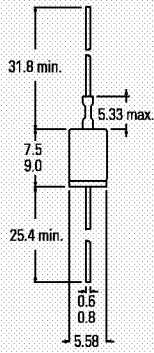


1N6036 – 1N6072A
Series



All dimensions in mm

Invisible Protection

When no problems exist, Crydom TVS Diodes are totally invisible to the circuits they're protecting. But when potentially damaging transients occur, they provide high-speed "clamping" to prevent damage -- and then return to their electronically invisible state.

1N60 SERIES (1500 WATT) METAL AXIAL TRANSIENT VOLTAGE SUPPRESSORS (hermetically sealed package for harsh industrial environments)

FEATURES

- Glass passivated junction
- Stand-off voltage range: 6.8-200 V
- Excellent clamping capability
- Low zener impedance
- 100% surge tested
- -65°C to +175°C
- Hermetically sealed
- Bi-directional

MAXIMUM RATINGS

- Peak pulse power (PR): 1500 watts (10 X 1000 μ s)
- 1 watt steady state
- Response time: 1×10^{-12} s (theoretical)
- Operating and storage temperature: -55°C to +175°C

MECHANICAL CHARACTERISTICS

- Case: Metal hermetically sealed DO-13 package
- Terminals: Axial leads, solderable per MIL-STD-202 Method 208
- Weight: 1.5 grams (approx.)

Transient Voltage Suppression (TVS) Diodes

1N6036 – 1N6072A Series

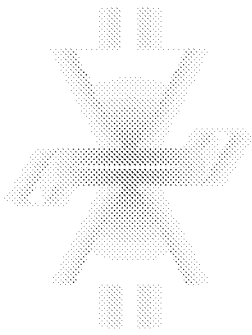
| PART NUMBER | REVERSE STAND-OFF VOLTAGE V _R (V) | BREAKDOWN VOLTAGE V _{BR} (V) @ I _T | | | MAXIMUM REVERSE LEAKAGE I _R @ V _R (μA) | MAXIMUM CLAMPING VOLTAGE V _C @ I _{PP} (V) | MAXIMUM PEAK PULSE CURRENT I _{PP} (A) | MAX. VOLTAGE TEMPERATURE VARIATION OF V _{BR} (mV/°C) |
|-------------|--|---|------|------|--|---|--|--|
| | | MIN. | MAX. | (mA) | | | | |
| *1N6036 | 5.5 | 6.75 | 8.25 | 10.0 | 1000.0 | 11.7 | 128.0 | 5.0 |
| *1N6036A | 6.0 | 7.13 | 7.88 | 10.0 | 1000.0 | 11.3 | 132.0 | 5.0 |
| *1N6037 | 6.5 | 7.38 | 9.02 | 10.0 | 500.0 | 12.5 | 120.0 | 5.0 |
| *1N6037A | 7.0 | 7.79 | 8.61 | 10.0 | 500.0 | 12.1 | 124.0 | 5.0 |
| 1N6038 | 7.0 | 8.19 | 10.0 | 1.0 | 200.0 | 13.8 | 109.0 | 7.0 |
| 1N6038A | 7.5 | 8.65 | 9.55 | 1.0 | 200.0 | 13.4 | 112.0 | 7.0 |
| 1N6039 | 8.0 | 9.0 | 11.0 | 1.0 | 50.0 | 15.0 | 100.0 | 7.0 |
