



semitron hot line

T-11-09
T-11-11

TOLL FREE NUMBER 800-777-3960

silicon voltage reference diodes

temperature compensated
200 milliwatt

Type	Nom. Zener Voltage, Vz (volts)	Dynamic Impedance, Zz (ohms)	Zener Current, Iz (mA)	Temp. Coefficient (% per °C)	Temp. Range (°C)	Case Style
1N429	6.2	20	7	± .01	-55/+100	C-1
1N1735	6.2	20	—	± .01	-55/+100	A-27h

250 milliwatt

1N430	8.4	15	10	±0.002	-55/+100	S-20
1N430A	8.4	15	10	±0.001	-55/+100	S-20
1N821	6.2	15	7.5	±0.01	-55/+100	D0-7
1N821A	6.2	10	7.5	±0.01	-55/+100	D0-7
1N823	6.2	15	7.5	±0.005	-55/+100	D0-7
1N823A	6.2	10	7.5	±0.005	-55/+100	D0-7
1N824	6.2	15	7.5	±0.005	-55/+100	D0-7
1N825	6.2	15	7.5	±0.002	-55/+100	D0-7
1N825A	6.2	10	7.5	±0.002	-55/+100	D0-7
1N827	6.2	15	7.5	±0.001	-55/+100	D0-7
1N827A	6.2	10	7.5	±0.001	-55/+100	D0-7
1N829	6.2	15	7.5	±0.0005	-55/+100	D0-7
1N829A	6.2	10	7.5	±0.0005	-55/+100	D0-7
1N2765	6.8	20	7.5	±0.005	-55/+100	A-48c
1N2765A	6.8	20	7.5	±0.002	-55/+100	A-48c
1N3496	6.2	15	7.5	±0.005	0/+75	D0-7
1N3497	6.2	15	7.5	±0.002	0/+75	D0-7
1N3498	6.2	15	7.5	±0.001	0/+75	D0-7
1N3499	6.2	15	7.5	±0.0005	0/+75	D0-7
1N3500	6.2	15	7.5	±0.01	0/+75	D0-7
1N3553	6.3	15	7.5	±0.0001	-55/+100	D0-7
1N4770	9.1	200	1.0	±0.01	0/+75	D0-7
1N4770A	9.1	200	1.0	±0.01	-55/+100	D0-7
1N4771	9.1	200	1.0	±0.005	0/+75	D0-7
1N4771A	9.1	200	1.0	±0.005	-55/+100	D0-7
1N4772	9.1	200	1.0	±0.002	0/+75	D0-7
1N4772A	9.1	200	1.0	±0.002	-55/+100	D0-7
1N4773	9.1	200	1.0	±0.001	0/+75	D0-7
1N4773A	9.1	200	1.0	±0.001	-55/+100	D0-7
1N4780	8.5	100	1.0	±0.01	0/+75	D0-7
1N4780A	8.5	100	1.0	±0.01	-55/+100	D0-7
1N4781	8.5	100	1.0	±0.005	0/+75	D0-7
1N4781A	8.5	100	1.0	±0.005	-55/+100	D0-7
1N4782	8.5	100	1.0	±0.002	0/+75	D0-7
1N4782A	8.5	100	1.0	±0.002	-55/+100	D0-7
1N4783	8.5	100	1.0	±0.001	0/+75	D0-7
1N4783A	8.5	100	1.0	±0.001	-55/+100	D0-7

400 milliwatt

1N1736	12.4	40	7.5	±0.01	-55/+100	A-28b
1N1736A	12.4	40	7.5	±0.005	-55/+100	A-28b
1N2766	13.6	40	7.5	±0.005	-55/+100	A-48c
1N2766A	13.6	40	7.5	±0.0025	-55/+100	A-48c
1N3154	8.4	15	10.0	±0.01	-55/+100	D0-7
1N3154A	8.4	15	10.0	±0.01	-55/+150	D0-7
1N3155	8.4	15	10.0	±0.005	-55/+100	D0-7
1N3155A	8.4	15	10.0	±0.005	-55/+150	D0-7
1N3156	8.4	15	10.0	±0.002	-55/+100	D0-7
1N3157	8.4	15	10.0	±0.001	-55/+100	D0-7
1N3157A	8.4	15	10.0	±0.001	-55/+150	D0-7
1N4295	10	20	10	±0.012	-55/+150	A-97
1N4295A	10	20	10	±0.012	-55/+100	A-97
1N4570	6.4	100	1.0	±0.01	0/+75	D0-7
1N4570A	6.4	100	1.0	±0.01	-55/+100	D0-7
1N4571	6.4	100	1.0	±0.005	0/+75	D0-7
1N4571A	6.4	100	1.0	±0.005	-55/+100	D0-7
1N4572	6.4	100	1.0	±0.002	0/+75	D0-7
1N4572A	6.4	100	1.0	±0.002	-55/+100	D0-7
1N4573	6.4	100	1.0	±0.001	0/+75	D0-7
1N4573A	6.4	100	1.0	±0.001	-55/+100	D0-7

