

POWER DISCRETES
Description

Quick reference data

$V_{BR\ MIN} = 6.12 - 180V$

$V_{RWM} = 5.2 - 152V$

$V_C\ (max) = 11 - 273V$

$I_{(BR)}\ 1N6102 - 1N6137 = 5mA - 175mA$

Features

- ◆ Low dynamic impedance
- ◆ Hermetically sealed non-cavity construction
- ◆ 500 watt peak pulse power
- ◆ 1.5W continuous

These products are qualified to MIL-PRF-19500/516 and are preferred parts as listed in MIL-HDBK-5961. They can be supplied fully released as JANTX, JANTXV and JANS versions.

Electrical Specifications

Electrical specifications @ $T_A = 25^\circ C$ unless otherwise specified.

| Device Type | Minimum Breakdown Voltage $V_{(BR)} @ I_{(BR)}$ | Test Current $I_{(BR)}$ | Working Pk. Reverse Voltage V_{RWM} | Maximum Reverse Current I_{R1} | Maximum Clamping Voltage $V_C @ I_P$ | Maximum Pk. Pulse Current I_P $T_P = 1mS$ | Temp. Coeff. of $V_{(BR)}$ $\alpha_{(VZ)}$ | Maximum Reverse Current $I_{R2} @ 150^\circ C$ |
|-------------|--|----------------------------|--|-------------------------------------|---|---|--|---|
| | Volts | mA | Volts | μA | Volts | Amps | %/°C | μA |
| 1N6102 | 6.12 | 175 | 5.2 | 100 | 11.0 | 45.4 | 0.05 | 4,000 |
| 1N6103 | 6.75 | 175 | 5.7 | 50 | 11.8 | 42.4 | 0.06 | 750 |
| 1N6103A | 7.13 | 175 | 5.7 | 50 | 11.2 | 44.6 | 0.06 | 750 |
| 1N6104 | 7.38 | 150 | 6.2 | 20 | 12.7 | 39.4 | 0.06 | 500 |
| 1N6104A | 7.79 | 150 | 6.2 | 20 | 12.1 | 41.3 | 0.06 | 500 |
| 1N6105 | 8.19 | 150 | 6.9 | 20 | 14.0 | 35.7 | 0.06 | 300 |
| 1N6105A | 8.65 | 150 | 6.9 | 20 | 13.4 | 37.3 | 0.06 | 300 |
| 1N6106 | 9.0 | 125 | 7.6 | 20 | 15.2 | 32.9 | 0.07 | 200 |
| 1N6106A | 9.50 | 125 | 7.6 | 20 | 14.5 | 34.5 | 0.07 | 200 |
| 1N6107 | 9.9 | 125 | 8.4 | 20 | 16.3 | 30.7 | 0.07 | 200 |
| 1N6107A | 10.45 | 125 | 8.4 | 20 | 15.6 | 32.0 | 0.07 | 200 |
| 1N6108 | 10.8 | 100 | 9.1 | 20 | 17.7 | 28.2 | 0.07 | 150 |
| 1N6108A | 11.4 | 100 | 9.1 | 20 | 16.9 | 29.6 | 0.07 | 150 |
| 1N6109 | 11.7 | 100 | 9.9 | 20 | 19.0 | 26.3 | 0.08 | 150 |
| 1N6109A | 12.35 | 100 | 9.9 | 20 | 18.2 | 27.5 | 0.08 | 150 |
| 1N6110 | 13.5 | 75 | 11.4 | 20 | 21.9 | 22.8 | 0.08 | 100 |
| 1N6110A | 14.25 | 75 | 11.4 | 20 | 21.0 | 23.8 | 0.08 | 100 |
| 1N6111 | 14.4 | 75 | 12.2 | 20 | 23.4 | 21.4 | 0.08 | 100 |
| 1N6111A | 15.2 | 75 | 12.2 | 20 | 22.3 | 22.4 | 0.08 | 100 |

