

- 1N935BUR-1, 1N937BUR-1 and 1N938BUR-1 AVAILABLE IN JAN, JANTX, JANTXV AND JANS PER MIL-PRF-19500/156
- TEMPERATURE COMPENSATED ZENER REFERENCE DIODES
- LEADLESS PACKAGE FOR SURFACE MOUNT
- 9.0 VOLT NOMINAL ZENER VOLTAGE
- METALLURGICALLY BONDED, DOUBLE PLUG CONSTRUCTION

1N935BUR-1 thru 1N938BUR-1  
and  
CDLL935 thru CDLL938B

## MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C  
Storage Temperature: -65°C to +175°C  
DC Power Dissipation: 500mW @ +50°C  
Power Derating: 4 mW / °C above +50°C

## REVERSE LEAKAGE CURRENT

$I_R = 10 \mu A$  @ 25°C &  $V_R = 6 V_{dc}$

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

CDI TYPE NUMBER	ZENER VOLTAGE $V_Z @ I_{ZT}$	ZENER TEST CURRENT $I_{ZT}$	MAXIMUM ZENER IMPEDANCE $Z_{ZT}$  (Note 1)	VOLTAGE TEMPERATURE STABILITY $\Delta V_{ZT}$ MAXIMUM (Note 2)	TEMPERATURE RANGE	EFFECTIVE TEMPERATURE COEFFICIENT
	VOLTS	mA	OHMS	mV	°C	% / °C
CDLL935	8.55 - 9.45	7.5	20	67	0 to + 75	0.01
CDLL935A	8.55 - 9.45	7.5	20	139	-55 to +100	0.01
CDLL935B	8.55 - 9.45	7.5	20	184	-55 to +150	0.01
CDLL936	8.55 - 9.45	7.5	20	34	0 to + 75	0.005
CDLL936A	8.55 - 9.45	7.5	20	70	-55 to +100	0.005
CDLL936B	8.55 - 9.45	7.5	20	92	-55 to +150	0.005
CDLL937	8.55 - 9.45	7.5	20	13	0 to + 75	0.002
CDLL937A	8.55 - 9.45	7.5	20	28	-55 to +100	0.002
CDLL937B	8.55 - 9.45	7.5	20	37	-55 to +150	0.002
CDLL938	8.55 - 9.45	7.5	20	6.7	0 to + 75	0.001
CDLL938A	8.55 - 9.45	7.5	20	13.9	-55 to +100	0.001
CDLL938B	8.55 - 9.45	7.5	20	19	-55 to +150	0.001

**NOTE 1** Zener impedance is derived by superimposing on  $I_{ZT}$  A 60Hz rms a.c. current equal to 10% of  $I_{ZT}$ .

**NOTE 2** The maximum allowable change observed over the entire temperature range i.e., the diode voltage will not exceed the specified mV at any discrete temperature between the established limits, per JEDEC standard No.5.

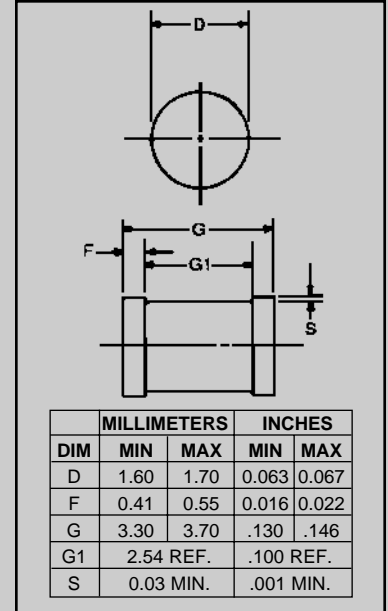


FIGURE 1

## DESIGN DATA

**CASE:** DO-213AA, Hermetically sealed glass case. (MELF, SOD-80, LL34)

**LEAD FINISH:** Tin / Lead

**POLARITY:** Diode to be operated with the banded (cathode) end positive.

**MOUNTING POSITION:** Any.

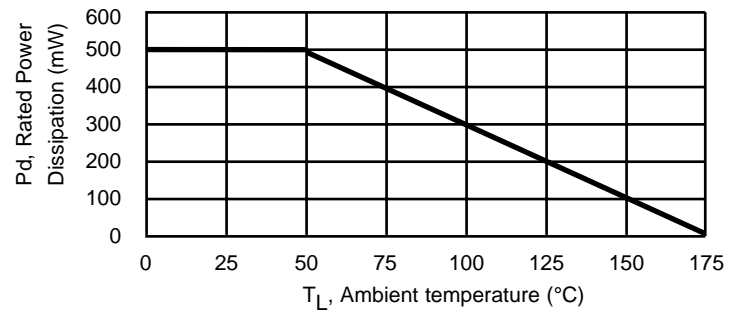
**MOUNTING SURFACE SELECTION:**  
The Axial Coefficient of Expansion (COE) Of this Device is Approximately +6PPM/°C. The COE of the Mounting Surface System Should Be Selected To Provide A Suitable Match With This Device.