500 milliwatt

Type	Nom. Zener Voltage, Vz (volts)	Dynamic Impedance, Zz (ohms)	Zener Current, Iz (mA)	Temp. Coefficient (% per °C)	Temp. Range (°C)	Case Style
1N935	9.0	20	7.5	± .01	0/+75	D0-7
1N935A	9.0	20	7.5	± .01	-55/+100	D0-7
1N935B	9.0	20	7.5	± .01	-55/+150	D0-7
1N936	9.0	20	7.5	± .005	0/+75	D0-7
1N936A	9.0	20	7.5	± .005	-55/+100	D0-7
1N936B	9.0	20	7.5	± .005	-55/+150	D0-7
1N937	9.0	20	7.5	± .002	0/+75	D0-7
1N937A	9.0	20	7.5	± .002	-55/+100	D0-7
1N937B	9.0	20	7.5	± .002	-55/+150	D0-7
1N938	9.0	20	7.5	± .001	0/+75	D0-7
1N938A	9.0	20	7.5	± .001	-55/+100	D0-7
1N938B	9.0	20	7.5	± .001	-55/+150	D0-7
1N939	9.0	20	7.5	± .0005	0/+75	D0-7
1N939A	9.0	20	7.5	± .0005	-55/+100	D0-7
1N939B	9.0	20	7.5	± .0005	-55/+150	D0-7
1N940	9.0	20	7.5	± .0002	0/+75	D0-7
1N940A	9.0	20	7.5	± .0002	-55/+100	D0-7
1N940B	9.0	20	7.5	± .0002	-55/+150	D0-7
1N941	11.7	30	7.5	±0.01	0/+75	D0-7
1N941A	11.7	30	7.5	±0.01	-55/+100	D0-7
1N941B	11.7	30	7.5	±0.01	-55/+150	D0-7
1N942	11.7	30	7.5	±0.005	0/+75	D0-7
1N942A	11.7	30	7.5	±0.005	-55/+100	D0-7
1N942B	11.7	30	7.5	±0.005	-55/+150	D0-7
1N943	11.7	30	7.5	±0.002	0/+75	D0-7
1N943A	11.7	30	7.5	±0.002	-55/+100	D0-7
1N943B	11.7	30	7.5	±0.002	-55/+150	D0-7
1N944	11.7	30	7.5	±0.001	0/+75	D0-7
1N944A	11.7	30	7.5	±0.001	-55/+100	D0-7
1N944B	11.7	30	7.5	±0.001	-55/+150	D0-7
1N945	11.7	30	7.5	±0.0005	0/+75	D0-7
1N945A	11.7	30	7.5	±0.0005	-55/+100	D0-7
1N945B	11.7	30	7.5	±0.0005	-55/+150	D0-7
1N946	11.7	30	7.5	±0.0002	0/+75	D0-7
1N946A	11.7	30	7.5	±0.0002	-55/+100	D0-7
1N946B	11.7	30	7.5	±0.0002	-55/+150	D0-7

750 milliwatt

1N2163	9.4	15	10	0.005	0/+70	D0-13
1N2163A	9.4	15	10	0.005	0/+70	D0-13
1N2164	9.4	15	10	0.005	55/+125	D0-13
1N2164A	9.4	15	10	0.005	55/+125	D0-13
1N2165	9.4	15	10	0.005	-55/+185	D0-13
1N2165A	9.4	15	10	0.005	-55/+185	D0-13
1N2166	9.4	15	10	0.001	0/+70	D0-13
1N2166A	9.4	15	10	0.001	0/+70	D0-13
1N2167	9.4	15	10	0.001	-55/+125	D0-13
1N2167A	9.4	15	10	0.001	-55/+125	D0-13
1N2168	9.4	15	10	0.001	-55/+185	D0-13
1N2168A	9.4	15	10	0.001	-55/+185	D0-13
1N2169	9.4	15	10	0.005	0/+70	D0-13
1N2169A	9.4	15	10	0.005	0/+70	D0-13
1N2170	9.4	15	10	0.005	-55/+125	D0-13
1N2170A	9.4	15	10	0.005	-55/+125	D0-13
1N2171	9.4	15	10	0.005	-55/+185	D0-13
1N2171A	9.4	15	10	0.005	-55/+185	D0-13
1N2620	9.3	15	10	0.01	0/+75	D0-13
1N2620A	9.3	15	10	0.01	-55/+100	D0-13
1N2620B	9.3	15	10	0.01	-55/+150	D0-13
1N2621	9.3	15	10	0.005	0/+75	D0-13
1N2621A	9.3	15	10	0.005	-55/+100	D0-13
1N2621B	9.3	15	10	0.005	-55/+150	D0-13
1N2622	9.3	15	10	0.002	0/+75	D0-13
1N2622A	9.3	15	10	0.002	-55/+100	D0-13
1N2622B	9.3	15	10	0.002	-55/+150	D0-13
1N2623	9.3	15	10	0.001	0/+75	D0-13
1N2623A	9.3	15	10	0.001	-55/+100	D0-13
1N2623B	9.3	15	10	0.001	-55/+150	D0-13
1N2624	9.3	15	10	0.0005	0/+75	D0-13
1N2624A	9.3	15	10	0.0005	-55/+100	D0-13
1N2624B	9.3	15	10	0.0005	-55/+150	D0-13
1N3580	11.7	25	7.5	0.01	0/+75	D0-13
1N3580A	11.7	25	7.5	0.01	-55/+100	D0-13

Semitronics Corp.