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|-------------|--|----------------------------|--|-------------------------------------|---|--|--|---|
| | Volts | mA | Volts | μA | Volts | Amps | %/°C | μA |
| 1N6112 | 16.2 | 65 | 13.7 | 1 | 26.3 | 19.0 | 0.085 | 100 |
| 1N6112A | 17.1 | 65 | 13.7 | 1 | 25.1 | 19.9 | 0.085 | 100 |
| 1N6113 | 18.0 | 65 | 15.2 | 1 | 29.0 | 17.2 | 0.085 | 100 |
| 1N6113A | 19.0 | 65 | 15.2 | 1 | 27.7 | 18.0 | 0.085 | 100 |
| 1N6114 | 19.8 | 50 | 16.7 | 1 | 31.9 | 15.7 | 0.085 | 100 |
| 1N6114A | 20.9 | 50 | 16.7 | 1 | 30.5 | 16.4 | 0.085 | 100 |
| 1N6115 | 21.6 | 50 | 18.2 | 1 | 34.8 | 14.4 | 0.09 | 100 |
| 1N6115A | 22.8 | 50 | 18.2 | 1 | 33.3 | 15.0 | 0.09 | 100 |
| 1N6116 | 24.3 | 50 | 20.6 | 1 | 39.2 | 12.8 | 0.09 | 100 |
| 1N6116A | 25.7 | 50 | 20.6 | 1 | 37.4 | 13.4 | 0.09 | 100 |
| 1N6117 | 27.0 | 40 | 22.8 | 1 | 43.6 | 11.5 | 0.09 | 100 |
| 1N6117A | 28.5 | 40 | 22.8 | 1 | 41.6 | 12.0 | 0.09 | 100 |
| 1N6118 | 29.7 | 40 | 25.1 | 1 | 47.9 | 10.4 | 0.095 | 100 |
| 1N6118A | 31.4 | 40 | 25.1 | 1 | 45.7 | 10.9 | 0.095 | 100 |
| 1N6119 | 32.4 | 30 | 27.4 | 1 | 52.3 | 9.6 | 0.095 | 100 |
| 1N6119A | 34.2 | 30 | 27.4 | 1 | 49.9 | 10.0 | 0.095 | 100 |
| 1N6120 | 35.1 | 30 | 29.7 | 1 | 56.2 | 8.9 | 0.095 | 100 |
| 1N6120A | 37.1 | 30 | 29.7 | 1 | 53.6 | 9.3 | 0.095 | 100 |
| 1N6121 | 38.7 | 30 | 32.7 | 1 | 62.0 | 8.1 | 0.095 | 100 |
| 1N6121A | 40.9 | 30 | 32.7 | 1 | 59.1 | 8.5 | 0.095 | 100 |
| 1N6122 | 42.3 | 25 | 35.8 | 1 | 67.7 | 7.4 | 0.095 | 100 |
| 1N6122A | 44.7 | 25 | 35.8 | 1 | 64.6 | 7.7 | 0.095 | 100 |
| 1N6123 | 45.9 | 25 | 38.8 | 1 | 73.5 | 6.8 | 0.095 | 100 |
| 1N6123A | 48.5 | 25 | 38.8 | 1 | 70.1 | 7.1 | 0.095 | 100 |
| 1N6124 | 50.4 | 20 | 42.6 | 1 | 80.7 | 6.2 | 0.095 | 100 |
| 1N6124A | 53.2 | 20 | 42.6 | 1 | 77.0 | 6.5 | 0.095 | 100 |

