- **ZENER DIODE**
- **LEADLESS PACKAGE FOR SURFACE MOUNT**
- **LOW REVERSE LEAKAGE CHARACTERISTICS**
- **LOW NOISE CHARACTERISTICS**
- **DOUBLE PLUG CONSTRUCTION**
- **METALLURGICALLY BONDED (-1)**

CDLL6309 thru CDLL6349

MAXIMUM RATINGS

Junction & Storage Temperature: -65°C to +175°C
DC Power Dissipation: 500mW @ T_{EC} = +125°C
Power Derating: 10 mW / °C above T_{EC} = +125°C
Forward Voltage @ 200mA: 1.1 volts maximum

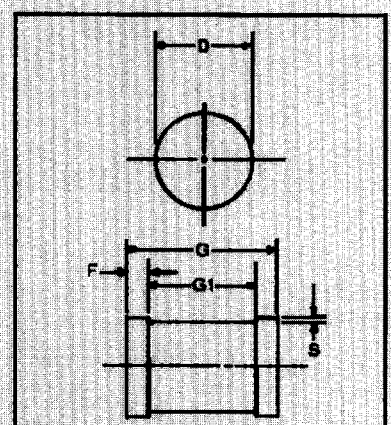
ELECTRICAL CHARACTERISTICS @ 25°C

CDI TYPE NUMBER	NOMINAL ZENER VOLTAGE (NOTE 1)	ZENER TEST CURRENT I_{ZT}	Z_{ZT} @ I_{ZT} (NOTE 3)	Z_{Zk} @ 250μA (NOTE 3)	I_{ZM}	V_Z (reg) (NOTE 2)	MAX. REVERSE LEAKAGE CURRENT @250μA I_R @ V_R		N_D @250mA
	VOLTS	mA	OHMS	OHMS	mA	VOLTS	μA	VOLTS	μV/√Hz
CDLL6309	2.4	20	30	1200	177	1.0	100	1.0	1.0
CDLL6310	2.7	20	30	1300	157	1.0	60	1.0	1.0
CDLL6311	3.0	20	29	1400	141	1.0	30	1.0	1.0
CDLL6312	3.3	20	24	1400	128	1.0	5.0	1.0	1.0
CDLL6313	3.6	20	22	1400	117	1.0	3.0	1.0	1.0
CDLL6314	3.9	20	20	1700	108	1.0	2.0	1.0	1.0
CDLL6315	4.3	20	18	1400	99	0.9	2.0	1.0	1.0
CDLL6316	4.7	20	16	1500	90	0.5	5.0	1.5	1.0
CDLL6317	5.1	20	14	1300	83	0.4	5.0	2.0	1.0
CDLL6318	5.6	20	8.0	1200	76	0.4	5.0	2.5	2.0
CDLL6319	6.2	20	3.0	800	68	0.3	5.0	3.5	5.0
CDLL6320	6.8	20	3.0	400	63	0.35	2.0	4.0	5.0
CDLL6321	7.5	20	4.0	400	57	0.4	2.0	5.0	5.0
CDLL6322	8.2	20	5.0	400	52	0.4	1.0	6.0	20
CDLL6323	9.1	20	6.0	500	47	0.5	1.0	7.0	40
CDLL6324	10	20	6.0	500	43	0.5	1.0	8.0	80
CDLL6325	11	20	7.0	550	39	0.5	1.0	8.5	100
CDLL6326	12	20	7.0	550	35	0.55	1.0	9.0	100
CDLL6327	13	9.5	8.0	550	33	0.55	.05	9.9	100
CDLL6328	15	8.5	10	600	28	0.70	.05	11	100
CDLL6329	16	7.8	12	600	27	0.75	.05	12	100
CDLL6330	18	7.0	14	600	24	0.85	.05	14	100
CDLL6331	20	6.2	18	500	21	0.95	.05	15	100
CDLL6332	22	5.6	20	500	19	1.05	.05	17	100
CDLL6333	24	5.2	24	500	18	1.15	.05	18	100
CDLL6334	27	4.6	27	500	16	1.30	.05	21	100
CDLL6335	30	4.2	32	500	14	1.45	.05	23	100
CDLL6336	33	3.8	40	600	13	1.60	.05	25	100
CDLL6337	36	3.4	50	600	12	1.75	.05	27	100
CDLL6338	39	3.2	55	700	11	1.90	.05	30	100
CDLL6339	43	3.0	65	800	9.9	2.10	.05	33	80
CDLL6340	47	2.7	75	900	9.0	2.25	.05	36	80
CDLL6341	51	2.5	85	1000	8.3	2.50	.05	39	80
CDLL6342	56	2.2	100	1200	7.6	2.70	.05	43	80
CDLL6343	62	2.0	125	1300	6.8	2.90	.05	47	80
CDLL6344	68	1.8	155	1500	6.3	3.20	.05	52	80
CDLL6345	75	1.7	180	1600	5.7	3.40	.05	56	80
CDLL6346	82	1.5	220	1800	5.2	3.80	.05	62	80
CDLL6347	91	1.4	270	2100	4.7	4.20	.05	69	80
CDLL6348	100	1.3	340	2400	4.3	4.40	.05	76	80
CDLL6349	110	1.1	500	2800	3.9	4.80	.05	84	80

NOTE 1 The JEDEC 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 at an ambient temperature of 25°C ± 3°C. "C" suffix = ± 2% and "D" suffix = ± 1%.

