 | 9 | 400 | 1.0 | 50 | 1.0 | – | 1.2 | 200 | |
| NTE5068A | 4.3 | 58.0 | 9 | 400 | 1.0 | 10 | 1.0 | – | 1.2 | 200 | |
| NTE5069A | 4.7 | 53.0 | 8 | 500 | 1.0 | 10 | 1.0 | – | 1.2 | 200 | |
| NTE135A | 5.1 | 49.0 | 7 | 550 | 1.0 | 10 | 1.0 | – | 1.2 | 200 | |
| NTE136A | 5.6 | 45.0 | 5 | 600 | 1.0 | 10 | 2.0 | – | 1.2 | 200 | |
| NTE5070A | 6.0 | 43.0 | 3.5 | 650 | 1.0 | 10 | 2.5 | – | 1.2 | 200 | |
| NTE137A | 6.2 | 41.0 | 2 | 700 | 1.0 | 10 | 3.0 | – | 1.2 | 200 | |
| NTE5071A | 6.8 | 37.0 | 3.5 | 700 | 1.0 | 10 | 4.0 | – | 1.2 | 200 | |
| NTE138A | 7.5 | 34.0 | 4.0 | 700 | 0.5 | 10 | 5.0 | – | 1.2 | 200 | |
| NTE5072A | 8.2 | 31.0 | 4.5 | 700 | 0.5 | 10 | 6.0 | – | 1.2 | 200 | |

Maximum Ratings and Electrical Characteristics (Cont'd): ($T_C = +25^\circ\text{C}$, unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load, for capacitive load, derate current by 20%)

| NTE Type Number | Nominal Zener Voltage $V_z @ I_{zt}$ | Zener Test Current (I_{zt}) | Maximum Dynamic Impedance | | | Maximum Leakage Current $I_R @ V_R$ | | Max DC Zener Current (I_{zm}) | Max Forward Voltage $V_F @ I_F$ | |
|-----------------|--------------------------------------|---------------------------------|---------------------------|-------------------|------|-------------------------------------|-------|-----------------------------------|---------------------------------|-----|
| | | | $Z_{zt} @ I_{zt}$ | $Z_{zk} @ I_{zk}$ | | μA | Volts | | Volts | mA |
| | Volts | mA | Ω | Ω | mA | μA | Volts | mA | Volts | mA |
| NTE5073A | 8.7 | 29.5 | 4.75 | 700 | 0.5 | 10 | 6.5 | – | 1.2 | 200 |
| NTE139A | 9.1 | 28.0 | 5.0 | 700 | 0.5 | 10 | 7.0 | – | 1.2 | 200 |
| NTE140A | 10.0 | 25.0 | 7.0 | 700 | 0.25 | 10 | 7.6 | – | 1.2 | 200 |
| NTE5074A | 11.0 | 23.0 | 8.0 | 700 | 0.25 | 5 | 8.4 | – | 1.2 | 200 |
| NTE141A | 11.5 | 22.0 | 8.5 | 700 | 0.25 | 5 | 8.7 | – | 1.2 | 200 |
| NTE142A | 12.0 | 21.0 | 9.0 | 700 | 0.25 | 5 | 9.1 | – | 1.2 | 200 |
| NTE143A | 13 | 19.0 | 10 | 700 | 0.25 | 5 | 9.9 | – | 1.2 | 200 |
| NTE144A | 14 | 18.0 | 12 | 700 | 0.25 | 5 | 10.7 | – | 1.2 | 200 |
| NTE145A | 15 | 17.0 | 14 | 700 | 0.25 | 5 | 11.4 | – | 1.2 | 200 |
| NTE5075A | 16 | 15.5 | 16 | 700 | 0.25 | 5 | 12.2 | – | 1.2 | 200 |
| NTE5076A | 17 | 14.75 | 18 | 725 | 0.25 | 5 | 13.0 | – | 1.2 | 200 |
| NTE5077A | 18 | 14.0 | 20 | 750 | 0.25 | 5 | 13.7 | – | 1.2 | 200 |
| NTE5078A | 19 | 13.25 | 21 | 750 | 0.25 | 5 | 14.5 | – | 1.2 | 200 |
| NTE5079A | 20 | 12.5 | 22 | 750 | 0.25 | 5 | 15.2 | – | 1.2 | 200 |
| NTE5080A | 22 | 11.5 | 23 | 750 | 0.25 | 5 | 16.7 | – | 1.2 | 200 |
| NTE5081A | 24 | 10.5 | 25 | 750 | 0.25 | 5 | 18.2 | – | 1.2 | 200 |
| NTE5082A | 25 | 10.0 | 30 | 750 | 0.25 | 5 | 19.4 | – | 1.2 | 200 |
| NTE146A | 27 | 9.5 | 35 | 750 | 0.25 | 5 | 20.6 | – | 1.2 | 200 |
| NTE5083A | 28 | 9.0 | 37 | 775 | 0.25 | 5 | 21.7 | – | 1.2 | 200 |
| NTE5084A | 30 | 8.5 | 40 | 1000 | 0.25 | 5 | 22.8 | – | 1.2 | 200 |
| NTE147A | 33 | 7.5 | 45 | 1000 | 0.25 | 5 | 25.1 | – | 1.2 | 200 |
| NTE5085A | 36 | 7.0 | 50 | 1000 | 0.25 | 5 | 27.4 | – | 1.2 | 200 |
| NTE5086A | 39 | 6.5 | 60 | 1000 | 0.25 | 5 | 29.7 | – | 1.2 | 200 |
| NTE5087A | 43 | 6.0 | 70 | 1500 | 0.25 | 5 | 32.7 | – | 1.2 | 200 |
| NTE5088A | 47 | 5.5 | 80 | 1500 | 0.25 | 5 | 35.8 | – | 1.2 | 200 |
| NTE5089A | 51 | 5.0 | 95 | 1500 | 0.25 | 5 | 38.8 | – | 1.2 | 200 |
| NTE148A | 55 | 4.75 | 103 | 1750 | 0.25 | 5 | 40.7 | – | 1.2 | 200 |
| NTE5090A | 56 | 4.5 | 110 | 2000 | 0.25 | 5 | 42.6 | – | 1.2 | 200 |
| NTE5091A | 60 | 4.75 | 118 | 2000 | 0.25 | 5 | 44.9 | – | 1.2 | 200 |
| NTE149A | 62 | 4.0 | 125 | 2000 | 0.25 | 5 | 47.1 | – | 1.2 | 200 |
| NTE5092A | 68 | 3.7 | 150 | 2000 | 0.25 | 5 | 51.7 | – | 1.2 | 200 |
| NTE5093A | 75 | 3.3 | 175 | 2000 | 0.25 | 5 | 56.0 | – | 1.2 | 200 |
| NTE150A | 82 | 3.0 | 200 | 3000 | 0.25 | 5 | 62.2 | – | 1.2 | 200 |

