

- TEMPERATURE COMPENSATED ZENER REFERENCE DIODES
- LEADLESS PACKAGE FOR SURFACE MOUNT
- 12.8 VOLT NOMINAL ZENER VOLTAGE  $\pm 5\%$
- LOW NOISE
- METALLURGICALLY BONDED
- DOUBLE PLUG CONSTRUCTION

CDLL4896  
thru  
CDLL4915A

### 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

$I_R = 15\mu A @ 25^\circ C \& V_R = 8Vdc$

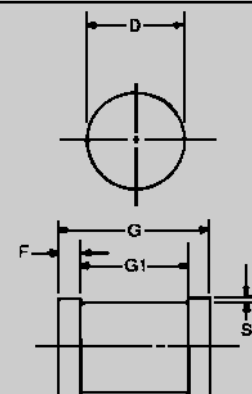
ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

CDI TYPE NUMBER (Note 3)	TEST CURRENT $I_{ZT}$	VOLTAGE TEMPERATURE STABILITY $^3V_{ZT}$ (Note 2)	TEMPERATURE RANGE	EFFECTIVE TEMPERATURE COEFFICIENT	MAXIMUM DYNAMIC IMPEDANCE $Z_{ZT}$ (Note 1)	MAXIMUM NOISE DENSITY $N_D$
	mA	mV	°C	%/°C	OHMS	$\mu V / Hz$
CDLL4896	0.5	96	+25 to +100	0.01	400	0.8
CDLL4896A	0.5	198	-55 to +100	0.01	400	0.8
CDLL4897	0.5	48	+25 to +100	0.005	400	0.8
CDLL4897A	0.5	99	-55 to +100	0.005	400	0.8
CDLL4898	0.5	19	+25 to +100	0.002	400	0.8
CDLL4898A	0.5	40	-55 to +100	0.002	400	0.8
CDLL4899	0.5	10	+25 to +100	0.001	400	0.8
CDLL4899A	0.5	20	-55 to +100	0.001	400	0.8
CDLL4900	1.0	96	+25 to +100	0.01	200	0.4
CDLL4900A	1.0	198	-55 to +100	0.01	200	0.4
CDLL4901	1.0	48	+25 to +100	0.005	200	0.4
CDLL4901A	1.0	99	-55 to +100	0.005	200	0.4
CDLL4902	1.0	19	+25 to +100	0.002	200	0.4
CDLL4902A	1.0	40	-55 to +100	0.002	200	0.4
CDLL4903	1.0	10	+25 to +100	0.001	200	0.4
CDLL4903A	1.0	20	-55 to +100	0.001	200	0.4
CDLL4904	2.0	96	+25 to +100	0.01	100	0.25
CDLL4904A	2.0	198	-55 to +100	0.01	100	0.25
CDLL4905	2.0	48	+25 to +100	0.005	100	0.25
CDLL4905A	2.0	99	-55 to +100	0.005	100	0.25
CDLL4906	2.0	19	+25 to +100	0.002	100	0.25
CDLL4906A	2.0	40	-55 to +100	0.002	100	0.25
CDLL4907	2.0	10	+25 to +100	0.001	100	0.25
CDLL4907A	2.0	20	-55 to +100	0.001	100	0.25
CDLL4908	4.0	96	+25 to +100	0.01	50	0.22
CDLL4908A	4.0	198	-55 to +100	0.01	50	0.22
CDLL4909	4.0	48	+25 to +100	0.005	50	0.22
CDLL4909A	4.0	99	-55 to +100	0.005	50	0.22
CDLL4910	4.0	19	+25 to +100	0.002	50	0.22
CDLL4910A	4.0	40	-55 to +100	0.002	50	0.22
CDLL4911	4.0	10	+25 to +100	0.001	50	0.22
CDLL4911A	4.0	20	-55 to +100	0.001	50	0.22
CDLL4912	7.5	96	+25 to +100	0.01	25	0.20
CDLL4912A	7.5	198	-55 to +100	0.01	25	0.20
CDLL4913	7.5	48	+25 to +100	0.005	25	0.20
CDLL4913A	7.5	99	-55 to +100	0.005	25	0.20
CDLL4914	7.5	19	+25 to +100	0.002	25	0.20
CDLL4914A	7.5	40	-55 to +100	0.002	25	0.20
CDLL4915	7.5	10	+25 to +100	0.001	25	0.20
CDLL4915A	7.5	20	-55 to +100	0.001	25	0.20

**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, per JEDEC standard No.5.

**NOTE 3** Zener voltage range equals 12.8 volts  $\pm 5\%$ .



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
D	1.60	1.70	0.063	0.067
F	0.41	0.55	0.016	0.022
G	3.30	3.70	.130	.146
G1	2.54 REF.		.100 REF.	
S	0.03 MIN.		.001 MIN.	

