



SUSSEX

SEMICONDUCTOR, INC.

12251 TOWN LAKE DRIVE, FORT MYERS, FLORIDA, 33913 • TEL: (941) 768-6800 • FAX: (941) 768-6868

**.5 TO 10 WATT UNIPOLAR
ZENER FLIP-DIE**

GLASS PASSIVATED SURFACE MOUNT UNIPOLAR FLIP-DIE

ZENER VOLTAGE- 6.8 TO 200 VOLTS

.5 TO 10 WATT MAXIMUM POWER DISSIPATION

.5 TO 10 WATT ZENER FLIP-DIE SPECIFICATIONS

- ◆ Exclusive Sussex Semiconductor Flip-Die Technology
- ◆ Each Die Fully Glass Passivated: Needs No Encapsulation
- ◆ Unipolar
- ◆ Each Device Individually Inspected
- ◆ Available in Waffle Packs or Tape and Reel
- ◆ Operating Temperature: -65 to 150°C
- ◆ Storage Temperature: -65 to 175°C
- ◆ Metallization: Ni-Ni-Au
- ◆ Polarity:

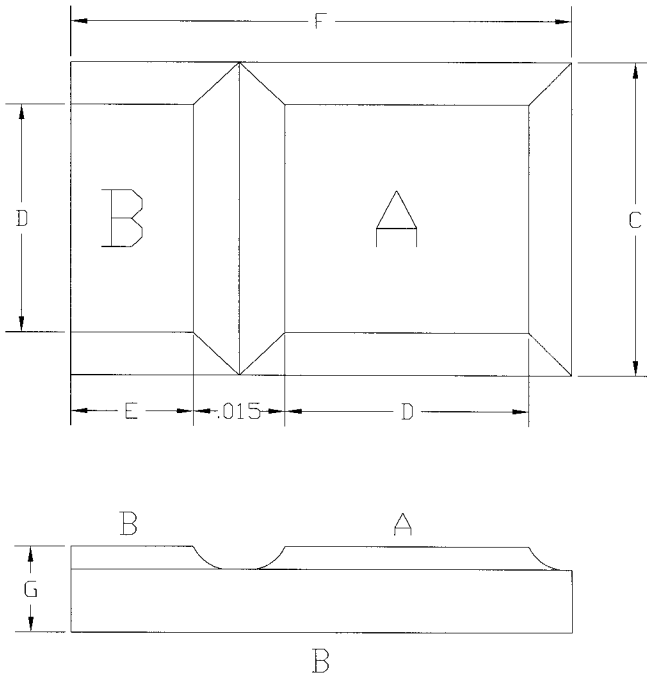
6.8 to 10 Nominal Zener Volts (V_z) 11 to 200 Nominal Zener Volts (V_z)

A-Cathode

A-Anode

B-Anode

B-Cathode



CUSTOM ORDERING SPECIFIER

DIE SPECIFICATIONS

SZFD

UNIPOLAR
ZENER
FLIP-DIE

NOMINAL ZENER
VOLTAGE

%TOLERANCE OF V_z

ZENER TEST
CURRENT(mA)

TOLERANCES	
CODE	TOLERANCE
5	±5%
10	±10%
20	±20%

'A'-SIDE METALLIZATION	
CODE	MATERIAL
A	ALUMINUM
E	GOLD
BLANK	NI-NI-AU (STANDARD)

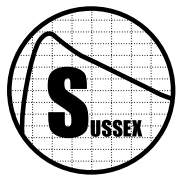
**REFER TO PAGE 7-31
FOR A LISTING OF OUR
STANDARD PARTS**

CONTACT FACTORY FOR ELECTRICAL
SPECIFICATIONS ON CUSTOM PARTS

TABLE 2C - UNIPOLAR FLIP-DIE DIMENSION SPECIFICATIONS

♦ ALL TOLERANCES ARE ±.005" ♦ ALL DIMENSIONS ARE IN INCHES

SIZE CODE	C	D	E	F	G	POWER HANDLING	SIZE CODE	C	D	E	F	G	POWER HANDLING
0.25	0.018	0.010	0.005	0.027	0.011	1/2 WATT	8	0.100	0.085	0.042	0.150	0.011	8 WATTS
0.75	0.030	0.020	0.010	0.045	0.011	3/4 WATT	16	0.115	0.100	0.051	0.175	0.011	10 WATTS
1	0.040	0.028	0.014	0.060	0.011	1 WATT							
1.5	0.055	0.040	0.020	0.083	0.011	3 WATTS							
2	0.070	0.055	0.027	0.105	0.011	4 WATTS							
3	0.085	0.070	0.033	0.128	0.011	5 WATTS							



