

- 1.5 WATT ZENER DIODE
- LEADLESS PACKAGE FOR SURFACE MOUNT
- METALLURGICALLY BONDED
- DOUBLE SLUG CONSTRUCTION

# CDLL4460 thru CDLL4496

### MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C  
 Storage Temperature: -65°C to +200°C  
 DC Power Dissipation: 1.5 watts @ 25°C  
 Power Derating: 10mW/°C above 25°C  
 Forward Voltage @ 200mA = 1.0 volts maximum

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

CDI TYPE NO.	NOMINAL ZENER VOLTAGE Vz @ Izt (Note 1)	ZENER TEST CURRENT Izt	MAXIMUM ZENER IMPEDANCE Zzt (Note 2)	MAXIMUM REVERSE LEAKAGE CURRENT Ir @ Vr		MAXIMUM KNEE IMPEDANCE Zzk @ Izk (Note 2)	
	VOLTS	mA	OHMS	µA	VOLTS	OHMS	mA
CDLL4460	6.2	40.0	4	10.0	3.72	200	1.0
CDLL4461	6.8	37.0	2.5	5.0	4.08	200	1.0
CDLL4462	7.5	34.0	2.5	1.0	4.50	400	.5
CDLL4463	8.2	31.0	3	.50	4.92	400	.5
CDLL4464	9.1	28.0	4	.30	5.46	500	.5
CDLL4465	10.0	25.0	5	.30	8.00	500	.25
CDLL4466	11.0	23.0	6	.30	8.80	550	.25
CDLL4467	12.0	21.0	7	.20	9.60	550	.25
CDLL4468	13.0	19.0	8	.05	10.40	550	.25
CDLL4469	15.0	17.0	9	.05	12.00	600	.25
CDLL4470	16.0	15.5	10	.05	12.80	600	.25
CDLL4471	18.0	14.0	11	.05	14.40	650	.25
CDLL4472	20.0	12.5	12	.05	16.00	650	.25
CDLL4473	22.0	11.5	14	.05	17.60	650	.25
CDLL4474	24.0	10.5	16	.05	19.20	700	.25
CDLL4475	27.0	9.5	18	.05	21.60	700	.25
CDLL4476	30.0	8.5	20	.05	24.00	750	.25
CDLL4477	33.0	7.5	25	.05	26.40	800	.25
CDLL4478	36.0	7.0	27	.05	28.80	850	.25
CDLL4479	39.0	6.5	30	.05	31.2	900	.25
CDLL4480	43.0	6.0	40	.05	34.4	950	.25
CDLL4481	47.0	5.5	50	.05	37.6	1000	.25
CDLL4482	51.0	5.0	60	.25	40.8	1100	.25
CDLL4483	56.0	4.5	70	.25	44.8	1300	.25
CDLL4484	62.0	4.0	80	.25	49.6	1500	.25
CDLL4485	68.0	3.7	100	.25	54.4	1700	.25
CDLL4486	75.0	3.3	130	.25	60.4	2000	.25
CDLL4487	82.0	3.0	160	.25	65.6	2500	.25
CDLL4488	91.0	2.8	200	.25	72.8	3000	.25
CDLL4489	100.0	2.5	250	.25	80.0	3100	.25
CDLL4490	110.0	2.0	300	.25	88.0	4000	.25
CDLL4491	120.0	2.0	400	.25	96.0	4500	.25
CDLL4492	130.0	1.9	500	.25	104.0	5000	.25
CDLL4493	150.0	1.7	700	.25	120.0	6000	.25
CDLL4494	160.0	1.6	1000	.25	128.0	6500	.25
CDLL4495	180.0	1.4	1300	.25	144.0	7000	.25
CDLL4496	200.0	1.2	1500	.25	160.0	8000	.25

**NOTE 1** The CDI type numbers shown above have a standard tolerance of ± 5% of the nominal Zener voltage. Nominal zener voltage is measured with the device junction in thermal equilibrium and the temperature of the end cap of the case equalling 30°C ± 2°C.

**NOTE 2** Zener impedance is derived by superimposing on Izt or Izk, a 60Hz rms a.c. current equal to 10% of Izt or Izk.

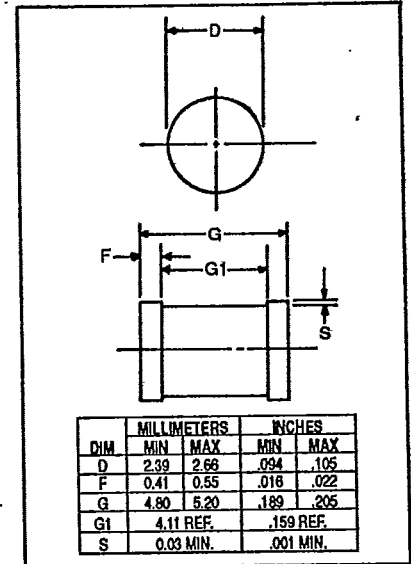


FIGURE 1

### DESIGN DATA

**CASE:** DO-213AB, Hermetically sealed glass case. (MELF, LL41)

**LEAD FINISH:** Tin/Lead

**THERMAL RESISTANCE:** 60 °C/W (Typical) junction to END CAP

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

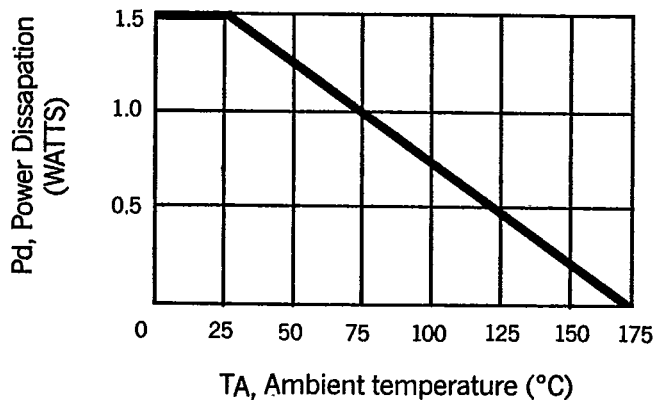
**WEIGHT:** 0.2 grams (Typical)

