


SENSITRON
SEMICONDUCTOR

TECHNICAL DATA
DATA SHEET 287, REV -

**TRANSIENT VOLTAGE SUPPRESSOR DIODES
(AXIAL LEAD and MELF)**

TRANSIENT VOLTAGE SUPPRESSORS, 500W SERIES

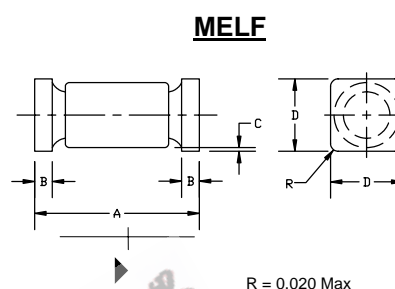
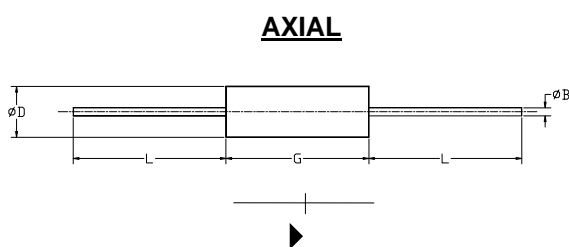
| SERIES TYPE | BREAK-DOWN VOLTAGE V_{BR} | TEST CURRENT I_{BR} | WORKING PEAK REVERSE VOLTAGE V_{RWM} | MAXIMUM REVERSE CURRENT I_{R1} | MAX. CLAMP. VOLTAGE $V_C(max)$ @ I_P $t_p = 1ms$ | MAX. PEAK PULSE CURRENT I_P | MAX. TEMP. COEFFICIENT T $V_{(BR)}$ | MAX. REVERSE CURRENT @ $T_A = 150^\circ C$ | PACKAGE STYLE |
|-------------|-----------------------------|-----------------------|--|----------------------------------|---|-------------------------------|---------------------------------------|--|---|
| 500W | Min. Vdc | mA dc | Vdc | μA dc | V(pk) | A(pk) | % / $^\circ C$ | μA dc | |
| 1N6102A | 6.46 | 175 | 5.2 | 100 | 10.5 | 47.6 | .05 | 4,000 |  |
| 1N6103A | 7.13 | 175 | 5.7 | 50 | 11.2 | 44.6 | .06 | 750 | |
| 1N6104A | 7.79 | 150 | 6.2 | 20 | 12.1 | 41.3 | .06 | 500 | |
| 1N6105A | 8.65 | 150 | 6.9 | 20 | 13.4 | 37.3 | .06 | 300 | |
| 1N6106A | 9.50 | 125 | 7.6 | 20 | 14.5 | 34.5 | .07 | 200 | |
| 1N6107A | 10.45 | 125 | 8.4 | 20 | 15.6 | 32.0 | .07 | 200 | |
| 1N6108A | 11.40 | 100 | 9.1 | 20 | 16.9 | 29.6 | .07 | 150 | |
| 1N6109A | 12.35 | 100 | 9.9 | 20 | 18.2 | 27.5 | .08 | 150 | |
| 1N6110A | 14.25 | 75 | 11.4 | 20 | 21.0 | 23.8 | .08 | 100 | |
| 1N6111A | 15.20 | 75 | 12.2 | 20 | 22.3 | 22.4 | .08 | 100 | |
| 1N6112A | 17.10 | 65 | 13.7 | 1.0 | 25.1 | 19.9 | .085 | 100 | |
| 1N6113A | 19.00 | 65 | 15.2 | 1.0 | 27.7 | 18.0 | .085 | 100 | |
| 1N6114A | 20.9 | 50 | 16.7 | 1.0 | 30.5 | 16.4 | .085 | 100 | |
| 1N6115A | 22.8 | 50 | 18.2 | 1.0 | 33.3 | 15.0 | .09 | 100 | |
| 1N6116A | 25.7 | 50 | 20.6 | 1.0 | 37.4 | 13.4 | .09 | 100 | |
| 1N6117A | 28.5 | 40 | 22.8 | 1.0 | 41.6 | 12.0 | .09 | 100 | |
| 1N6118A | 31.4 | 40 | 25.1 | 1.0 | 45.7 | 10.9 | .095 | 100 | |
| 1N6119A | 34.2 | 30 | 27.4 | 1.0 | 49.9 | 10.0 | .095 | 100 | |
| 1N6120A | 37.1 | 30 | 29.7 | 1.0 | 53.6 | 9.3 | .095 | 100 | |
| 1N6121A | 40.9 | 30 | 32.7 | 1.0 | 59.1 | 8.5 | .095 | 100 | |
| 1N6122A | 44.7 | 25 | 35.8 | 1.0 | 64.6 | 7.7 | .095 | 100 | |
| 1N6123A | 48.5 | 25 | 38.8 | 1.0 | 70.1 | 7.1 | .095 | 100 | |
| 1N6124A | 53.2 | 20 | 42.6 | 1.0 | 77.0 | 6.5 | .095 | 100 | |
| 1N6125A | 58.9 | 20 | 47.1 | 1.0 | 85.3 | 5.9 | .100 | 100 | |
| 1N6126A | 64.6 | 20 | 51.7 | 1.0 | 97.1 | 5.1 | .100 | 100 | |
| 1N6127A | 71.3 | 20 | 56.0 | 1.0 | 103.1 | 4.8 | .100 | 100 | |
| 1N6128A | 77.9 | 15 | 62.2 | 1.0 | 112.8 | 4.4 | .100 | 100 | |
| 1N6129A | 86.5 | 15 | 69.2 | 1.0 | 125.1 | 4.0 | .100 | 100 | |
| 1N6130A | 95.0 | 12 | 76.0 | 1.0 | 137.6 | 3.6 | .100 | 100 | |
| 1N6131A | 104.5 | 12 | 83.6 | 1.0 | 151.3 | 3.3 | .100 | 100 | |
| 1N6132A | 114.0 | 10 | 91.2 | 1.0 | 165.1 | 3.0 | .100 | 100 | |
| 1N6133A | 123.5 | 10 | 98.8 | 1.0 | 178.8 | 2.8 | .105 | 100 | |
| 1N6134A | 142.5 | 8.0 | 114.0 | 1.0 | 206.3 | 2.4 | .105 | 100 | |
| 1N6135A | 152 | 8.0 | 121.6 | 1.0 | 218.4 | 2.3 | .105 | 100 | |
| 1N6136A | 171 | 5.0 | 136.8 | 1.0 | 245.7 | 2.0 | .110 | 100 | |
| 1N6137A | 190 | 5.0 | 152.0 | 1.0 | 273.0 | 1.8 | .110 | 100 | |