INTEX/ SEMITRONICS CORP

silicon zener diodes

T-11-09

NOTES: The following notes explain variations in the standard type numbers listed for Silicon Zener Diodes. "Note" numbers are inserted above type numbers in the "Type" column. A note number then pertains to all types which follow it, up to that point where another note number is inserted and takes effect for subsequent types.

1. Standard tolerances of 5.0% and 10% are available — no suffix is $\pm 10\%$ tolerance; suffix "A" denotes $\pm 5\%$ tolerance.
2. Standard tolerance of $\pm 5\%$.
3. Standard tolerance of $\pm 20\%$.
4. Standard tolerances of 5.0%, 10%, and 20% are available — no suffix is 20% tolerance; suffix "A" denotes $\pm 10\%$ tolerance; suffix "B" is $\pm 5\%$ tolerance.
5. Reverse polarity types available; add suffix "R."
6. Standard tolerances of 1.0%, 5.0% and 10% are available — no suffix is $\pm 10\%$; suffix "A" denotes $\pm 5\%$ tolerance; suffix "B" is $\pm 1\%$.
7. Standard tolerance of $\pm 15\%$.
8. Impedance is derived from the 60 cycle AC voltage which results when an AC current having an RMS value equal to 10% of the DC Zener current is superimposed upon the DC current.
9. Standard tolerance of $\pm 10\%$.
10. Standard types are $\pm 10\%$ tolerance; suffix "A" denotes $\pm 5\%$ tolerance; suffix "C" denotes $\pm 10\%$ clipper; suffix "CA" denotes $\pm 5\%$ clipper.

400 milliwatt

(Note 1)										
1N702	2.0/3.2	60	10	75	1.0	—	—	—	—	DO-7
1N703	3.0/3.9	55	10	50	1.0	—	—	—	—	DO-7
1N704	3.7/4.5	45	10	5	1.0	—	—	—	—	DO-7
1N705	4.3/5.4	35	10	5	1.5	—	—	—	—	DO-7
1N706	5.2/6.4	20	10	5	1.5	—	—	—	—	DO-7
1N707	6.2/8.0	10	10	5	3.5	—	—	—	—	DO-7
1N708	5.6	2.6	25	5	3.5	—	—	—	—	DO-7
1N709	6.2	4.1	25	5	3.5	—	—	—	—	DO-7
1N710	6.8	4.7	25	5	3.5	—	—	—	—	DO-7
1N711	7.5	5.3	25	5	3.5	—	—	—	—	DO-7
1N712	8.2	6.0	25	5	3.5	—	—	—	—	DO-7
1N713	9.1	7.0	12	5	3.5	—	—	—	—	DO-7
1N714	10.0	8.0	12	5	8.0	—	—	—	—	DO-7
1N715	11.0	9.0	12	5	8.0	—	—	—	—	DO-7
1N716	12.0	10.0	12	5	9.0	—	—	—	—	DO-7
1N717	13.0	11.0	12	—	—	—	—	—	—	DO-7
1N718	15.0	13.0	12	—	—	—	—	—	—	DO-7
1N719	16.0	15.0	12	—	—	—	—	—	—	DO-7
1N720	18.0	17.0	12	—	—	—	—	—	—	DO-7
1N721	20.0	20.0	4	—	—	—	—	—	—	DO-7
1N722	22.0	24.0	4	—	—	—	—	—	—	DO-7
1N723	24.0	28.0	4	—	—	—	—	—	—	DO-7
1N724	27.0	35.0	4	—	—	—	—	—	—	DO-7
1N725	30.0	42.0	4	—	—	—	—	—	—	DO-7
1N726	33.0	50.0	4	—	—	—	—	—	—	DO-7
1N727	36.0	60.0	4	—	—	—	—	—	—	DO-7
1N728	39.0	70.0	4	—	—	—	—	—	—	DO-7
1N729	43.0	84.0	4	—	—	—	—	—	—	DO-7
1N730	47.0	98.0	4	—	—	—	—	—	—	DO-7
1N731	51.0	115	4	—	—	—	—	—	—	DO-7
1N732	56.0	140	4	—	—	—	—	—	—	DO-7
1N733	62.0	170	2	—	—	—	—	—	—	DO-7
1N734	68.0	200	2	—	—	—	—	—	—	DO-7
1N735	75.0	240	2	—	—	—	—	—	—	DO-7
1N736	82.0	280	2	—	—	—	—	—	—	DO-7
1N737	91.0	340	1	—	—	—	—	—	—	DO-7
1N738	100	400	1	—	—	—	—	—	—	DO-7
1N739	110	490	1	—	—	—	—	—	—	DO-7
1N740	120	570	1	—	—	—	—	—	—	DO-7
1N741	130	650	1	—	—	—	—	—	—	DO-7
1N742	150	860	1	—	—	—	—	—	—	DO-7
1N743	160	970	1	—	—	—	—	—	—	DO-7
1N744	180	1200	1	—	—	—	—	—	—	DO-7
1N745	200	1400	1	—	—	—	—	—	—	DO-7
1N746	3.3	28	20	10	1.0	1.0	100	—	—	DO-7