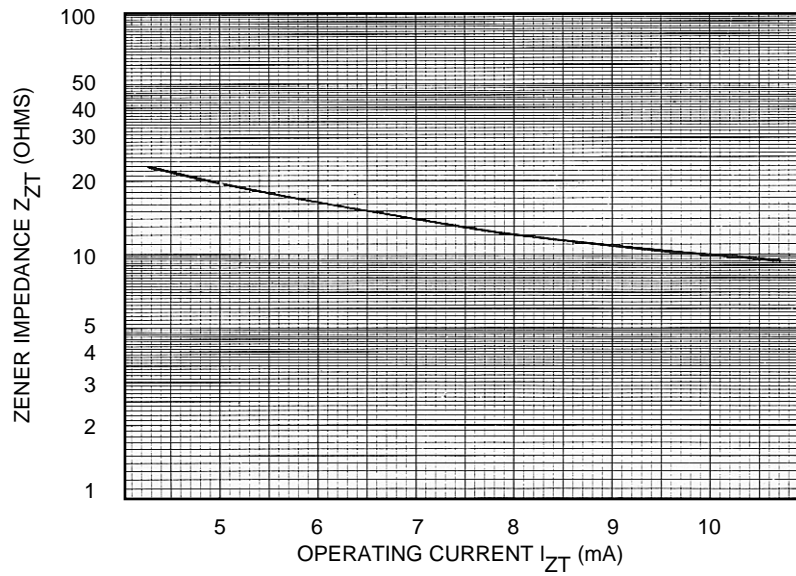
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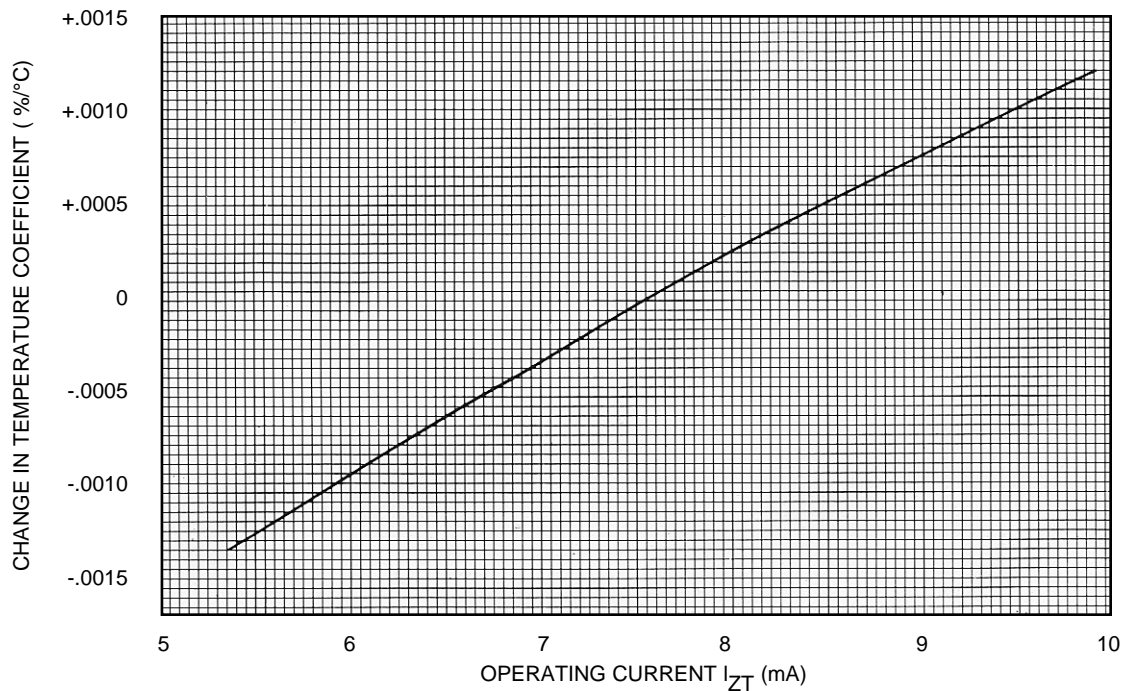
# CDLL935 thru CDLL938B



**FIGURE 2  
POWER DERATING CURVE**



**FIGURE 3  
ZENER IMPEDANCE VS. OPERATING CURRENT**



**FIGURE 4  
TYPICAL CHANGE OF TEMPERATURE COEFFICIENT  
WITH CHANGE IN OPERATING CURRENT**