

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

**CDLL4916**  
thru  
**CDLL4932A**

### MAXIMUM RATINGS

Operating Temperature:  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$   
Storage Temperature:  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$   
DC Power Dissipation: 500mW @  $+50^{\circ}\text{C}$   
Power Derating: 4 mW /  $^{\circ}\text{C}$  above  $+50^{\circ}\text{C}$

### REVERSE LEAKAGE CURRENT

$I_R = 15\mu\text{A}$  @  $25^{\circ}\text{C}$  &  $V_R = 12\text{Vdc}$

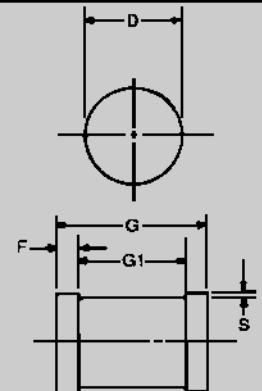
**ELECTRICAL CHARACTERISTICS** @  $25^{\circ}\text{C}$ , unless otherwise specified.

CDI TYPE NUMBER (Note 3)	TEST CURRENT $I_{ZT}$	VOLTAGE TEMPERATURE STABILITY $^{\circ}\text{V}_{ZT}$ (Note 2)	TEMPERATURE RANGE	EFFECTIVE TEMPERATURE COEFFICIENT	MAXIMUM DYNAMIC IMPEDANCE $Z_{ZT}$ (Note 1)	MAXIMUM NOISE DENSITY $N_D$
	mA	mV	$^{\circ}\text{C}$	$\%/^{\circ}\text{C}$	OHMS	$\mu\text{V}/\text{Hz}$
CDLL4916	0.5	144	+25 to +100	0.01	600	1.0
CDLL4916A	0.5	298	-55 to +100	0.01	600	1.0
CDLL4917	0.5	72	+25 to +100	0.005	600	1.0
CDLL4917A	0.5	149	-55 to +100	0.005	600	1.0
CDLL4918	0.5	29	+25 to +100	0.002	600	1.0
CDLL4918A	0.5	60	-55 to +100	0.002	600	1.0
CDLL4919	1.0	144	+25 to +100	0.01	300	0.5
CDLL4919A	1.0	298	-55 to +100	0.01	300	0.5
CDLL4920	1.0	72	+25 to +100	0.005	300	0.5
CDLL4920A	1.0	149	-55 to +100	0.005	300	0.5
CDLL4921	1.0	29	+25 to +100	0.002	300	0.5
CDLL4921A	1.0	60	-55 to +100	0.002	300	0.5
CDLL4922	2.0	144	+25 to +100	0.01	150	0.25
CDLL4922A	2.0	298	-55 to +100	0.01	150	0.25
CDLL4923	2.0	72	+25 to +100	0.005	150	0.25
CDLL4923A	2.0	149	-55 to +100	0.005	150	0.25
CDLL4924	2.0	29	+25 to +100	0.002	150	0.25
CDLL4924A	2.0	60	-55 to +100	0.002	150	0.25
CDLL4925	4.0	144	+25 to +100	0.01	75	0.22
CDLL4925A	4.0	298	-55 to +100	0.01	75	0.22
CDLL4926	4.0	72	+25 to +100	0.005	75	0.22
CDLL4926A	4.0	149	-55 to +100	0.005	75	0.22
CDLL4927	4.0	29	+25 to +100	0.002	75	0.22
CDLL4927A	4.0	60	-55 to +100	0.002	75	0.22
CDLL4928	4.0	14	+25 to +100	0.001	75	0.22
CDLL4928A	4.0	30	-55 to +100	0.001	75	0.22
CDLL4929	7.5	144	+25 to +100	0.01	36	0.20
CDLL4929A	7.5	298	-55 to +100	0.01	36	0.20
CDLL4930	7.5	72	+25 to +100	0.005	36	0.20
CDLL4930A	7.5	149	-55 to +100	0.005	36	0.20
CDLL4931	7.5	29	+25 to +100	0.002	36	0.20
CDLL4931A	7.5	60	-55 to +100	0.002	36	0.20
CDLL4932	7.5	14	+25 to +100	0.001	36	0.20
CDLL4932A	7.5	30	-55 to +100	0.001	36	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 i.e., the diode voltage will not exceed the specified mV at any discrete temperature between the established limits, per JEDEC standard No.5.