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ZENER DIE SPECIFICATIONS

TABLE 3C - ZENER DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

JEDEC PART NUMBER (NOTE 2)	SUSSEX ORDER CODE <small>REFER TO PAGE 7-36 FOR ORDER SPECIFIER</small>	NOMINAL ZENER VOLTAGE $V_Z @ I_{ZT}$ (NOTE 3) VOLTS	ZENER TEST CURRENT (I_{ZT}) mA	ZENER IMPEDANCE $Z_{ZT} @ I_{ZT}$ (NOTE 4) OHMS	MAX. REVERSE LEAKAGE CURRENT		TYPICAL ZENER VOLTAGE TEMP. COEFF. %/°C	MAX. DC ZENER CURRENT $(I_{ZM}) @ 75^{\circ}\text{C}$ (NOTE 5) mA	MAX POWER DISSIPATION WATTS
					μA	VOLTS			
1N4158A	1-6.8-5-37	6.8	37.0	3.5	500	5.2	0.040	140.0	1
1N4159A	1-7.5-5-34	7.5	34.0	4	300	5.7	0.040	125.0	1
1N4160A	1-8.2-5-31	8.2	31.0	4.5	200	6.2	0.050	115.0	1
1N4161A	1-9.1-5-28	9.1	28.0	5	100	6.9	0.060	105.0	1
1N4162A	1-10-5-25	10	25.0	7	40	7.6	0.070	95.0	1
1N4163A	1-11-5-23	11	23.0	8	10	9.1	0.070	85.0	1
1N4164A	1-12-5-21	12	21.0	9	10	9.9	0.070	80.0	1
1N4165A	1-13-5-19	13	19.0	10	10	10.6	0.070	74.0	1
1N4166A	1-15-5-17	15	17.0	14	10	11.4	0.080	63.0	1
1N4167A	1-16-5-15.5	16	15.5	16	5	12.1	0.080	60.0	1
1N4168A	1-18-5-14	18	14.0	20	5	13.7	0.080	52.0	1
1N4169A	1-20-5-12.5	20	12.5	22	5	15.2	0.080	47.0	1
1N4170A	1-22-5-11.5	22	11.5	23	5	16.7	0.090	43.0	1
1N4171A	1-24-5-10.5	24	10.5	25	5	18.2	0.090	40.0	1
1N4172A	1-27-5-9.5	27	9.5	35	1	20.5	0.090	35.0	1
1N4173A	1-30-5-8.5	30	8.5	40	1	22.8	0.090	31.0	1
1N4174A	1-33-5-7.5	33	7.5	45	1	25.1	0.095	28.0	1
1N4175A	1-36-5-7	36	7.0	50	1	27.3	0.095	26.0	1
1N4176A	1-39-5-6.5	39	6.5	60	1	30.4	0.095	24.0	1
1N4177A	1-43-5-6	43	6.0	70	1	34.2	0.095	22.0	1
1N4178A	1-47-5-5.5	47	5.5	80	1	38.0	0.095	20.0	1
1N4179A	1-51-5-5	51	5.0	95	1	42.5	0.095	17.0	1
1N4180A	1-56-5-4.5	56	4.5	110	1	45.6	0.095	15.0	1
1N4181A	1-62-5-4	62	4.0	125	1	47.1	0.095	14.5	1
1N4182A	1-68-5-3.7	68	3.7	150	1	53.2	0.095	14.0	1
1N4183A	1-75-5-3.3	75	3.3	175	1	57.0	0.095	12.0	1
1N4184A	1-82-5-3	82	3.0	200	1	60.8	0.100	11.0	1
1N4185A	1-91-5-2.8	91	2.8	250	1	68.4	0.100	10.0	1
1N4186A	1-100-5-2.5	100	2.5	350	1	76.0	0.100	9.5	1
1N4187A	1-110-5-2.3	110	2.3	450	1	83.6	0.100	8.5	1
1N4188A	1-120-5-2	120	2.0	550	1	91.2	0.100	8.0	1
1N4189A	1-130-5-1.9	130	1.9	700	1	98.8	0.100	7.2	1
1N4190A	1-150-5-1.7	150	1.7	1000	1	114.0	0.100	6.3	1
1N4191A	1-160-5-1.6	160	1.6	1100	1	121.0	0.100	5.9	1
1N4192A	1-180-5-1.4	180	1.4	1200	1	137.0	0.100	5.2	1
1N4193A	1-200-10-1.2	200	1.2	1500	1	152.0	0.100	4.7	1