Maximum Ratings and Electrical Characteristics (Cont'd): ($T_C = +25^\circ\text{C}$, unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load, for capacitive load, derate current by 20%)

| NTE Type Number | Nominal Zener Voltage $V_Z @ I_{ZT}$ | Zener Test Current (I_{ZT}) | Maximum Dynamic Impedance | | | Maximum Leakage Current $I_R @ V_R$ | | Max DC Zener Current (I_{ZM}) | Max Forward Voltage $V_F @ I_F$ | |
|-----------------|--------------------------------------|---------------------------------|---------------------------|-------------------|------|-------------------------------------|-------|-----------------------------------|---------------------------------|-----|
| | | | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | | μA | Volts | | Volts | mA |
| | Volts | mA | Ω | Ω | mA | μA | Volts | mA | Volts | mA |
| NTE5094A | 87 | 2.9 | 225 | 3000 | 0.25 | 5 | 65.7 | – | 1.2 | 200 |
| NTE5095A | 91 | 2.8 | 250 | 3000 | 0.25 | 5 | 69.2 | – | 1.2 | 200 |
| NTE5096A | 100 | 2.5 | 350 | 3000 | 0.25 | 5 | 76.0 | – | 1.2 | 200 |
| NTE151A | 110 | 2.3 | 600 | 5000 | 0.25 | 0.5 | 80 | 9.1 | 1.0 | 1A |
| NTE5097A | 120 | 2.1 | 700 | 5000 | 0.25 | 0.5 | 90 | 8.3 | 1.0 | 1A |
| NTE5098A | 130 | 1.9 | 800 | 5000 | 0.25 | 0.5 | 95 | 7.7 | 1.0 | 1A |
| NTE5099A | 140 | 1.8 | 900 | 5000 | 0.25 | 0.5 | 105 | 7.1 | 1.0 | 1A |
| NTE5100A | 150 | 1.7 | 1000 | 5000 | 0.25 | 0.5 | 110 | 6.6 | 1.0 | 1A |
| NTE5101A | 160 | 1.6 | 1100 | 5000 | 0.25 | 0.5 | 120 | 6.3 | 1.0 | 1A |
| NTE5102A | 170 | 1.5 | 1200 | 5000 | 0.25 | 0.5 | 130 | 5.9 | 1.0 | 1A |
| NTE5103A | 180 | 1.4 | 1300 | 5000 | 0.25 | 0.5 | 140 | 5.6 | 1.0 | 1A |
| NTE5104A | 190 | 1.3 | 1400 | 5000 | 0.25 | 0.5 | 150 | 5.3 | 1.0 | 1A |
| NTE5105A | 200 | 1.3 | 1500 | 5000 | 0.25 | 0.5 | 160 | 5.0 | 1.0 | 1A |

