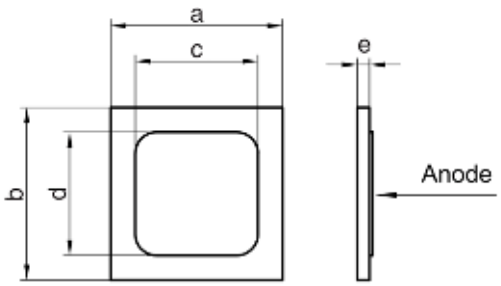
DATA SHEET Rev: B

Small Signal Zener Diodes
Wire Bondable, Epoxy Attach Bare Die



a = .013 in b = .013 in c = .006 in
d = .006 in e = .007 in

FEATURES

- Wafer fab by Vishay Semiconductor
- Silicon planar Zener diode

MECHANICAL DATA

Top Metal (Anode)	AlSi
Back Metal (Cathode)	AuSb
Passivation	Nitride

THERMAL CHARACTERISTICS

Parameter:	Symbol:	Value:	Unit
Junction Temperature (max)	T_J	+175	°C
Operating Temperature Range	T_{OP}	-55 to +175	°C
Storage Temperature Range	T_S	-55 to +175	°C

DEVICE CODE

1N6310	C	E	B	D
Base Part Number	Tolerance (%V_Z)	Bottom Side Attach Method	Top Side Connection Method	Form
1N6309 – 1N6345	"No suffix" = 5% "C" = 2%	Epoxy Die Attach	Wire Bondable	D = Die

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ELECTRICAL CHARACTERISTICS (T_{amb} = +25 °C unless otherwise noted.)

Part Number	V_Z @ I_{Z2}	V_Z @ I_{Z1} 250uA	I_{Z2}	Z_Z @ I_{Z2}	Z_{ZK} @ 250uA	I_{ZM}	V_Z (reg) ΔVZ	I_{ZM} Surge	V_R	I_{R1} @ +25°C	I_{R2} @ +150°C	N_D @ 250uA 1 – 3 kHZ	άV_Z	C @ 0V
	(Volts)	(Volts)	(mA)	(Ω)	(Ω)	(mA)	(Volts)	(Amps)	(Volts)	(uA)	(uA)	(uV/√Hz)	(%/°C)	(pF)
1N6309	2.4	1.1	20	30	1200	177	1.6	2.5	1	100	200	1	-0.085	2000
1N6310	2.7	1.2	20	30	1300	157	1.6	2.2	1	60	150	1	-0.080	1900
1N6311	3.0	1.3	20	29	1400	141	1.6	2.0	1	30	100	1	-0.075	1800
1N6312	3.3	1.5	20	24	1400	128	1.6	1.8	1	5	20	1	-0.065	1650
1N6313	3.6	1.8	20	22	1400	109	1.6	1.65	1	3	12	1	-0.055 +0.020	1600
1N6314	3.9	2.0	20	20	1700	118	1.6	1.5	1	2	12	1	-0.043 +0.025	1400
1N6315	4.3	2.4	20	18	1400	99	0.9	1.4	1	2	12	1	-0.030 +0.030	1350
1N6316	4.7	2.8	20	16	1500	90	0.5	1.27	1.5	5	12	1	-0.028 +0.032	1300
1N6317	5.1	3.3	20	14	1300	83	0.4	1.17	2	5	12	1	+0.045	1200
1N6318	5.6	4.3	20	8	1200	76	0.4	1.10	2.5	5	10	2	+0.050	1150
1N6319	6.2	5.2	20	3	800	68	0.3	0.97	3.5	5	10	5	0.060	1050
1N6320	6.8	6.0	20	3	400	63	0.35	1.23	4	2	10	5	0.062	1000
1N6321	7.5	6.6	20	4	400	57	0.4	1.16	5	2	10	5	0.068	900
1N6322	8.2	7.5	20	5	400	52	0.4	1.07	6	1	10	20	0.075	800
1N6323	9.1	8.4	20	6	500	47	0.5	0.97	7	1	10	40	0.076	700
1N6324	10	9.1	20	6	500	43	0.5	0.89	8	1	10	80	0.079	600
1N6325	11	10	20	7	550	39	0.5	0.83	8.5	1	10	100	0.082	500
1N6326	12	11	20	7	550	35	0.55	0.77	9	1	10	100	0.083	425
1N6327	13	11.9	95	8	550	33	0.55	0.71	9.9	0.5	10	100	0.079	400
1N6328	15	13.8	8.5	10	600	28	0.7	0.62	11	0.5	10	100	0.082	350
1N6329	16	14.7	7.8	12	600	27	0.75	0.58	12	0.5	10	100	0.083	325
1N6330	18	16.6	7.0	14	600	24	0.85	0.52	14	0.5	10	100	0.085	300
1N6331	20	18.5	6.2	18	500	21	0.95	0.47	15	0.5	10	100	0.086	275
1N6332	22	20.4	5.6	20	500	19	1.05	0.43	17	0.5	10	100	0.087	260
1N6333	24	22.3	5.2	24	500	18	1.15	0.39	18	0.5	10	100	0.088	240
1N6334	27	25.2	4.6	27	500	16	1.30	0.35	21	0.5	10	100	0.090	220
1N6335	30	28.0	4.2	32	500	14	1.45	0.31	23	0.5	10	100	0.091	200
1N6336	33	30.9	3.8	40	600	13	1.60	0.28	25	0.5	10	100	0.092	185
1N6337	36	33.7	3.4	50	600	12	1.75	0.26	27	0.5	10	100	0.093	175
1N6338	39	36.6	3.2	55	700	11	1.90	0.24	30	0.5	10	100	0.094	170
1N6339	43	40.4	3.0	65	800	9.9	2.10	0.22	33	0.5	10	80	0.095	165
1N6340	47	44.2	2.7	75	900	9	2.25	0.20	36	0.5	10	80	0.095	155
1N6341	51	48	2.5	85	1000	8.3	2.50	0.18	39	0.5	10	80	0.096	145
1N6342	56	52.7	2.2	100	1200	7.6	2.70	0.17	43	0.5	10	80	0.097	135
1N6343	62	58.4	2.0	125	1300	6.8	2.90	0.15	47	0.5	10	80	0.097	130
1N6344	68	64.1	1.8	155	1500	6.3	3.20	0.13	52	0.5	10	80	0.098	120
1N6345	75	70.8	1.7	180	1600	5.7	3.40	0.125	56	0.5	10	80	0.098	110

Note – Add “C” Suffix for +/-2% Tolerance