| 1N6039A | 8.5 | 9.5 | 10.5 | 1.0 | 50.0 | 14.5 | 103.0 | 7.0 |
| 1N6040 | 8.5 | 9.9 | 12.1 | 1.0 | 10.0 | 16.2 | 93.0 | 8.0 |
| 1N6040A | 9.0 | 10.5 | 11.6 | 1.0 | 10.0 | 15.6 | 96.0 | 8.0 |
| *1N6041 | 9.0 | 10.8 | 13.2 | 1.0 | 5.0 | 17.3 | 87.0 | 9.0 |
| *1N6041A | 10.0 | 11.4 | 12.6 | 1.0 | 5.0 | 16.7 | 90.0 | 9.0 |
| 1N6042 | 10.0 | 11.7 | 14.3 | 1.0 | 5.0 | 19.0 | 79.0 | 10.0 |
| 1N6042A | 11.0 | 12.4 | 13.7 | 1.0 | 5.0 | 18.2 | 82.0 | 10.0 |
| 1N6043 | 11.0 | 13.5 | 16.5 | 1.0 | 5.0 | 22.0 | 68.0 | 11.0 |
| 1N6043A | 12.0 | 14.3 | 15.8 | 1.0 | 5.0 | 21.2 | 71.0 | 12.0 |
| 1N6044 | 12.0 | 14.4 | 17.6 | 1.0 | 5.0 | 23.5 | 64.0 | 12.0 |
| 1N6044A | 13.0 | 15.2 | 16.8 | 1.0 | 5.0 | 22.5 | 67.0 | 13.0 |
| *1N6045 | 14.0 | 16.2 | 19.8 | 1.0 | 5.0 | 26.5 | 56.5 | 14.0 |
| *1N6045A | 15.0 | 17.1 | 18.9 | 1.0 | 5.0 | 25.2 | 59.5 | 15.0 |
| 1N6046 | 16.0 | 18.0 | 22.0 | 1.0 | 5.0 | 29.1 | 51.5 | 17.0 |
| 1N6046A | 17.0 | 19.0 | 21.0 | 1.0 | 5.0 | 27.7 | 54.0 | 18.0 |
| 1N6047 | 17.0 | 19.8 | 24.2 | 1.0 | 5.0 | 31.9 | 47.0 | 19.0 |
| 1N6047A | 18.0 | 20.9 | 23.1 | 1.0 | 5.0 | 30.6 | 49.0 | 20.0 |
| 1N6048 | 19.0 | 21.6 | 26.4 | 1.0 | 5.0 | 34.7 | 43.0 | 24.0 |
| 1N6048A | 20.0 | 22.8 | 25.2 | 1.0 | 5.0 | 33.2 | 45.0 | 24.0 |
| *1N6049 | 21.0 | 24.3 | 29.7 | 1.0 | 5.0 | 39.1 | 38.5 | 27.0 |
| *1N6049A | 22.0 | 25.7 | 28.4 | 1.0 | 5.0 | 37.5 | 40.0 | 28.0 |
| 1N6050 | 24.0 | 27.0 | 33.0 | 1.0 | 5.0 | 43.5 | 34.5 | 36.0 |
| 1N6050A | 25.0 | 28.5 | 31.5 | 1.0 | 5.0 | 41.4 | 36.0 | 31.0 |
| *1N6051 | 26.0 | 29.7 | 36.3 | 1.0 | 5.0 | 47.7 | 31.5 | 32.0 |
| *1N6051A | 28.0 | 31.4 | 34.7 | 1.0 | 5.0 | 45.7 | 33.0 | 34.0 |
| 1N6052 | 29.0 | 32.4 | 39.6 | 1.0 | 5.0 | 52.0 | 29.0 | 36.0 |
| 1N6052A | 30.0 | 34.2 | 37.8 | 1.0 | 5.0 | 49.9 | 30.0 | 37.0 |
| 1N6053 | 31.0 | 35.1 | 42.9 | 1.0 | 5.0 | 56.4 | 26.5 | 39.0 |
| 1N6053A | 33.0 | 37.1 | 41.0 | 1.0 | 5.0 | 53.9 | 28.0 | 40.0 |
| *1N6054 | 34.0 | 38.7 | 47.3 | 1.0 | 5.0 | 61.9 | 24.0 | 44.0 |