**MOUNTING POSITION:** Any.



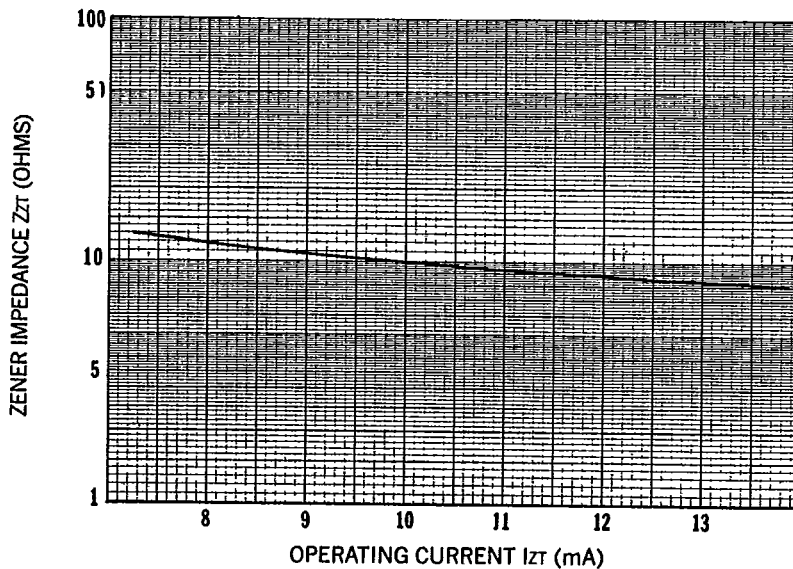
# CDLL4460 thru CDLL4496

FIGURE 2



POWER DERATING CURVE

FIGURE 3



TYPICAL CHANGE OF ZENER IMPEDANCE WITH CHANGE IN OPERATING CURRENT

# PACKAGING DATA

## BULK PACK

PACKAGE	QUANTITY PER CONTAINER	
	PLASTIC BAGS	VIALS
DO-213AA (MELF, LL34, SOD-80)	5,000	500
DO-213AB (MELF, LL41)	5,000	500

## TAPE & REEL

PACKAGE	TAPE WIDTH (MM)	REEL SIZE (INCHES)	QUANTITY PER REEL
DO-213AA (MELF, LL34, SOD-80)	8	7	2,000
		13	10,000
DO-213AB (MELF, LL41)	12	7	1,500
		13	6,000

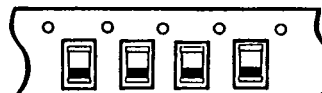
## ORIENTATION OPTIONS

Option 1



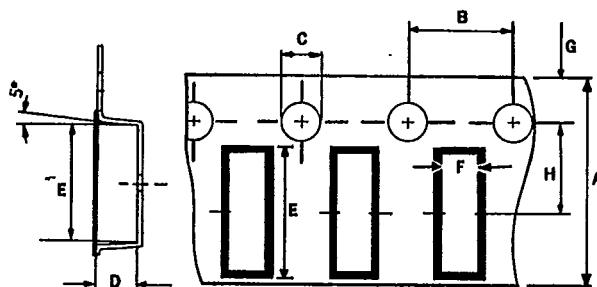
CATHODE BAND AT SPROCKET HOLE SIDE (STANDARD)

Option 2



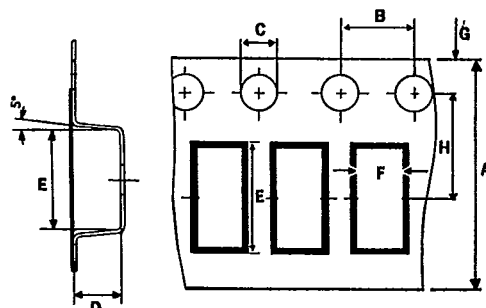
CATHODE BAND AWAY FROM SPROCKET HOLE SIDE (ON REQUEST)

## TAPE DIMENSIONS



DIRECTION OF FEED →  
8MM TAPE

Accumulated pitch tolerance is  $\pm 0.2$  mm over 10 pitches



DIRECTION OF FEED →  
12MM TAPE

Accumulated pitch tolerance is  $\pm 0.2$  mm over 10 pitches

### ALL DIMENSIONS IN MM

	A	B	C	D	E	F	G	H
8MM TAPE	$8.0 \pm 0.3$	$4.0 \pm 0.1$	$1.5 \pm 0.1$	2.0 MAX	2.0 MAX	4.0 MAX	$1.75 \pm 0.1$	$3.5 \pm 0.05$
12MM TAPE	$12.0 \pm 0.3$	$4.0 \pm 0.1$	$1.5 \pm 0.1$	3.0 MAX	3.0 MAX	5.5 MAX	$1.75 \pm 0.1$	$5.5 \pm 0.05$