NOTE 2 Vz REG = Vz @ 50% of I zm minus Vz @ 10% of I zm.

NOTE 3 Zener impedance is derived by superimposing on 1_{ZT} A 60Hz rms a.c. current equal to 10% of 1_{ZT} or 1_{Zk}.



DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES 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

THERMAL RESISTANCE: Junction to End Cap = 100 °C/W maximum

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

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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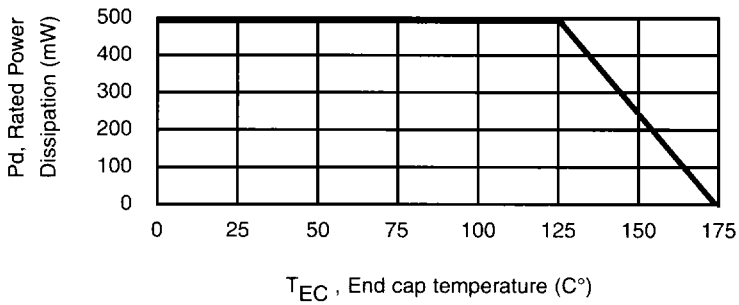
FIGURE 2



POWER DERATING CURVE

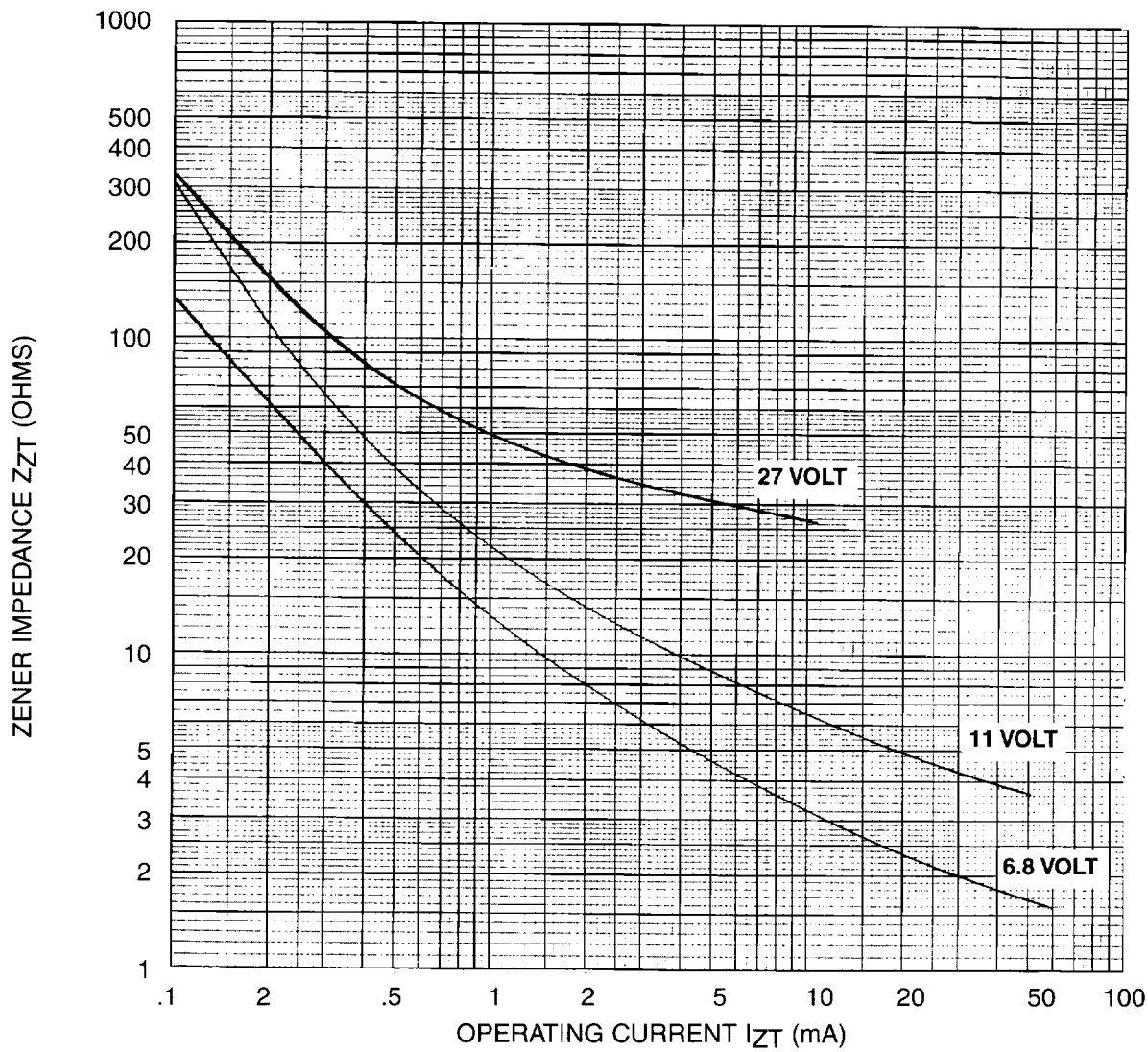


FIGURE 3

ZENER IMPEDANCE VS. OPERATING CURRENT