* Preferred voltages.

Note: Suffix "A" denotes 5% tolerance device. No suffix denotes 10% tolerance device. Electrical specifications @ 25°C.

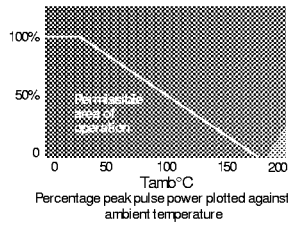
1N6036 – 1N6072A Series

| PART NUMBER | REVERSE STAND-OFF VOLTAGE Vr (V) | BREAKDOWN VOLTAGE Vbr (V) @1T | | | MAXIMUM REVERSE LEAKAGE IR @ Vr (µA) | MAXIMUM CLAMPING VOLTAGE Vc @ IPP (V) | MAXIMUM PEAK PULSE CURRENT IPP (A) | MAX. VOLTAGE TEMPERATURE VARIATION OF Vbr (mV/°C) |
|-------------|-------------------------------------|----------------------------------|-------|------|--|---|---------------------------------------|---|
| | | MIN. | MAX. | (mA) | | | | |
| *1N6054A | 36.0 | 40.9 | 45.2 | 1.0 | 5.0 | 59.3 | 25.3 | 43.0 |
| *1N6055 | 38.0 | 42.3 | 51.7 | 1.0 | 5.0 | 67.8 | 22.2 | 49.0 |
| *1N6055A | 40.0 | 44.7 | 49.4 | 1.0 | 5.0 | 64.8 | 23.2 | 47.0 |
| *1N6056 | 41.0 | 45.9 | 56.1 | 1.0 | 5.0 | 73.5 | 20.4 | 53.0 |
| *1N6056A | 43.0 | 48.5 | 53.6 | 1.0 | 5.0 | 70.1 | 21.4 | 51.0 |
| 1N6057 | 45.0 | 50.4 | 61.6 | 1.0 | 5.0 | 80.5 | 18.6 | 58.0 |
| 1N6057A | 47.0 | 53.2 | 58.8 | 1.0 | 5.0 | 77.0 | 19.5 | 56.0 |
| *1N6058 | 48.0 | 55.8 | 68.2 | 1.0 | 5.0 | 89.0 | 16.9 | 64.0 |
| *1N6058A | 53.0 | 58.9 | 65.1 | 1.0 | 5.0 | 85.0 | 17.7 | 62.0 |
| *1N6059 | 55.0 | 61.2 | 74.8 | 1.0 | 5.0 | 98.0 | 15.3 | 70.0 |
| *1N6059A | 58.0 | 64.6 | 71.4 | 1.0 | 5.0 | 92.0 | 16.3 | 68.0 |
| 1N6060 | 60.0 | 67.5 | 82.5 | 1.0 | 5.0 | 108.0 | 13.9 | 77.0 |
| 1N6060A | 64.0 | 71.3 | 78.8 | 1.0 | 5.0 | 103.0 | 14.6 | 75.0 |
| *1N6061 | 66.0 | 73.8 | 90.2 | 1.0 | 5.0 | 118.0 | 12.7 | 84.0 |
| *1N6061A | 70.0 | 77.9 | 86.1 | 1.0 | 5.0 | 113.0 | 13.3 | 82.0 |
| 1N6062 | 73.0 | 81.9 | 100.0 | 1.0 | 5.0 | 131.0 | 11.4 | 90.0 |
| 1N6062A | 75.0 | 86.5 | 95.5 | 1.0 | 5.0 | 125.0 | 12.0 | 86.0 |
| *1N6063 | 81.0 | 90.0 | 110.0 | 1.0 | 5.0 | 144.0 | 10.4 | 99.0 |
| *1N6063A | 82.0 | 95.0 | 105.0 | 1.0 | 5.0 | 137.0 | 11.0 | 94.0 |
| 1N6064 | 90.0 | 99.0 | 121.0 | 1.0 | 5.0 | 158.0 | 9.5 | 109.0 |
| 1N6064A | 94.0 | 105.0 | 116.0 | 1.0 | 5.0 | 152.0 | 9.9 | 104.0 |
| 1N6065 | 95.0 | 108.0 | 132.0 | 1.0 | 5.0 | 173.0 | 8.7 | 120.0 |
| 1N6065A | 100.0 | 114.0 | 126.0 | 1.0 | 5.0 | 165.0 | 9.1 | 115.0 |
| 1N6066 | 105.0 | 117.0 | 143.0 | 1.0 | 5.0 | 187.0 | 8.0 | 131.0 |
| 1N6066A | 110.0 | 124.0 | 137.0 | 1.0 | 5.0 | 179.0 | 8.4 | 125.0 |
| 1N6067 | 121.0 | 135.0 | 165.0 | 1.0 | 5.0 | 215.0 | 7.0 | 142.0 |
| 1N6067A | 128.0 | 143.0 | 158.0 | 1.0 | 5.0 | 207.0 | 7.2 | 136.0 |
| 1N6068 | 137.0 | 153.0 | 187.0 | 1.0 | 5.0 | 258.0 | 5.8 | 164.0 |
| 1N6068A | 145.0 | 162.0 | 179.0 | 1.0 | 5.0 | 245.0 | 6.1 | 157.0 |
| *1N6069 | 145.0 | 162.0 | 198.0 | 1.0 | 5.0 | 274.0 | 5.5 | 175.0 |
| *1N6069A | 150.0 | 171.0 | 189.0 | 1.0 | 5.0 | 261.0 | 5.7 | 167.0 |
| 1N6070 | 155.0 | 171.0 | 210.0 | 1.0 | 5.0 | 292.0 | 5.1 | 186.0 |
| 1N6070A | 160.0 | 181.0 | 200.0 | 1.0 | 5.0 | 278.0 | 5.4 | 188.0 |
| *1N6071 | 165.0 | 180.0 | 220.0 | 1.0 | 5.0 | 308.0 | 4.9 | 197.0 |
| *1N6071A | 170.0 | 190.0 | 210.0 | 1.0 | 5.0 | 294.0 | 5.1 | 188.0 |
| 1N6072 | 175.0 | 198.0 | 242.0 | 1.0 | 5.0 | 344.0 | 4.3 | 219.0 |
| 1N6072A | 185.0 | 209.0 | 231.0 | 1.0 | 5.0 | 328.0 | 4.6 | 209.0 |

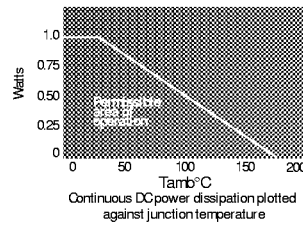


1N6036 – 1N6072A Series

Peak Power Derating Curve
Peak Pulse Power in Percentage of 25°C Rating



Continuous DC Power Derating Curve
Continuous DC Power Dissipation



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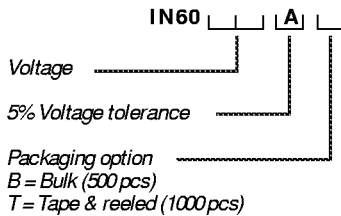
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