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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# CDLL4896 thru CDLL4915A

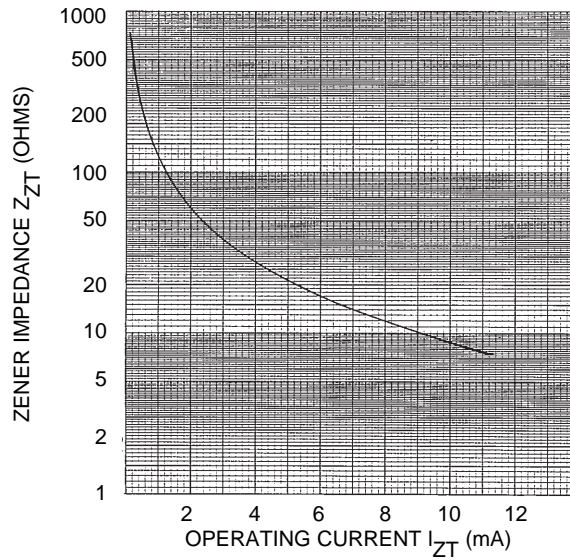


FIGURE 2

ZENER IMPEDANCE VS. OPERATING CURRENT

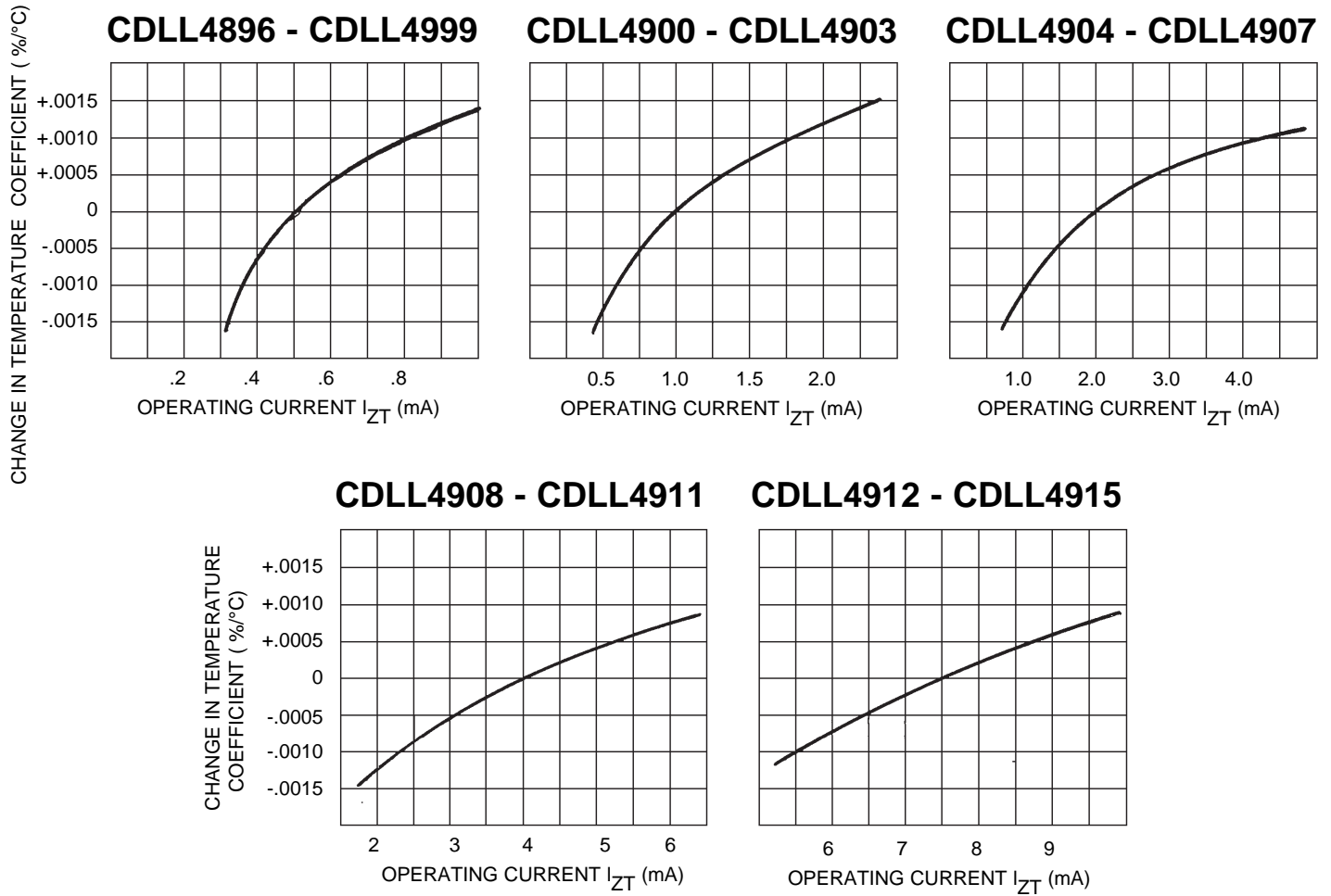


FIGURE 3

TYPICAL CHANGE OF TEMPERATURE COEFFICIENT WITH CHANGE IN OPERATING CURRENT