

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

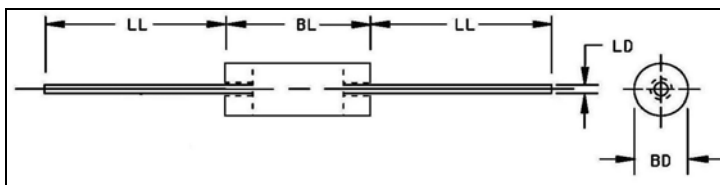
† Double Anode; electrical specifications apply under both bias polarities.

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.

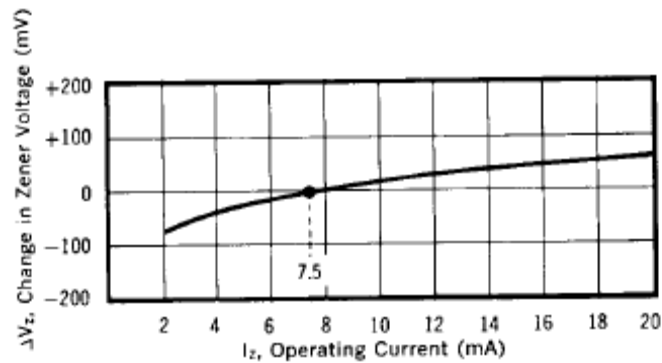
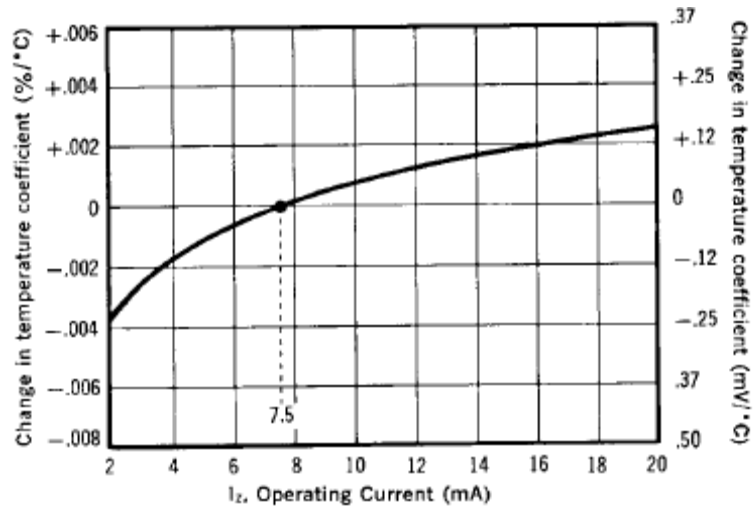
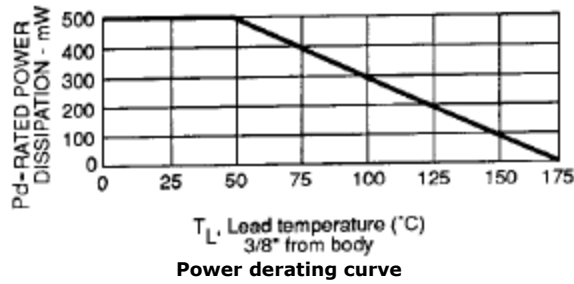
MECHANICAL CHARACTERISTICS

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	-

DIGITRON SEMICONDUCTORS



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.