



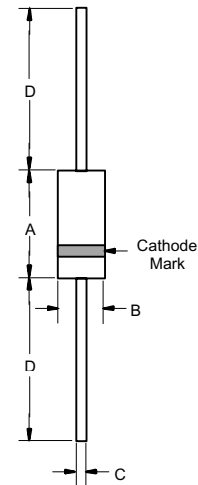
Micro Commercial Components

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1N3821A THRU 1N3828A

1.0 Watt Zener Diode 3.3 to 6.2 Volts

DO-41G



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|-------|-------|----------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | ----- | 0.177 | ----- | 4.50 | |
| B | ----- | 0.110 | ----- | 2.80 | Diameter |
| C | 0.026 | 0.034 | 0.70 | 0.90 | Diameter |
| D | 1.000 | ----- | 25.40 | ----- | |

Features

- Double Plug Construction
- Metallurgically Bound
- Marking: CathodeBand and Type Number
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbol | Value | Unit |
|---|------------------|------------|-------|
| Forward Voltage at $I_F=200\text{mA}$ | V_F | 1.2 | V |
| Power Dissipation at $T_L = 95^\circ\text{C}$ | P_{tot} | 1.0 | W |
| Power Derating Above $T_L = 95^\circ\text{C}$ | | 12.5 | mW/°C |
| Operating Temperature | T_j | -65 ~ +175 | °C |
| Storage Temperature Range | T_{STG} | -65 ~ +175 | °C |

Note: 1. Lead in Glass Exemption Applied, see EU Directive Annex 5.

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ELECTRICAL CHARACTERISTICS @25°C

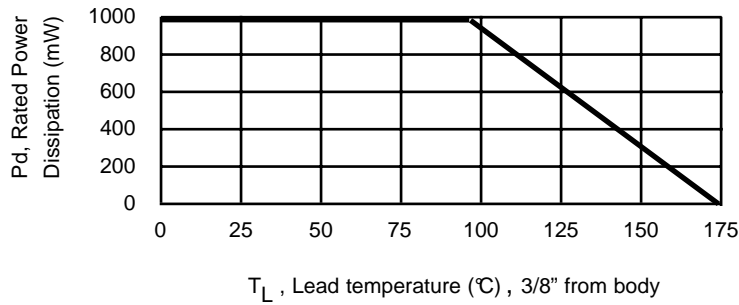
| TYPE NUMBER | NOMINAL | | MAXIMUM ZENER IMPEDANCE | | MAX. DC | MAX. REVERSE | |
|-------------|----------|--------------|-------------------------|------|---------|-----------------|-------|
| | ZENER | TEST CURRENT | | | ZENER | | |
| | VOLTAGE | | | | CURRENT | LEAKAGE CURRENT | |
| | VZ @ IZT | IZT | ZZT @ IZT ZZK @ IZK=1mA | | IZM | IR @ VR | |
| (NOTE 1) | (NOTE 3) | (NOTE 2) | | | | | |
| | VOLTS | mA | OHMS | OHMS | mA | μ A | VOLTS |
| 1N3821 | 3.3 | 76 | 10 | 400 | 276 | 100 | 1 |
| 1N3821A | 3.3 | 76 | 10 | 400 | 276 | 100 | 1 |
| 1N3822 | 3.6 | 69 | 10 | 400 | 252 | 75 | 1 |
| 1N3822A | 3.6 | 69 | 10 | 400 | 252 | 75 | 1 |
| 1N3823 | 3.9 | 64 | 9 | 400 | 238 | 25 | 1 |
| 1N3823A | 3.9 | 64 | 9 | 400 | 238 | 25 | 1 |
| 1N3824 | 4.3 | 58 | 9 | 400 | 213 | 5 | 1 |
| 1N3824A | 4.3 | 58 | 9 | 400 | 213 | 5 | 1 |
| 1N3825 | 4.7 | 53 | 8 | 500 | 194 | 5 | 1 |
| 1N3825A | 4.7 | 53 | 8 | 500 | 194 | 5 | 1 |
| 1N3826 | 5.1 | 49 | 7 | 550 | 178 | 3 | 1 |
| 1N3826A | 5.1 | 49 | 7 | 550 | 178 | 3 | 1 |
| 1N3827 | 5.6 | 45 | 5 | 600 | 162 | 3 | 2 |
| 1N3827A | 5.6 | 45 | 5 | 600 | 162 | 3 | 2 |
| 1N3828 | 6.2 | 41 | 2 | 700 | 146 | 3 | 3 |
| 1N3828A | 6.2 | 41 | 2 | 700 | 146 | 3 | 3 |

NOTE 1 No suffix = ± 10% tolerance on nominal Zener voltage, suffix "A" signifies ±5%, suffix "C" signifies ± 2%.

NOTE 2 Zener impedance is derived by superimposing on I_{ZT} A 60Hz rms a.c. current equal to 10% of I_{ZT} .

NOTE 3 Zener voltage is measured with the device junction in thermal equilibrium at an ambient temperature of 25°C ± 3°C.

FIGURE 1



POWER DERATING CURVE

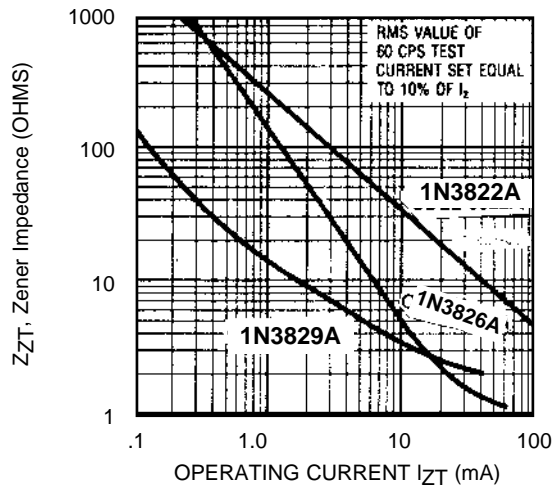


FIGURE 2
ZENER IMPEDANCE VS. OPERATING CURRENT



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Ordering Information

| Device | Packing |
|------------------|------------------------------|
| (Part Number)-TP | Tape&Reel; 5Kpcs/Reel |
| (Part Number)-AP | Ammo Packing;2.5Kpcs/AmmoBox |
| (Part Number)-BP | Bulk;1Kpcs/Box |

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