THIS TABLE CONTINUES

NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS MEASURED AT A JUNCTION TEMPERATURE (T_J) OF 25°C UNLESS OTHERWISE STATED
- NOTE 2:** ♦ JEDEC PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE
- NOTE 3:** ♦ V_Z MEASURED AT JUNCTION AND CASE TEMPERATURE BOTH AT 25°C
- NOTE 4:** ♦ ZENER IMPEDANCE IS DERIVED FROM 60HZ AC VOLTAGE WHICH RESULTS WHEN AN AC CURRENT RMS VALUE EQUAL TO 10% OF D.C ZENER CURRENT IS SUPERIMPOSED ON I_{ZT}
- NOTE 5:** ♦ I_{ZM} VALUES DERIVED FOR A $\pm 5\%$ V_Z TOLERANCE
♦ I_{ZM} IS THE VALUE OF ZENER CURRENT AT WHICH POINT MAX POWER DISSIPATION RESULTS



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ZENER DIE SPECIFICATIONS CONTINUED

TABLE 3C (CONTINUED) - ZENER DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

JEDEC PART NUMBER (NOTE 2)	SUSSEX ORDER CODE REFER TO PAGE 7-36 FOR ORDER SPECIFIER	NOMINAL ZENER VOLTAGE $V_Z @ I_{ZT}$ (NOTE 3) VOLTS	ZENER TEST CURRENT (I_{ZT}) mA	ZENER IMPEDANCE $Z_{ZT} @ I_{ZT}$ (NOTE 4) OHMS	MAX. REVERSE LEAKAGE CURRENT $(I_R) @ V_{DC}$		TYPICAL ZENER VOLTAGE TEMP. COEFF. %/°C	MAX. DC ZENER CURRENT $(I_{ZM}) @ 75^\circ\text{C}$ (NOTE 5) mA	MAX POWER DISSIPATION WATTS
					I_R μA	V_{DC} VOLTS			
1N5063	1.5-6.8-5-75	6.8	75.0	2	500	5.2	0.040	440.0	3
1N5064	1.5-7.5-5-75	7.5	75.0	2	300	5.7	0.040	400.0	3
1N5065	1.5-8.2-5-75	8.2	75.0	3	200	6.2	0.050	360.0	3
1N5066	1.5-9.1-5-75	9.1	75.0	3	100	6.9	0.060	330.0	3
1N5067	1.5-10-5-75	10	75.0	4	40	7.6	0.070	300.0	3
1N5068	1.5-12-5-70	11	70.0	5	10	9.1	0.070	250.0	3
1N5069	1.5-13-5-50	13	50.0	6	10	9.9	0.070	230.0	3
1N5070	1.5-14-5-50	14	50.0	6	10	10.6	0.070	210.0	3
1N5071	1.5-15-5-50	15	50.0	6	10	11.4	0.080	200.0	3
1N5072	1.5-16-5-50	16	50.0	7	5	12.1	0.080	185.0	3
1N5073	1.5-18-5-40	18	40.0	8	5	13.7	0.080	170.0	3
1N5074	1.5-22-5-30	22	30.0	10	5	16.7	0.090	135.0	3
1N5075	1.5-24-5-30	24	30.0	10	5	18.2	0.090	125.0	3
1N5076	1.5-27-5-25	27	25.0	12	1	20.5	0.090	110.0	3
1N5077	1.5-30-5-25	30	25.0	15	1	22.8	0.090	100.0	3
1N5078	1.5-33-5-20	33	20.0	21	1	25.1	0.095	90.0	3
1N5079	1.5-36-5-20	36	20.0	21	1	27.3	0.095	85.0	3
1N5080	1.5-39-5-20	39	20.0	27	1	29.5	0.095	80.0	3
1N5081	1.5-40-5-20	40	20.0	27	1	30.4	0.095	75.0	3
1N5082	1.5-43-5-15	43	15.0	35	1	32.6	0.095	70.0	3
1N5083	1.5-45-5-15	45	15.0	37	1	34.2	0.095	65.0	3
1N5084	1.5-47-5-15	47	15.0	43	1	35.7	0.095	60.0	3
1N5085	1.5-50-5-10	50	15.0	50	1	38.0	0.095	60.0	3
1N5086	1.5-51-5-15	51	15.0	50	1	38.7	0.095	55.0	3
1N5087	1.5-56-5-10	56	10.0	70	1	42.5	0.095	55.0	3
1N5088	1.5-60-5-10	60	10.0	70	1	45.6	0.095	50.0	3
1N5089	1.5-62-5-10	62	10.0	75	1	47.1	0.095	50.0	3
1N5090	1.5-68-5-10	68	10.0	85	1	51.9	0.095	45.0	3
1N5091	1.5-70-5-10	70	10.0	90	1	53.2	0.095	45.0	3
1N5092	1.5-75-5-10	75	10.0	100	1	57.0	0.095	40.0	3
1N5093	1.5-80-5-10	80	10.0	115	1	60.8	0.100	35.0	3
1N5094	1.5-82-5-10	82	10.0	120	1	68.4	0.100	30.0	3
1N5095	1.8-91-5-8	91	8.0	155	1	76.0	0.100	30.0	3
1N5096	1.5-110-5-5	110	5.0	250	1	83.6	0.100	25.0	3
1N5097	1.5-120-5-5	120	5.0	325	1	91.2	0.100	25.0	3
1N5098	1.5-130-5-5	130	5.0	375	1	98.8	0.100	20.0	3
1N5099	1.5-140-5-5	140	5.0	550	1	106.0	0.100	20.0	3
1N5100	1.5-160-5-4	160	4.0	700	1	121.0	0.100	20.0	3
1N5101	1.5-170-5-4	170	4.0	750	1	129.0	0.100	18.0	3
1N5102	1.5-180-5-4	180	4.0	850	1	137.0	0.100	18.0	3
1N5103	1.5-190-5-4	190	4.0	900	1	144.0	0.100	15.0	3
1N5104	1.5-200-5-4	200	4.0	950	1	152.0	0.100	15.0	3

