



Micro Commercial Components

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# 1N3821A THRU 1N3828A

## 1.0 Watt Zener Diode 3.3 to 6.2 Volts

### Features

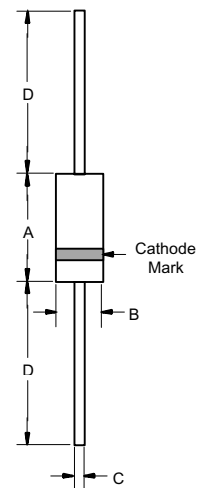
- Double Plug Construction
- Metallurgically Bound
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Marking: Cathode Band and Type Number

### 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 $T_L = 95^\circ\text{C}$	$P_{\text{tot}}$	1.0	W
Power Derating Above $T_L = 95^\circ\text{C}$		12.5	mW/ $^\circ\text{C}$
Operating Temperature	$T_j$	-65 ~ +175	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{STG}}$	-65 ~ +175	$^\circ\text{C}$

DO-41



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

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## ELECTRICAL CHARACTERISTICS @25°C

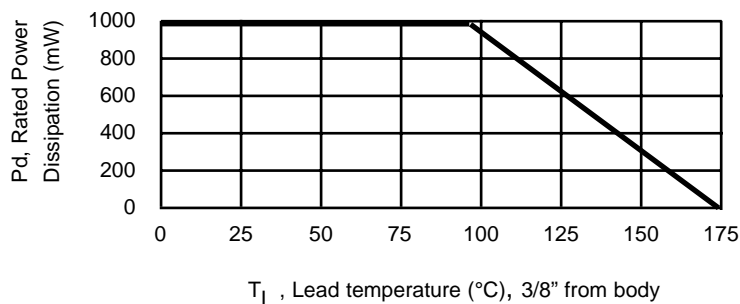
TYPE NUMBER	NOMINAL		MAXIMUM ZENER IMPEDANCE		MAX. DC	MAX. REVERSE	
	ZENER	TEST CURRENT			ZENER		
	VOLTAGE		CURRENT	LEAKAGE CURRENT			
	VZ @ IZT	IZT	IZM	IR @ VR			
(NOTE 1)	(NOTE 3)	(NOTE 2)					
	VOLTS	mA	OHMS	OHMS	mA	μ A	VOLTS
1N3821	3.3	76	10	400	276	100	1
1N3821A	3.3	76	10	400	276	100	1
1N3822	3.6	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%, suffix "D" signifies ± 1%.

**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

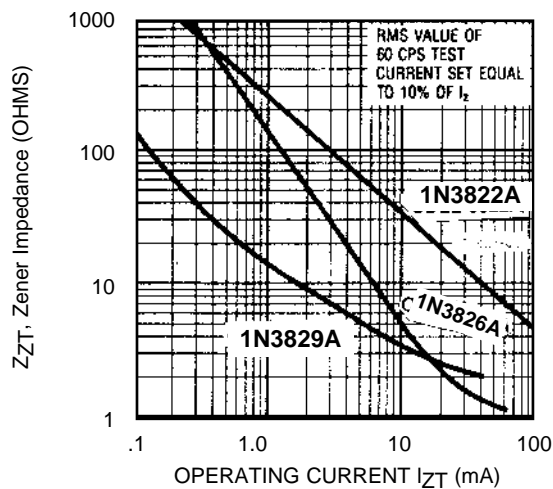


FIGURE 2  
ZENER IMPEDANCE VS. OPERATING CURRENT



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