(Note 1)										
1N747	3.6	24	20	10	1.0	1.0	100	—	—	DO-7
1N748	3.9	23	20	10	1.0	1.0	100	—	—	DO-7
1N749	4.3	22	20	2	1.0	1.0	100	—	—	DO-7
1N750	4.7	19	20	2	1.0	1.0	100	—	—	DO-7
1N751	5.1	17	20	1	1.0	1.0	100	—	—	DO-7
1N752	5.6	11	20	1	1.0	1.0	100	—	—	DO-7
1N753	6.2	7	20	0.1	1.0	1.0	100	—	—	DO-7
1N754	6.8	5	20	0.1	1.0	1.0	100	—	—	DO-7
1N755	7.5	6	20	0.1	1.0	1.0	100	—	—	DO-7
1N756	8.2	8	20	0.1	1.0	1.0	100	—	—	DO-7
1N757	9.1	10	20	0.1	1.0	1.0	100	—	—	DO-7
1N758	10.0	17	20	0.1	1.0	1.0	100	—	—	DO-7
1N759	12.0	30	20	0.1	1.0	1.0	100	—	—	DO-7
1N761, A	4.3/5.4	40	10	—	—	—	—	—	—	DO-7
1N762, A	5.2/6.4	18	10	—	—	—	—	—	—	DO-7
1N763, A	6.2/8.0	7	10	—	—	—	—	—	—	DO-7
1N763-3	7.5	7	10	—	—	—	—	—	—	DO-7
1N764, A	7.5/10.0	12	10	—	—	—	—	—	—	DO-7
1N765, A	9.0/12.0	45	5	—	—	—	—	—	—	DO-7
1N766, A	11.0/14.5	55	5	—	—	—	—	—	—	DO-7
1N767, A	13.5/18.0	70	5	—	—	—	—	—	—	DO-7
1N768, A	17/21	100	5	—	—	—	—	—	—	DO-7
1N769, A	20/27	150	5	—	—	—	—	—	—	DO-7
(Note 4)										
1N957	6.8	4.5	18.5	150	4.9	1.5	200	—	—	DO-7
1N958	7.5	5.5	16.5	75	5.4	1.5	200	—	—	DO-7
1N959	8.2	6.5	15.0	50	5.9	1.5	200	—	—	DO-7
1N960	9.1	7.5	14.0	25	6.6	1.5	200	—	—	DO-7
1N961	10.0	8.5	12.5	10	7.2	1.5	200	—	—	DO-7
1N962	11.0	9.5	11.5	5	8.0	1.5	200	—	—	DO-7
1N963	12.0	11.5	10.5	5	8.6	1.5	200	—	—	DO-7
1N964	13.0	13.0	9.5	5	9.4	1.5	200	—	—	DO-7
1N965	15.0	16.0	8.5	5	10.8	1.5	200	—	—	DO-7
1N966	16.0	17.0	7.8	5	11.5	1.5	200	—	—	DO-7
1N967	18.0	21.0	7.0	5	13.0	1.5	200	—	—	DO-7
1N968	20.0	25.0	6.2	5	14.4	1.5	200	—	—	DO-7
1N969	22.0	29.0	5.6	5	15.8	1.5	200	—	—	DO-7
1N970	24.0	33.0	5.2	5	17.3	1.5	200	—	—	DO-7
1N971	27.0	41.0	4.6	5	19.4	1.5	200	—	—	DO-7
1N972	30.0	49.0	4.2	5	21.6	1.5	200	—	—	DO-7
1N973	33.0	58.0	3.8	5	23.8	1.5	200	—	—	DO-7
1N974	36.0	70.0	3.4	5	25.9	1.5	200	—	—	DO-7
1N975	39.0	80.0	3.2	5	28.1	1.5	200	—	—	DO-7
1N976	43.0	93.0	3.0	5	31.0	1.5	200	—	—	DO-7
1N977	47.0	105.0	2.7	5	33.8	1.5	200	—	—	DO-7



T-11-09

TOLL FREE NUMBER 800-777-3960

INTEX/ SEMITRONICS CORP

27E D

silicon zener diodes cont'd

T-11-11

400 milliwatt — (cont'd)

Table with 9 columns: Type, Zener Vz (volts), Dynamic Impedance Zz (ohms), Zener Current Iz (mA), Reverse Current (uA), Reverse Voltage (volts), Max. Forward Voltage (volts), Forward Current (mA), Case Style. Rows include 1N978-1N986 and 1N982-1N986.

Table with 9 columns: Type, Zener Vz (volts), Dynamic Impedance Zz (ohms), Zener Current Iz (mA), Reverse Current (uA), Reverse Voltage (volts), Max. Forward Voltage (volts), Forward Current (mA), Case Style. Rows include 1N987-1N992 and 1N4370-1N4372.