**NOTE 3** Zener voltage range equals 19.2 volts  $\pm 5\%$ .



	MILLIMETERS		INCHES	
DIM	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

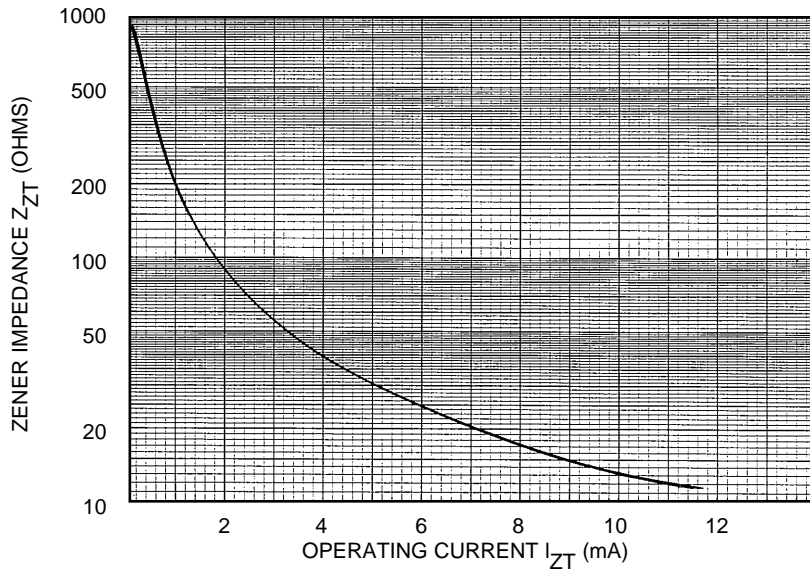
**POLARITY:** Diode to be operated with the banded (cathode) end positive.

**MOUNTING POSITION:** Any.

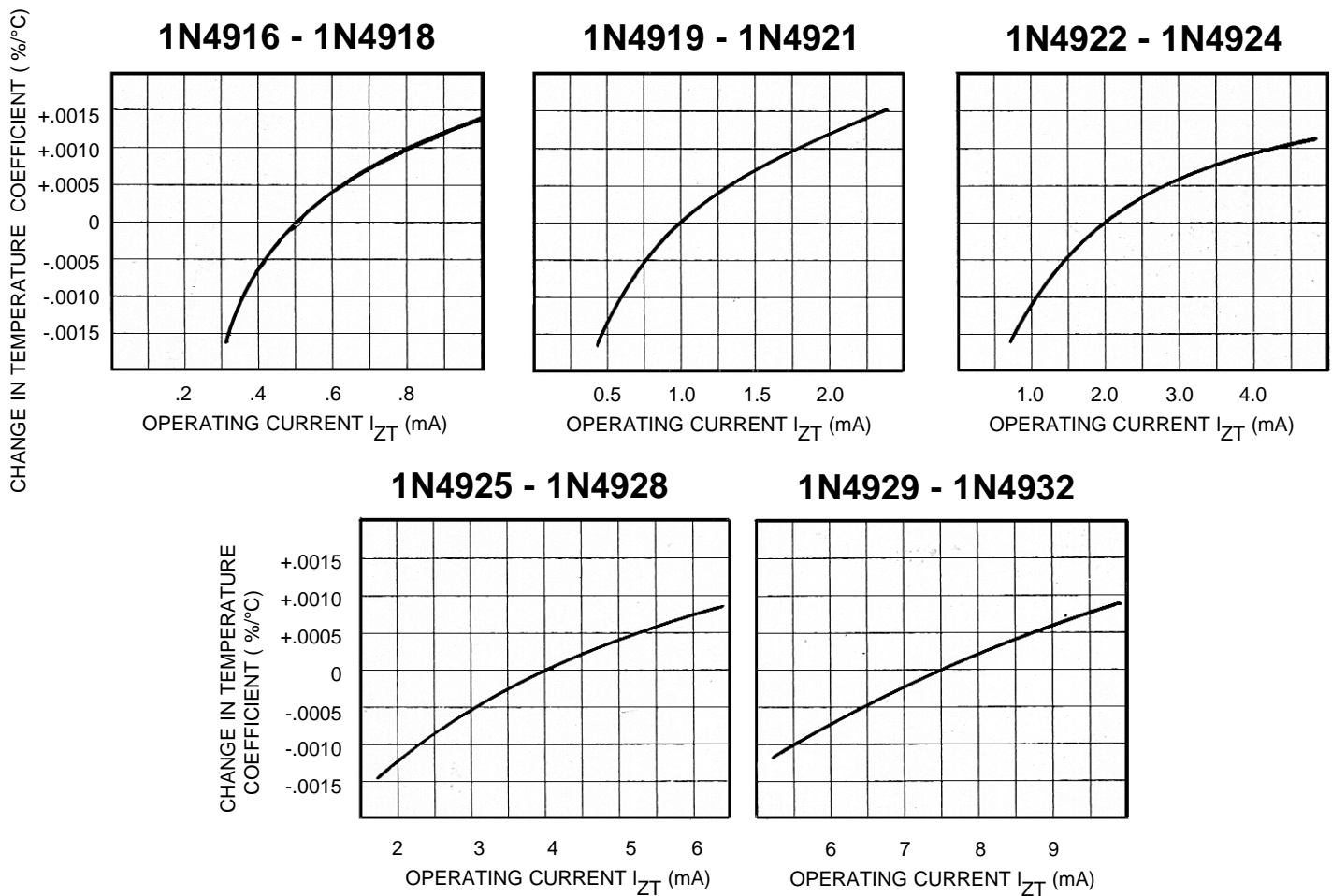
**MOUNTING SURFACE SELECTION:**  
The Axial Coefficient of Expansion (COE) Of This Device is Approximately  $+6\text{PPM}/^{\circ}\text{C}$ . The COE of the Mounting Surface System Should Be Selected To Provide A Suitable Match With This Device.



# CDLL4916 thru CDLL4932A



**FIGURE 2**  
**ZENER IMPEDANCE VS. OPERATING CURRENT**



**FIGURE 3**  
**TYPICAL CHANGE OF TEMPERATURE COEFFICIENT WITH CHANGE IN OPERATING CURRENT**