Notes:

- $P_R = 2W$ for 500W peak pulse power devices at $T_A = +25^\circ C$.
- $P_R = 3W$ (for 500W peak pulse power devices at $T_L = +75^\circ C$ for $L = 0.375$ inch (9.53mm)).
- $P_{PR} = 500W$
- $-55^\circ C \leq T_{op} \leq +175^\circ C$, $-55^\circ C \leq T_{stg} \leq +175^\circ C$ (ambient temperatures).

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MECHANICAL DIMENSIONS: In inches / mm



| 500 W | | 1N6102A - 1N6137A | | | |
|---------------|-----------------------------------|------------------------|------------------------|-------------------------|--|
| PACKAGE STYLE | DIMENSIONS - INCHES / MILLIMETERS | | | | |
| | ϕB | ϕD | G | L | |
| 401 | .026/.033 .66/.84 | .085/.140 2.16/3.56 | .140/.185 3.56/4.70 | 1.00/1.30 25.4/33.02 | |

| 500 W | | 1N6102AUS - 1N6137AUS | | | |
|---------------|-----------------------------------|------------------------|-----------------------|------------------------|--|
| PACKAGE STYLE | DIMENSIONS - INCHES / MILLIMETERS | | | | |
| | A | B | C | D | |
| MELF-B | .200/.225 5.08/5.72 | .019/.028 0.48/0.71 | 0.003 Min 0.08 Min | .137/.148 3.48/3.76 | |

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