500 milliwatt

Table with 5 columns: Type, Zener Voltage Vz (volts), Dynamic Resistance Zz (ohms), Zener Current Iz (mA), Case Style. Rows include 1N5221-1N5225, 1N5226-1N5230, 1N5231-1N5235, 1N5236-1N5240, 1N5241-1N5245, 1N5246-1N5250.

Table with 5 columns: Type, Zener Voltage Vz (volts), Dynamic Impedance Zz (ohms), Zener Current Iz (mA), Case Style. Rows include 1N5241-1N5253, 1N5256-1N5260, 1N5261-1N5265, 1N5266-1N5270, 1N5271-1N5275, 1N5276-1N5281.

1 watt

Table with 5 columns: Type, Zener Voltage Vz (volts), Dynamic Resistance R0 (ohms), Zener Current Iz (mA), Case Style. Rows include 1N3016-1N3018, 1N3019-1N3023, 1N3024-1N3028, 1N3029-1N3033, 1N3034-1N3038.

Table with 5 columns: Type, Zener Voltage Vz (volts), Dynamic Resistance R0 (ohms), Zener Current Iz (mA), Case Style. Rows include 1N3039-1N3043, 1N3044-1N3048, 1N3049-1N3051, 1N4728-1N4729, 1N4730-1N4734, 1N4735-1N4739.

Table with 5 columns: Type, Zener Voltage Vz (volts), Dynamic Resistance R0 (ohms), Zener Current Iz (mA), Case Style. Rows include 1N4740-1N4744, 1N4745-1N4749, 1N4750-1N4754, 1N4755-1N4759, 1N4760-1N4764.

silicon zener diodes cont'd

5 watt DO-27 case style

T-11-15
 T-11-17

JEDOC TYPE NUMBER	NOMINAL ZENER VOLTAGE Vz VOLTS	TEST CURRENT Izt mA	MAXIMUM ZENER IMPEDANCE A & B SUFFIX ONLY		
			Zzt @ Izt Ohms	Zzk @ Izk Ohms	Izk mA
(NOTE 4)					
1N5333	3.3	380	3.0	400	1.0
1N5334	3.6	350	2.5	500	1.0
1N5335	3.9	320	2.0	500	1.0
1N5336	4.3	290	2.0	500	1.0
1N5337	4.7	260	2.0	450	1.0
1N5338	5.1	240	1.5	400	1.0
1N5339	5.6	220	1.0	400	1.0
1N5340	6.0	200	1.0	300	1.0
1N5341	6.2	200	1.0	200	1.0
1N5342	6.8	175	1.0	200	1.0
1N5343	7.5	175	1.5	200	1.0
1N5344	8.2	150	1.5	200	1.0
1N5345	8.7	150	2.0	200	1.0
1N5346	9.1	150	2.0	150	1.0
1N5347	10	125	2.0	125	1.0
1N5348	11	125	2.5	125	1.0
1N5349	12	100	2.5	125	1.0
1N5350	13	100	2.5	100	1.0
1N5351	14	100	2.5	75	1.0
1N5352	15	75	2.5	75	1.0
1N5353	16	75	2.5	75	1.0
1N5354	17	70	2.5	75	1.0
1N5355	18	65	2.5	75	1.0
1N5356	19	65	3.0	75	1.0
1N5357	20	65	3.0	75	1.0
1N5358	22	50	3.5	75	1.0
1N5359	24	50	3.5	100	1.0
1N5360	25	50	4.0	110	1.0

JEDOC TYPE NUMBER	NOMINAL ZENER VOLTAGE Vz VOLTS	TEST CURRENT Izt mA	MAXIMUM ZENER IMPEDANCE A & B SUFFIX ONLY		
			Zzt @ Izt Ohms	Zzk @ Izk Ohms	Izk mA
(NOTE 4)					
1N5361	27	50	5.0	120	1.0
1N5362	28	50	6.0	130	1.0
1N5363	30	40	25.0	140	1.0
1N5364	33	40	27.0	150	1.0
1N5365	36	30	35.0	160	1.0
1N5366	39	30	40.0	170	1.0
1N5367	43	30	42.0	190	1.0
1N5368	47	25	25.0	210	1.0
1N5369	51	25	27.0	230	1.0
1N5370	56	20	35.0	280	1.0
1N5371	60	20	40.0	350	1.0
1N5372	62	20	42.0	400	1.0
1N5373	68	20	44.0	500	1.0
1N5374	75	20	45.0	620	1.0
1N5375	82	15	65.0	720	1.0
1N5376	87	15	75.0	760	1.0
1N5377	91	15	75.0	760	1.0
1N5378	100	12	90.0	800	1.0
1N5379	110	12	125.0	1000	1.0
1N5380	120	10	170.0	1150	1.0
1N5381	130	10	190.0	1250	1.0
1N5382	140	8.0	230.0	1500	1.0
1N5383	150	8.0	330.0	1500	1.0
1N5384	160	8.0	350.0	1650	1.0
1N5385	170	8.0	380.0	1750	1.0
1N5386	180	5.0	430.0	1750	1.0
1N5387	190	5.0	450.0	1850	1.0
1N5388	200	5.0	480.0	1850	1.0