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|-------------|--|----------------------------|--|-------------------------------------|---|--|--|---|
| | Volts | mA | Volts | μA | Volts | Amps | $\%/^\circ\text{C}$ | μA |
| 1N6125 | 55.8 | 20 | 47.1 | 1 | 89.3 | 5.6 | 0.1 | 100 |
| 1N6125A | 58.9 | 20 | 47.1 | 1 | 85.3 | 5.9 | 0.1 | 100 |
| 1N6126 | 61.2 | 20 | 51.7 | 1 | 98.0 | 5.1 | 0.1 | 100 |
| 1N6126A | 64.6 | 20 | 51.7 | 1 | 97.1 | 5.1 | 0.1 | 100 |
| 1N6127 | 67.5 | 20 | 56.0 | 1 | 108.1 | 4.6 | 0.1 | 100 |
| 1N6127A | 71.3 | 20 | 56.0 | 1 | 103.1 | 4.8 | 0.1 | 100 |
| 1N6128 | 73.8 | 15 | 62.2 | 1 | 118.2 | 4.2 | 0.1 | 100 |
| 1N6128A | 77.9 | 15 | 62.2 | 1 | 112.8 | 4.4 | 0.1 | 100 |
| 1N6129 | 81.9 | 15 | 69.2 | 1 | 131.1 | 3.8 | 0.1 | 100 |
| 1N6129A | 86.5 | 15 | 69.2 | 1 | 125.1 | 4.0 | 0.1 | 100 |
| 1N6130 | 90.0 | 12 | 76.0 | 1 | 144.1 | 3.5 | 0.1 | 100 |
| 1N6130A | 95.0 | 12 | 76.0 | 1 | 137.6 | 3.6 | 0.1 | 100 |
| 1N6131 | 99.0 | 12 | 83.6 | 1 | 158.5 | 3.2 | 0.1 | 100 |
| 1N6131A | 104.5 | 12 | 83.6 | 1 | 151.3 | 3.3 | 0.1 | 100 |
| 1N6132 | 108.0 | 10 | 91.2 | 1 | 172.9 | 2.9 | 0.1 | 100 |
| 1N6132A | 114.0 | 10 | 91.2 | 1 | 165.1 | 3.0 | 0.1 | 100 |
| 1N6133 | 117.0 | 10 | 98.8 | 1 | 187.3 | 2.7 | 0.105 | 100 |
| 1N6133A | 123.5 | 10 | 98.8 | 1 | 178.8 | 2.8 | 0.105 | 100 |
| 1N6134 | 135.0 | 8 | 114.0 | 1 | 216.2 | 2.3 | 0.105 | 100 |
| 1N6134A | 142.5 | 8 | 114.0 | 1 | 206.3 | 2.4 | 0.105 | 100 |
| 1N6135 | 144 | 8 | 121.6 | 1 | 228.8 | 2.2 | 0.105 | 100 |
| 1N6135A | 152 | 8 | 121.6 | 1 | 218.4 | 2.3 | 0.105 | 100 |
| 1N6136 | 162 | 5 | 136.8 | 1 | 257.4 | 1.9 | 0.11 | 100 |
| 1N6136A | 171 | 5 | 136.8 | 1 | 245.7 | 2.0 | 0.11 | 100 |
| 1N6137 | 180 | 5 | 152.0 | 1 | 286.0 | 1.7 | 0.11 | 100 |
| 1N6137A | 190 | 5 | 152.0 | 1 | 273.0 | 1.8 | 0.11 | 100 |

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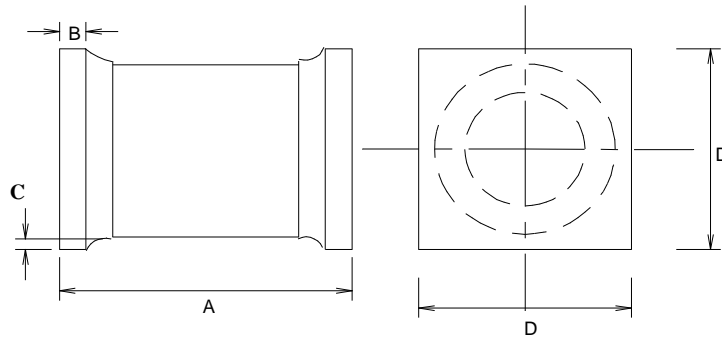
Ordering Information

| Part Number | Description |
|--|----------------------------------|
| 1N6102US thru 1N6137US 1N6103AUS thru 1N6137AUS | Surface Mount(US) ⁽¹⁾ |

Note:

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

Outline Drawing



| | Dimensions | |
|---|--|-------|
| | 1N6102US - 1N6137US 1N6103AUS - 1N6137AUS | |
| | Inches | |
| | MIN | MAX |
| A | 0.2 | 0.225 |
| B | 0.019 | 0.028 |
| C | 0.003 | - |
| D | 0.137 | 0.148 |

Contact Information

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