

- 1N3821A-1 THRU 1N3828A-1 AVAILABLE IN JAN, JANTX AND JANTXV
PER MIL-PRF-19500/115
- 1 WATT ZENER DIODE
- DOUBLE PLUG CONSTRUCTION
- METALLURGICALLY BONDED

1N3821A thru 1N3828A
and
1N3821A-1 thru 1N3828A-1

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C
Storage Temperature: -65°C to +175°C
DC Power Dissipation: 1 watt @ $T_L = 95^\circ\text{C}$
Power Derating: 12.5 mW / °C above $T_L = 95^\circ\text{C}$
Forward Voltage @ 200mA = 1.2 volts maximum

ELECTRICAL CHARACTERISTICS @ 25°C

CDI TYPE NUMBER (NOTE 1)	NOMINAL ZENER VOLTAGE $V_Z @ I_{ZT}$ (NOTE 3)	ZENER TEST CURRENT I_{ZT}	MAXIMUM ZENER IMPEDANCE $Z_{ZT} @ I_{ZT}$ $Z_{ZK} @ I_{ZK}=1\text{mA}$ (NOTE 2)		MAX. DC ZENER CURRENT I_{ZM}	MAX. REVERSE LEAKAGE CURRENT $I_R @ V_R$	
	VOLTS	mA	OHMS	OHMS	mA	μA	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 = $\pm 10\%$ tolerance on nominal Zener voltage, suffix "A" signifies $\pm 5\%$, suffix "C" signifies $\pm 2\%$, suffix "D" signifies $\pm 1\%$.

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 $25^\circ\text{C} \pm 3^\circ\text{C}$.

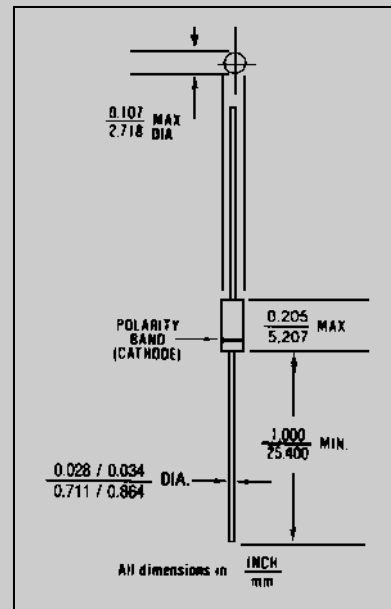


FIGURE 1

DESIGN DATA

CASE: Hermetically sealed glass case, DO41.

LEAD MATERIAL: Copper clad steel

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ($R_{\theta JEC}$): 80 °C/W maximum at L = .375 inch

THERMAL IMPEDANCE: ($Z_{\theta JX}$): 15 °C/W maximum

POLARITY: Diode to be operated with the banded (cathode) end positive.

MOUNTING POSITION: Any.

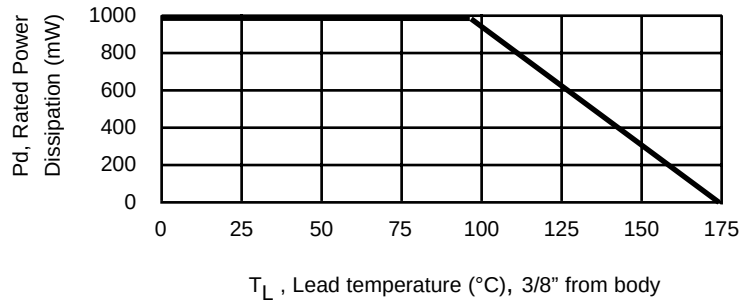


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1N3821A thru 1N3828A and 1N3821A-1 thru 1N3828A-1

FIGURE 2



POWER DERATING CURVE

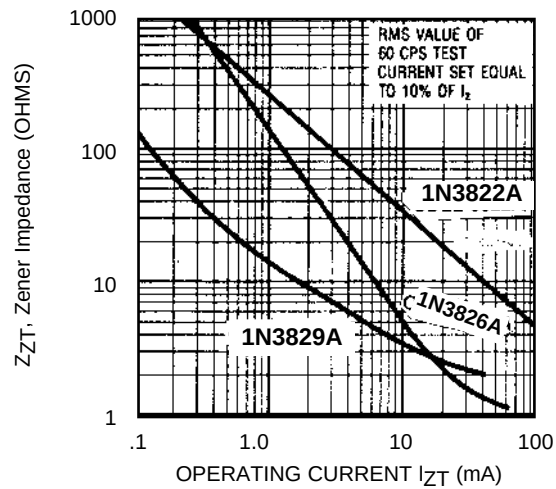


FIGURE 3
ZENER IMPEDANCE VS. OPERATING CURRENT