10 watt DO-4 case style

Type	Zener Voltage Vz (volts)	Dynamic Resistance R _D (ohms) (Note 8)	Zener Current I _z (mA)	Case Style
(Notes 5, 9)				
1N1351	10	2	500	DO-4
1N1352	11	2	500	DO-4
1N1353	12	2	500	DO-4
1N1354	13	2	500	DO-4
1N1355	15	2	500	DO-4
1N1356	16	3	500	DO-4
1N1357	18	3	150	DO-4
1N1358	20	3	150	DO-4
1N1359	22	3	150	DO-4
1N1360	24	3	150	DO-4
1N1361	27	3	150	DO-4
1N1362	30	4	150	DO-4
1N1363	33	4	150	DO-4
1N1364	36	5	150	DO-4
1N1365	39	5	150	DO-4
1N1366	43	6	150	DO-4
1N1367	47	7	150	DO-4
1N1368	51	8	150	DO-4
1N1379	56	9	150	DO-4
1N1370	62	12	50	DO-4
(Notes 5, 9)				
1N1371	68	14	50	DO-4
1N1372	75	20	50	DO-4
1N1373	82	22	50	DO-4
1N1374	91	35	50	DO-4
1N1375	100	40	50	DO-4
(Notes 1, 5)				
1N1588	3.9	2.9	150	DO-4
1N1588A	3.9	2.9	150	DO-4
1N1589	4.7	2.5	125	DO-4
1N1589A	4.7	2.5	125	DO-4
1N1590	5.6	1.9	110	DO-4
1N1590A	5.6	1.5	110	DO-4
1N1591	6.8	0.87	100	DO-4
1N1591A	6.8	0.73	100	DO-4
1N1592	8.2	0.60	80	DO-4
1N1592A	8.2	0.55	80	DO-4
1N1593	10.0	1.05	70	DO-4
1N1593A	10.0	0.88	70	DO-4
1N1594	12.0	2.2	50	DO-4
1N1594A	12.0	1.9	50	DO-4

Type	Zener Voltage Vz (volts)	Dynamic Resistance R _D (ohms) (Note 8)	Zener Current I _z (mA)	Case Style
(Notes 1, 5)				
1N1595	15.0	5.1	40	DO-4
1N1595A	15.0	4.9	40	DO-4
1N1596	18.0	8.0	35	DO-4
1N1596A	18.0	7.1	35	DO-4
1N1597	22.0	12.0	30	DO-4
1N1597A	22.0	10.5	30	DO-4
1N1598	27.0	18.0	25	DO-4
1N1598A	27.0	17.0	25	DO-4
1N1599	3.9	0.96	500	DO-4
1N1599A	3.9	0.92	500	DO-4
1N1600	4.7	0.85	400	DO-4
1N1600A	4.7	0.77	400	DO-4
1N1601	5.6	0.55	350	DO-4
1N1601A	5.6	0.41	350	DO-4
1N1602	6.8	0.28	300	DO-4
1N1602A	6.8	0.22	300	DO-4
1N1603	8.2	0.36	250	DO-4
1N1603A	8.2	0.29	250	DO-4
1N1604	10.0	0.78	200	DO-4
1N1604A	10.0	0.71	200	DO-4
(Notes 1, 5)				
1N1605	12.0	1.12	170	DO-4
1N1605A	12.0	1.10	170	DO-4
1N1606	15.0	1.90	140	DO-4
1N1606A	15.0	1.90	140	DO-4
1N1607	18.0	2.60	110	DO-4
1N1607A	18.0	2.45	110	DO-4
1N1608	22.0	3.9	90	DO-4
1N1608A	22.0	3.6	90	DO-4
1N1609	27.0	6.6	70	DO-4
1N1609A	27.0	5.5	70	DO-4
1N1803	5.6	1.0	1000	DO-4
1N1804	6.2	1.0	1000	DO-4
1N1805	6.8	1.0	1000	DO-4
1N1806	7.5	1.0	1000	DO-4
1N1807	8.2	1.0	1000	DO-4
1N1808	9.1	1.0	500	DO-4
1N1809	110.0	47.0	50	DO-4
1N1810	120.0	56.0	50	DO-4
1N1811	130.0	65.0	50	DO-4

