



1N3821 thru 1N3830A

FEATURES

- ZENER VOLTAGE RANGE: 3.3V to 7.5V
- 1N3821A-1N3828A HAVE JAN, JANTX and JANTXV QUALIFICATIONS TO MIL-S-19500/115

*MAXIMUM RATINGS

Junction and Storage Temperatures: -65°C to $+175^{\circ}\text{C}$

DC Power Dissipation: 1 Watt

Derating: 6.67 mW/ $^{\circ}\text{C}$ above 25°C

Forward Voltage @ 200 mA: 1.5 Volts

*ELECTRICAL CHARACTERISTICS @ 25°C

JEDEC TYPE NO.	NOMINAL ZENER VOLTAGE V _Z @ I _{ZT} (Note 1)	ZENER TEST CURRENT I _{ZT}	MAX. ZENER IMPEDANCE (Note 2)		MAXIMUM ZENER CURRENT I _{ZM} (Note 3)	MAXIMUM REVERSE CURRENT I _R @ V _R		TYPICAL TEMP. COEFF. OF ZENER VOLTAGE α _{VZ}
			Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK} = 1mA		μA	VOLTS	
			OHMS	OHMS				
1N3821	3.3	76	10	400	276	100	1	— .066
1N3821A	3.3	76	10	400	276	100	1	— .066
1N3822	3.6	69	10	400	252	100	1	— .058
1N3822A	3.6	69	10	400	252	100	1	— .058
1N3823	3.9	64	9	400	238	50	1	— .046
1N3823A	3.9	64	9	400	238	50	1	— .046
1N3824	4.3	58	9	400	213	10	1	— .033
1N3824A	4.3	58	9	400	213	10	1	— .033
1N3825	4.7	53	8	500	194	10	1	— .015
1N3825A	4.7	53	8	500	194	10	1	— .015
1N3826	5.1	49	7	550	178	10	1	+ .010
1N3826A	5.1	49	7	550	178	10	1	+ .010
1N3827	5.6	45	5	600	162	10	2	+ .030
1N3827A	5.6	45	5	600	162	10	2	+ .030
1N3828	6.2	41	2	700	146	10	3	+ .049
1N3828A	6.2	41	2	700	146	10	3	+ .049
1N3829	6.8	37	1.5	500	133	10	3	+ .053
1N3829A	6.8	37	1.5	500	133	10	3	+ .053
1N3830	7.5	34	1.5	250	121	10	3	+ .057
1N3830A	7.5	34	1.5	250	121	10	3	+ .057

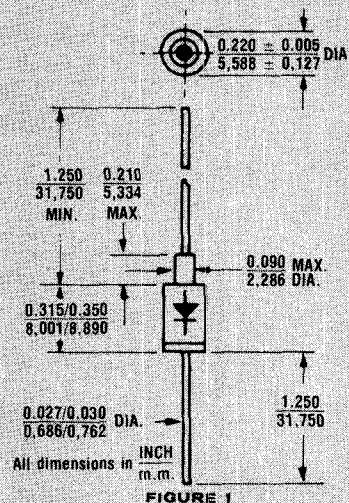
* JEDEC Registered Data

NOTE 1 The JEDEC type numbers shown with suffix A have a standard tolerance of $\pm 5\%$ on the nominal zener voltage. V_Z measured with device in thermal equilibrium in 25°C still air and mounted in test clips, $3/4"$ from unit body. If tighter tolerance on V_Z is required, consult factory.

NOTE 2 ZENER Impedance derived by superimposing on I_{ZT} - I_{ZK} a 60 cps, rms. a.c. current equal to $10\% I_{ZT}$ or I_{ZK} .

NOTE 3 Allowance has been made for the increase in V_Z due to Z_Z and for the increase in junction temperature as the unit approaches thermal equilibrium at the power dissipation of 1 watt.

SILICON 1 WATT ZENER DIODES



MECHANICAL CHARACTERISTICS

CASE: DO-13, welded, hermetically sealed metal and glass.

