

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 $V_Z @ 1Z_T$ (NOTE 3)	ZENER TEST CURRENT $1Z_T$	MAXIMUM ZENER IMPEDANCE		MAX. DC ZENER CURRENT $1Z_M$	MAX. REVERSE LEAKAGE CURRENT $I_R @ V_R$	
			$Z_{ZT} @ 1Z_T$	$Z_{ZK} @ 1Z_K=1\text{mA}$ (NOTE 2)		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 $1Z_T$ A 60Hz rms a.c. current equal to 10% of $1Z_T$.
- NOTE 3** Zener voltage is measured with the device junction in thermal equilibrium at an ambient temperature of $25^\circ\text{C} \pm 3^\circ\text{C}$.

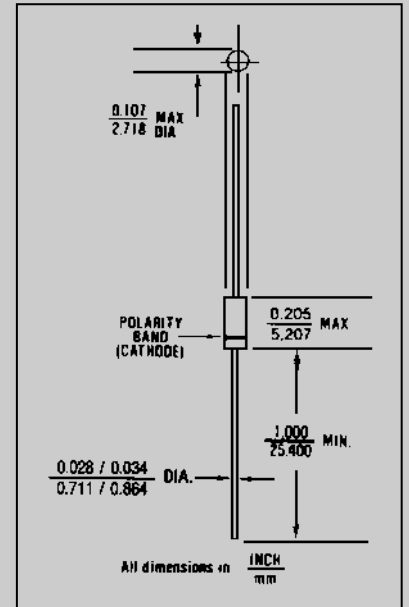


FIGURE 1

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.

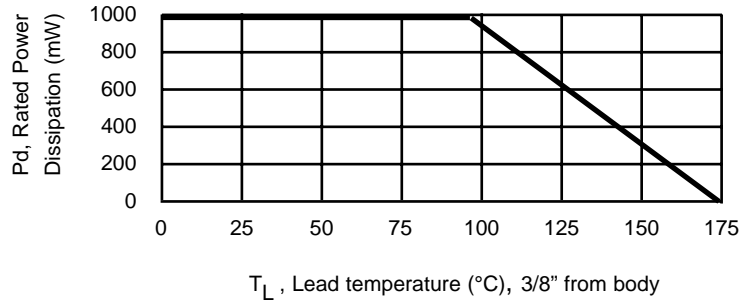


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1N3821A thru 1N3828A and 1N3821A-1 thru 1N3828A-1

FIGURE 2



POWER DERATING CURVE

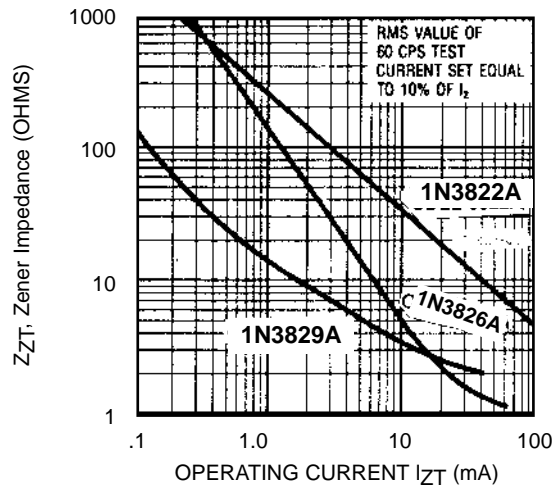


FIGURE 3
ZENER IMPEDANCE VS. OPERATING CURRENT

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