

# DIGITRON SEMICONDUCTORS

1N935A,B-1N940A,B

9.0 VOLT TEMPERATURE COMPENSATED  
ZENER REFERENCE DIODES

## MAXIMUM RATINGS

Characteristics	Values
Junction and storage temperatures	-65 to +175°C
DC power dissipation	500mW @ $T_L = 25^\circ\text{C}$ and maximum current $I_{ZM}$ of 50 mA. For optimum voltage temperature stability, $I_Z = 7.5\text{mA}$ (less than 75 mW in dissipated power)
Solder temperatures	260°C for 10 s (maximum)

## ELECTRICAL CHARACTERISTICS

Part number	Zener voltage $V_Z @ I_{ZT}$	Zener test current $I_{ZT}$	Maximum zener impedance $Z_{ZT} @ I_{ZT}$	Voltage temperature stability $\Delta V_{ZT}$ maximum	Temperature range	Effective temperature coefficient $\alpha_{VZ}$
			Note 2	Notes 3 & 4		
Notes 1	Notes 1 & 4					
	Volts	mA	Ohms	mV	°C	%/°C
1N935	8.55-9.45	7.5	20	67	0 to +75	0.01
1N935A	8.55-9.45	7.5	20	139	-55 to +100	0.01
1N935B	8.55-9.45	7.5	20	184	-55 to +150	0.01
1N936	8.55-9.45	7.5	20	33	0 to +75	0.005
1N936A	8.55-9.45	7.5	20	69	-55 to +100	0.005
1N936B	8.55-9.45	7.5	20	92	-55 to +150	0.005
1N937	8.55-9.45	7.5	20	13	0 to +75	0.002
1N937A	8.55-9.45	7.5	20	27	-55 to +100	0.002
1N937B	8.55-9.45	7.5	20	37	-55 to +150	0.002
1N938	8.55-9.45	7.5	20	6	0 to +75	0.001
1N938A	8.55-9.45	7.5	20	13	-55 to +100	0.001
1N938B	8.55-9.45	7.5	20	18	-55 to +150	0.001
1N939	8.55-9.45	7.5	20	3	0 to +75	0.0005
1N939A	8.55-9.45	7.5	20	7	-55 to +100	0.0005
1N939B	8.55-9.45	7.5	20	9	-55 to +150	0.0005
1N940	8.55-9.45	7.5	20	1.3	0 to +75	0.0002
1N940A	8.55-9.45	7.5	20	2.7	-55 to +100	0.0002
1N940B	8.55-9.45	7.5	20	3.7	-55 to +150	0.0002

Note 1. For devices with tighter tolerances, use a nominal voltage of 9.2V and add a hyphenated suffix to the part number for desired tolerance at the end of the part number, i.e. - 2%

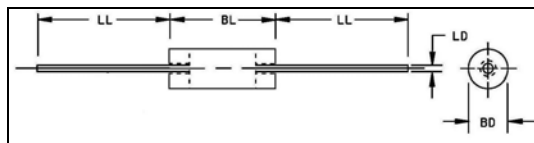
Note 2. Measured by superimposing 0.75mA ac rms on 7.5 mA dc @ 25°C

Note 3. 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

Note 4. Voltage measurements to be performed 15 seconds after application of dc current

## MECHANICAL CHARACTERISTICS

Case	DO-35 hermetically sealed glass
Marking	Body painted, alpha numeric
Polarity	Cathode band

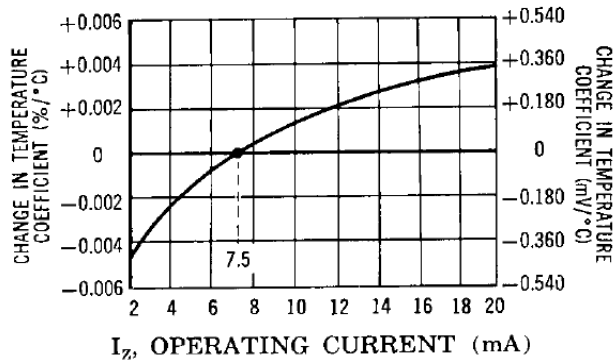
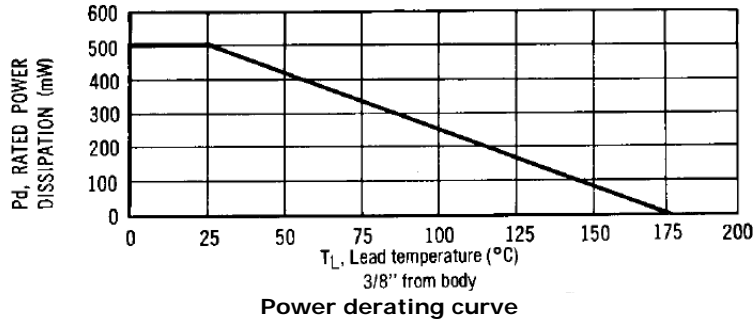


	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.107	-	2.718
BL	-	0.300	-	7.620
LD	0.018	0.022	0.457	0.559
LL	1.000	-	25.400	-

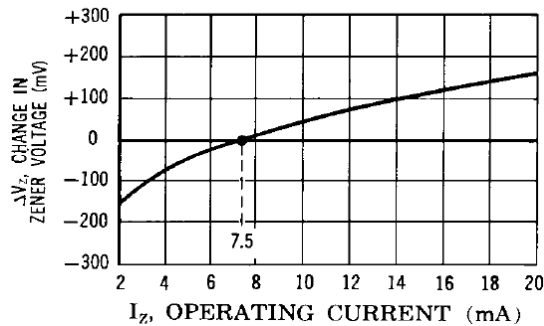
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9.0 VOLT TEMPERATURE COMPENSATED  
ZENER REFERENCE DIODES



Typical change of temperature coefficient with change in operating current



Typical change of zener voltage with change in operating 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.