

- ZENER DIODE CHIPS
- ALL JUNCTIONS COMPLETELY PROTECTED WITH SILICON DIOXIDE
- LOW REVERSE LEAKAGE CHARACTERISTICS
- LOW NOISE CHARACTERISTICS
- ELECTRONICALLY EQUIVALENT TO 1N6309 THRU 1N6349
- COMPATIBLE WITH ALL WIRE BONDING AND DIE ATTACH TECHNIQUES

CD6309
thru
CD6349

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C
Storage Temperature: -65°C to +175°C
Forward Voltage @ 200mA: 1.1 volts maximum

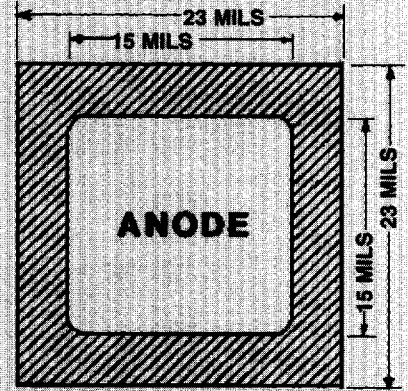
ELECTRICAL CHARACTERISTICS @ 25°C

CDI TYPE NUMBER	NOMINAL ZENER VOLTAGE (NOTE 1)	ZENER TEST CURRENT I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{Zk} @ 250μ A	I _{ZM}	V _Z (reg) (NOTE 2)	MAX. REVERSE LEAKAGE CURRENT @250μ A I _R @ V _R		N _D @250mA
			OHMS (NOTE 3)	OHMS (NOTE 3)			μ A	VOLTS	
CD6309	2.4	20	30	1200	177	1.0	100	1.0	1.0
CD6310	2.7	20	30	1300	157	1.0	60	1.0	1.0
CD6311	3.0	20	29	1400	141	1.0	30	1.0	1.0
CD6312	3.3	20	24	1400	128	1.0	5.0	1.0	1.0
CD6313	3.6	20	22	1400	109	1.0	3.0	1.0	1.0
CD6314	3.9	20	20	1700	118	1.0	2.0	1.0	1.0
CD6315	4.3	20	18	1400	99	0.9	2.0	1.0	1.0
CD6316	4.7	20	16	1500	90	0.5	5.0	1.5	1.0
CD6317	5.1	20	14	1300	83	0.4	5.0	2.0	1.0
CD6318	5.6	20	8.0	1200	76	0.4	5.0	2.5	2.0
CD6319	6.2	20	3.0	800	68	0.3	5.0	3.5	5.0
CD6320	6.8	20	3.0	400	63	0.35	2.0	4.0	5.0
CD6321	7.5	20	4.0	400	57	0.4	2.0	5.0	5.0
CD6322	8.2	20	5.0	400	52	0.4	1.0	6.0	20
CD6323	9.1	20	6.0	500	47	0.5	1.0	7.0	40
CD6324	10	20	6.0	500	43	0.5	1.0	8.0	80
CD6325	11	20	7.0	550	39	0.5	1.0	8.5	100
CD6326	12	20	7.0	550	35	0.55	1.0	9.0	100
CD6327	13	9.5	8.0	550	33	0.55	.05	9.9	100
CD6328	15	8.5	10	600	28	0.70	.05	11	100
CD6329	16	7.8	12	600	27	0.75	.05	12	100
CD6330	18	7.0	14	600	24	0.85	.05	14	100
CD6331	20	6.2	18	500	21	0.95	.05	15	100
CD6332	22	5.6	20	500	19	1.05	.05	17	100
CD6333	24	5.2	24	500	18	1.15	.05	18	100
CD6334	27	4.6	27	500	16	1.30	.05	21	100
CD6335	30	4.2	32	500	14	1.45	.05	23	100
CD6336	33	3.8	40	600	13	1.60	.05	25	100
CD6337	36	3.4	50	600	12	1.75	.05	27	100
CD6338	39	3.2	55	700	11	1.90	.05	30	100
CD6339	43	3.0	65	800	9.9	2.10	.05	33	80
CD6340	47	2.7	75	900	9.0	2.25	.05	36	80
CD6341	51	2.5	85	1000	8.3	2.50	.05	39	80
CD6342	56	2.2	100	1200	7.6	2.70	.05	43	80
CD6343	62	2.0	125	1300	6.8	2.90	.05	47	80
CD6344	68	1.8	155	1500	6.3	3.20	.05	52	80
CD6345	75	1.7	180	1600	5.7	3.40	.05	56	80
CD6346	82	1.5	220	1800	5.2	3.80	.05	62	80
CD6347	91	1.4	270	2100	4.7	4.20	.05	69	80
CD6348	100	1.3	340	2400	4.3	4.40	.05	76	80
CD6349	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. Suffix "C" signifies ± 2%, suffix "D" signifies ± 1% tolerance.