FINISH: All external surfaces are corrosion resistant and leads solderable.

THERMAL RESISTANCE: $100^{\circ}\text{C}/\text{W}$ (Typical) junction to lead at 0.375 -inches from body.

POLARITY: Cathode connected case.

WEIGHT: 1.4 grams.

MOUNTING POSITION: Any.

For more information call:
(602) 941-6300

1N3821 thru 1N3830A

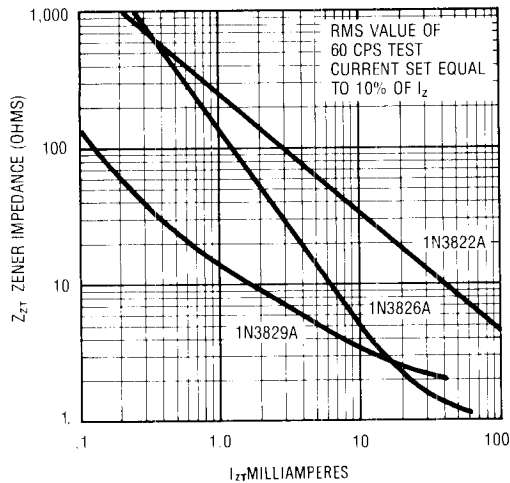


FIGURE 2
TYPICAL ZENER IMPEDANCE vs.
ZENER CURRENT FOR TYPES SHOWN

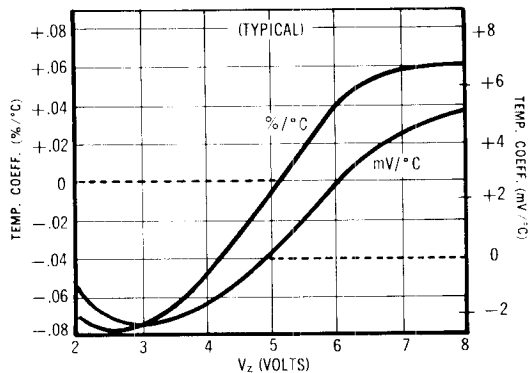


FIGURE 3
TEMP. COEFF. vs. ZENER VOLTAGE

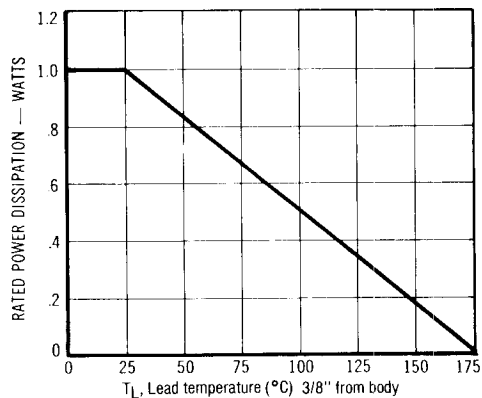


FIGURE 4
POWER DERATING CURVE

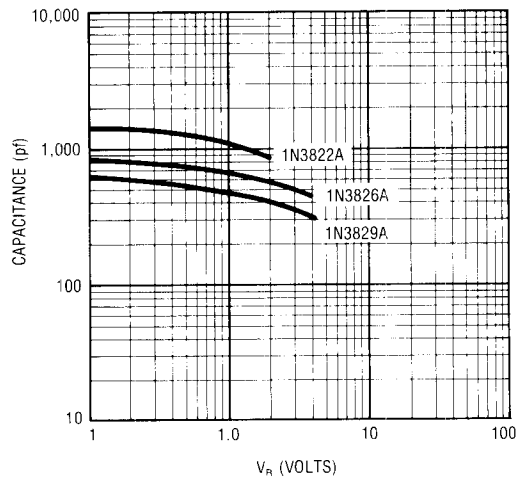


FIGURE 5
TYPICAL CAPACITANCE vs. REVERSE
VOLTAGE FOR 1-WATT ZENERS