Type	Zener Voltage Vz (volts)	Dynamic Resistance R _D (ohms) (Note 8)	Zener Current I _z (mA)	Case Style
(NOTE 1.5)				
1N1812	150.0	82.0	50	DO-4
1N1813	160.0	93.0	50	DO-4
1N1814	180.0	115.0	50	DO-4
1N1815	200.0	140.0	50	DO-4
1N1816	13.0	2.0	500	DO-4
1N1817	15.0	2.0	500	DO-4
1N1818	16.0	3.0	500	DO-4
1N1819	18.0	3.0	500	DO-4
1N1820	20.0	3.0	250	DO-4
1N1821	22.0	3.0	250	DO-4
1N1822	24.0	3.0	250	DO-4
1N1823	27.0	3.0	250	DO-4
1N1824	30.0	4.0	250	DO-4
1N1825	33.0	4.0	150	DO-4
1N1826	36.0	5.0	150	DO-4
1N1827	39.0	5.0	150	DO-4
(Notes 1, 5)				
1N1828	43.0	6.0	150	DO-4
1N1829	47.0	7.0	150	DO-4
1N1830	51.0	8.0	150	DO-4
1N1831	56.0	9.0	150	DO-4
1N1832	62.0	12.0	50	DO-4
1N1833	68.0	14.0	50	DO-4
1N1834	75.0	20.0	50	DO-4
1N1835	82.0	22.0	50	DO-4
1N1836	91.0	35.0	50	DO-4
1N2008	100	40	50	DO-4
1N2009	110	47	50	DO-4
1N2010	120	56	50	DO-4
1N2011	130	65	50	DO-4
1N2041	4.8	1.0	1000	DO-4
1N2042	5.8	0.7	1000	DO-4
1N2043	7.1	0.8	1000	DO-4
1N2044	8.75	0.8	1000	DO-4
1N2045	10.5	1.5	500	DO-4
1N2046	12.75	2.0	500	DO-4
1N2047	15.75	3.0	500	DO-4
1N2048	19.0	3.0	500	DO-4
1N2049	23.5	8.0	150	DO-4

discrete devices

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semitron hot line

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silicon zener diodes cont'd

10 watt — cont'd.

Type	Zener Voltage Vz (volts)	Dynamic Resistance R _D (ohms) (Note 8)	Zener Current I _Z (mA)	Case Style
(Notes 2, 5)				
1N2041-1	4.5	1.0	1000	DO-4
1N2041-2	5.0	1.0	1000	DO-4
1N2042-1	5.5	0.7	1000	DO-4
1N2042-2	6.0	0.7	1000	DO-4
1N2043-1				
1N2043-2	6.5	0.8	1000	DO-4
1N2043-3	7.0	0.8	1000	DO-4
1N2043-4	7.5	0.8	1000	DO-4
1N2044-1	8.0	0.8	1000	DO-4
1N2044-2	8.5	0.8	1000	DO-4
1N2044-3				
1N2044-4	9.0	0.8	1000	DO-4
1N2044-5	9.5	0.8	1000	DO-4
1N2045-1	10.0	1.5	500	DO-4
1N2045-2	11.0	1.5	500	DO-4
1N2046-1	12.0	2.0	500	DO-4
1N2046-2				
1N2046-3	13.0	2.0	500	DO-4
1N2046-4	14.0	2.0	500	DO-4
1N2047-1	15.0	3.0	500	DO-4
1N2047-2	16.0	3.0	500	DO-4
1N2047-3	17.0	3.0	500	DO-4
1N2048-1				
1N2048-2	18.0	3.0	500	DO-4
1N2048-3	19.0	3.0	500	DO-4
1N2048-4	20.0	3.0	500	DO-4
1N2049-1	22.0	8.0	150	DO-4
1N2049-2	24.0	8.0	150	DO-4
1N2049-3				
1N2049-4	26.0	8.0	150	DO-4
(Note 10)				
1N2498	10	2.0	500	DO-4
1N2499	11	2.0	500	DO-4
1N2500	12	2.0	500	DO-4

Type	Zener Voltage Vz (volts)	Dynamic Resistance R _D (ohms) (Note 8)	Zener Current I _Z (mA)	Case Style
(Notes 4, 5)				
1N2970	6.8	1.2	370	DO-4
1N2971	7.5	1.3	335	DO-4
1N2972	8.2	1.5	305	DO-4
1N2973	9.1	2.0	275	DO-4
1N2974				
1N2975	10.0	3.0	250	DO-4
1N2976	11.0	3.0	230	DO-4
1N2977	12.0	3.0	210	DO-4
1N2978	13.0	3.0	190	DO-4
1N2979	14.0	3.0	180	DO-4
1N2979				
1N2980	15.0	3.0	170	DO-4
1N2981	16.0	4.0	155	DO-4
1N2982	17.0	4.0	145	DO-4
1N2983	18.0	4.0	140	DO-4
1N2984	19.0	4.0	130	DO-4
1N2984				
1N2985	20.0	4.0	125	DO-4
1N2986	22.0	5.0	115	DO-4
1N2987	24.0	5.0	105	DO-4
1N2988	25.0	6.0	100	DO-4
1N2988				
1N2989	27.0	7.0	95	DO-4
1N2990	30.0	8.0	85	DO-4
1N2991	33.0	9.0	75	DO-4
1N2992	36.0	10.0	70	DO-4
1N2993	39.0	11.0	65	DO-4
1N2993				
1N2994	43.0	12.0	60	DO-4
1N2995	45.0	13.0	55	DO-4
1N2996	47.0	14.0	55	DO-4
1N2997	50.0	15.0	50	DO-4
1N2998	51.0	15.0	50	DO-4