NOTE 2 V_Z REG = V_Z @ 50% of I_{ZM} minus V_Z @ 10% of I_{ZM}.

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



BACKSIDE IS CATHODE
FIGURE 1

DESIGN DATA

METALLIZATION:

Top: (Anode).....Al
Back: (Cathode).....Au

AL THICKNESS.....25,000 Å Min

GOLD THICKNESS.....4,000 Å Min

CHIP THICKNESS.....10 Mils

TOLERANCES: ALL
Dimensions ± 2 mils



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CDLL6309 thru CDLL6349

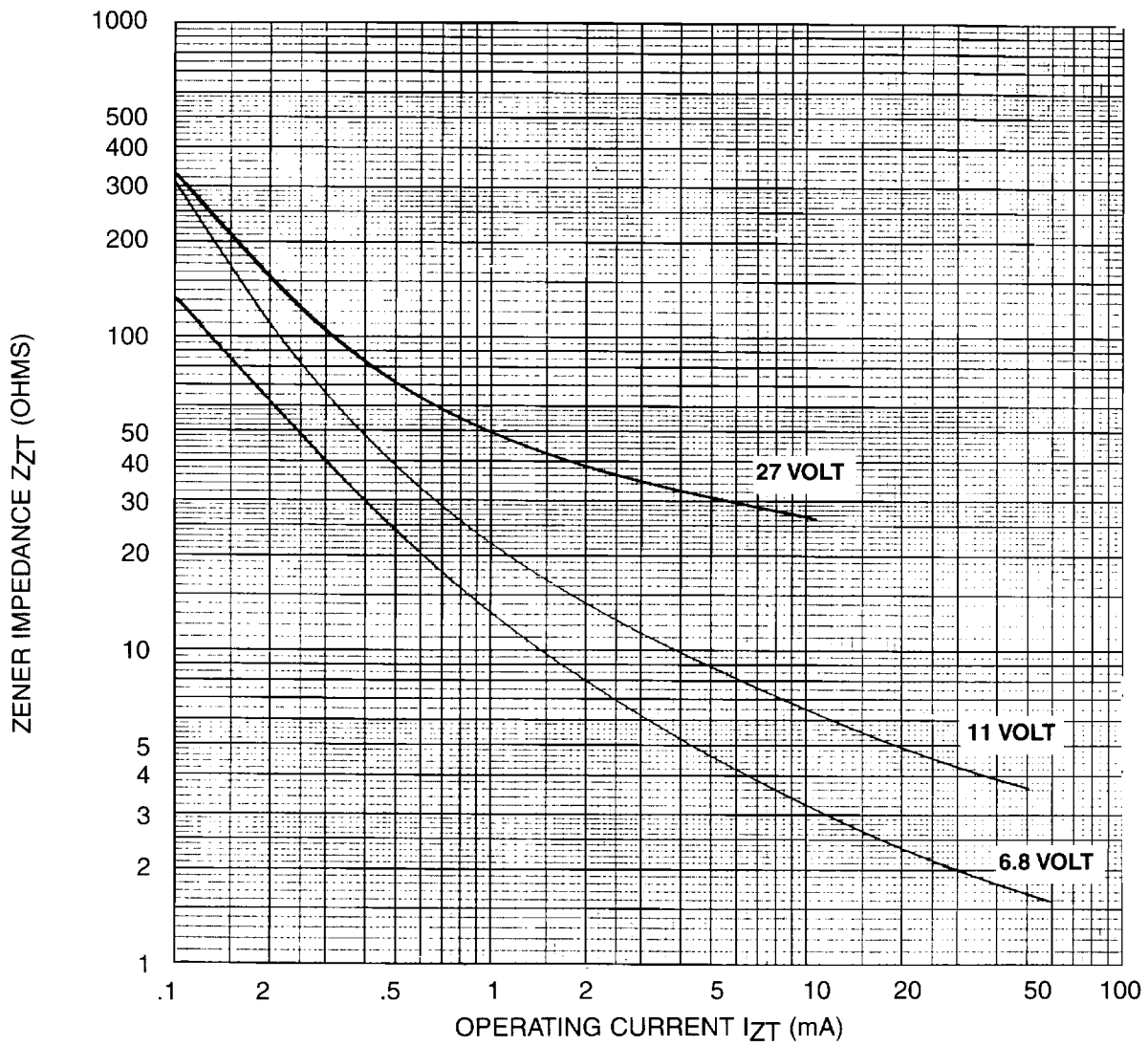


FIGURE 3
ZENER IMPEDANCE VS. OPERATING CURRENT