

DIGITRON SEMICONDUCTORS

1N821 – 1N829A
DO-35 CASE

TEMPERATURE COMPENSATED
ZENER REFERENCE DIODE
6.2 & 6.55 Volt

MAXIMUM RATINGS

1N821 – 1N829A	
Operating and storage temperature	-65° to +175°C
DC power dissipation	500mW @ 25°C
Derating solder temperatures	4 mW/°C above 25°C

ELECTRICAL CHARACTERISTICS

Part number	Zener voltage (Note 1 and 4) $V_Z @ I_{ZT}$	Zener test current I_{ZT}	Maximum zener impedance (Note 3 and 4) Z_{ZT}	Voltage temperature stability (ΔV_{ZT} MAX) -55°C to +100°C (Note 3 and 4)	Effective temperature coefficient α_{VZ}
	VOLTS	mA	OHMS	mV	%/°C
1N821	5.9-6.5	7.5	15	96	0.01
1N821A	5.9-6.5	7.5	10	96	0.01
1N822†	5.9-6.5	7.5	15	96	0.01
1N823	5.9-6.5	7.5	15	48	0.005
1N823A	5.9-6.5	7.5	10	48	0.005
1N824†	5.9-6.5	7.5	15	48	0.005
1N825	5.9-6.5	7.5	15	19	0.002
1N825A	5.9-6.5	7.5	10	19	0.002
1N826	6.2-6.9	7.5	15	20	0.002
1N827	5.9-6.5	7.5	15	9	0.001
1N827A	5.9-6.5	7.5	10	9	0.001
1N828	6.2-6.9	7.5	15	10	0.001
1N829	5.9-6.5	7.5	15	5	0.0005
1N829A	5.9-6.5	7.5	10	5	0.0005

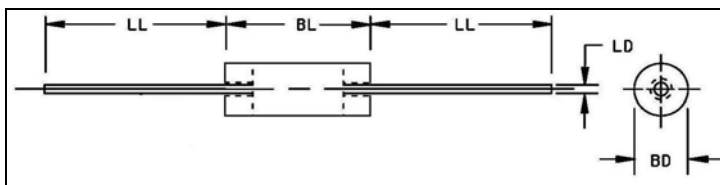
† Double Anode; electrical specifications apply under both bias polarities.

NOTES:

- When ordering devices with tighter tolerances than specified, use a nominal VZ voltage of 6.2 V.
- Measured by superimposing 0.75mA ac rms on 7.5mA DC @ 25°C.
- The maximum allowable change observed over the entire temperature range i.e., the diode voltage will not exceed the specified mV change at any discrete temperature between the established limits.
- Voltage measurements to be performed 15 seconds after application of DC current.

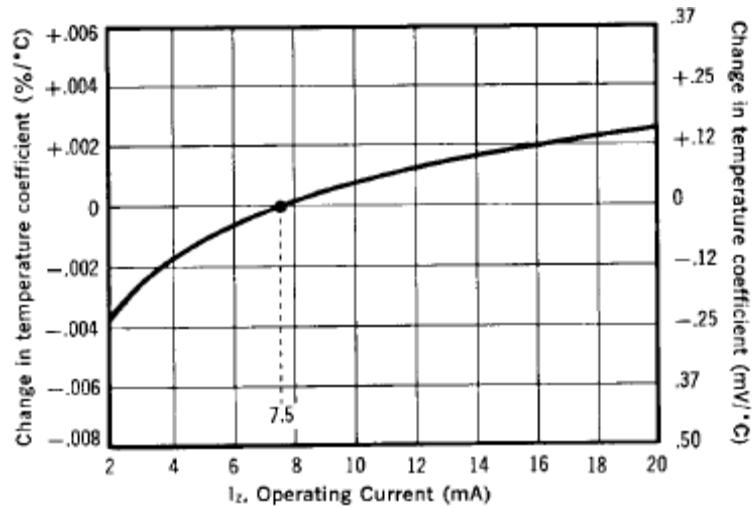
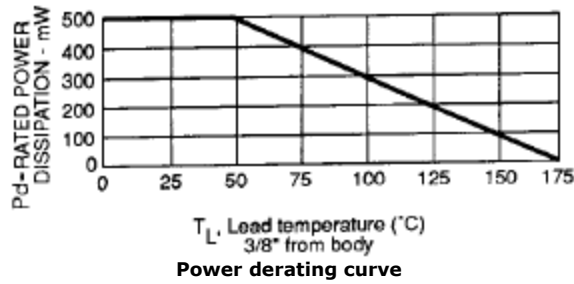
MECHANICAL CHARACTERISTICS

CASE:	Hermetically sealed glass, DO-35
MARKING:	Body painted, alpha numeric
POLARITY:	Cathode Band

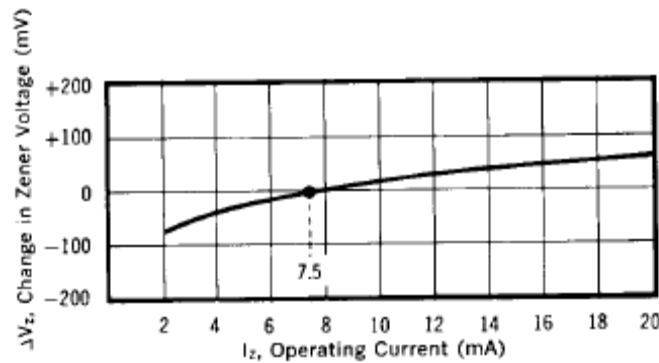


	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.080	-	2.030
BL	-	0.175	-	4.440
LD	0.018	0.022	0.457	0.559
LL	1.000	-	25.400	-

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Typical change of temperature coefficient with change in operating current



Typical change of zener voltage with change in operating current

This curve illustrates the change of diode voltage arising from the effect of impedance. It is in effect an exploded view of the zener operating region of the I-V characteristic. This curve can also be used to estimate total voltage regulation under conditions of both varying temperature and current.

Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).

Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.