Type	Zener Voltage Vz (volts)	Dynamic Resistance R _D (ohms) (Note 8)	Zener Current I _Z (mA)	Case Style
(NOTE 4.5)				
1N2998	52.0	15.0	50	DO-4
1N2999	56.0	16.0	45	DO-4
1N3000	62.0	17.0	40	DO-4
1N3001	68.0	18.0	37	DO-4
1N3002	75.0	22.0	33	DO-4
(Notes 4, 5)				
1N3003	82.0	25.0	30	DO-4
1N3004	91.0	35.0	28	DO-4
1N3005	100	40.0	25	DO-4
1N3006	105	45.0	25	DO-4
1N3007				
1N3008	110	55.0	23	DO-4
1N3009	120	75.0	20	DO-4
1N3010	130	100	19	DO-4
1N3011	140	125	18	DO-4
1N3012	150	175	17	DO-4
1N3012				
1N3013	160	200	16	DO-4
1N3014	175	250	14	DO-4
1N3015	180	260	14	DO-4
1N3016	200	300	12	DO-4
(Notes 1, 5)				
1N3993	3.9	2.0	640	DO-4
1N3994				
1N3995	4.3	1.5	580	DO-4
1N3996	4.7	1.2	530	DO-4
1N3997	5.1	1.1	490	DO-4
1N3998	5.6	1.0	445	DO-4
1N3999	6.2	1.1	405	DO-4
1N3999				
1N4000	6.8	1.2	370	DO-4
1N4001	7.5	1.3	335	DO-4

50 watt (Dissipation Rated @ 75°C)

Flange Mounted (Case Style TO-3) Type	Stud Mounted (Case Style DO-5) Type	Nominal Zener Voltage, Vz (volts)	Zener Current I _Z (mA)	Dynamic Resistance (R _D) (ohms) (Note 8)
(Notes 4, 5)				
1N2804	1N3305	6.8	1850	0.2
1N2805	1N3306	7.5	1700	0.3
1N2806	1N3307	8.2	1500	0.4
1N2807	1N3308	9.1	1370	0.5
1N2808	1N3309	10	1200	0.6
1N2809				
1N2810	1N3310	11	1100	0.8
1N2811	1N3311	12	1000	1.0
1N2812	1N3312	13	960	1.1
1N2813	1N3313	14	890	1.2
1N2814	1N3314	15	830	1.4
1N2814				
1N2815	1N3315	16	780	1.6
1N2816	1N3316	17	740	1.8
1N2817	1N3317	18	700	2.0
1N2818	1N3318	19	660	2.2
1N2819	1N3319	20	630	2.4

Flange Mounted (Case Style TO-3) Type	Stud Mounted (Case Style DO-5) Type	Nominal Zener Voltage, Vz (volts)	Zener Current I _Z (mA)	Dynamic Resistance (R _D) (ohms) (Note 8)
(Notes 4, 5)				
1N2819	1N3320	22	570	2.5
1N2820	1N3321	24	520	2.6
1N2821	1N3322	25	500	2.7
1N2822	1N3323	27	460	2.8
1N2823	1N3324	30	420	3.0
1N2824				
1N2825	1N3325	33	380	3.2
1N2826	1N3326	36	350	3.5
1N2827	1N3327	39	320	4.0
1N2828	1N3328	43	290	4.5
1N2829	1N3329	45	280	4.5
1N2829				
1N2830	1N3330	47	270	5.0
1N2831	1N3331	50	245	5.2
1N2832	1N3332	51	245	5.2
1N2833	1N3333	52	240	5.5
1N2834	1N3334	56	220	6.0

Flange Mounted (Case Style TO-3) Type	Stud Mounted (Case Style DO-5) Type	Nominal Zener Voltage, Vz (volts)	Zener Current I _Z (mA)	Dynamic Resistance (R _D) (ohms) (Note 8)
(Notes 4, 5)				
1N2835	1N3335	62	200	7.0
1N2836	1N3336	68	180	8.0
1N2837	1N3337	75	170	9.0
1N2838	1N3338	82	150	11
1N2839	1N3339	91	140	15
1N2839				
1N2840	1N3340	100	120	20
1N2841	1N3341	105	120	25
1N2842	1N3342	110	110	30
1N2843	1N3343	120	100	40
1N2844	1N3344	130	95	50
1N2844				
1N2845	1N3345	140	90	60
1N2846	1N3346	150	85	75
1N2847	1N3347	160	80	80
1N2848	1N3348	175	70	85
1N2849	1N3349	180	68	90
1N2850	1N3350	200	65	100

case outline drawings

FIG. "A" AXIAL (NOTE 2)

FIG. "B" PERIPHERAL (NOTE 3)

SECTION X-X

PACKAGE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	NOTES
Y220n/	.140	.045	.020	.012	.840	.340												.050	.340	.127	.100	.580	2
T0350AA	.180	.075	.045	.045	.885	.420												MAX	.422	.147	.120	.510	2
Y220D	.140	.045	.020	.012	.840	.340																	3
T0350AB	.180	.075	.045	.045	.885	.420																	3
Y220E	.140	.045	.020	.012	.840	.340																	3

NOTES:

1. Refer to rules for dimensioning semiconductor product outlines included in Publication No. 76.
2. Figure "A", Axial Terminal Configuration, applicable.
3. Figure "B", Peripheral Terminal Configuration, applicable.
4. Alternate lead configurations allowed within C and D.
5. Tab contour optional within M and P.
6. Chamfer optional.
7. Position of lead to be measured .050 - .055 below seating plane.
8. Position of lead to be measured .250 - .325 from bottom of dimension E.