THIS TABLE CONTINUES

NOTES

NOTE 1: ♦ ELECTRICAL CHARACTERISTICS MEASURED AT A JUNCTION TEMPERATURE (T_J) OF 25°C UNLESS OTHERWISE STATED

NOTE 2: ♦ JEDEC PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE

NOTE 3: ♦ V_Z MEASURED AT JUNCTION AND CASE TEMPERATURE BOTH AT 25°C

NOTE 4: ♦ ZENER IMPEDANCE IS DERIVED FROM 60HZ AC VOLTAGE WHICH RESULTS WHEN AN AC CURRENT RMS VALUE EQUAL TO 10% OF D.C ZENER CURRENT IS SUPERIMPOSED ON I_{ZT}

NOTE 5: ♦ I_{ZM} VALUES DERIVED FOR A $\pm 5\%$ V_Z TOLERANCE
♦ I_{ZM} IS THE VALUE OF ZENER CURRENT AT WHICH POINT MAX. POWER DISSIPATION RESULTS



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ZENER DIE SPECIFICATIONS CONTINUED

TABLE 3C (CONTINUED) - ZENER DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

JEDEC PART NUMBER (NOTE 2)	SUSSEX ORDER CODE <small>REFER TO PAGE 7-36 FOR ORDER SPECIFIER</small>	NOMINAL ZENER VOLTAGE $V_Z @ I_{ZT}$ (NOTE 3) VOLTS	ZENER TEST CURRENT (I_{ZT}) mA	ZENER IMPEDANCE $Z_{ZT} @ I_{ZT}$ (NOTE 4) OHMS	MAX. REVERSE LEAKAGE CURRENT $(I_R) @ V_{DC}$		TYPICAL ZENER VOLTAGE TEMP. COEFF. %/°C	MAX. DC ZENER CURRENT $(I_{ZM}) @ 75^{\circ}\text{C}$ (NOTE 5) mA	MAX POWER DISSIPATION WATTS
					I_R μA	V_{DC} VOLTS			
1N4954	3-6.8-5-175	6.8	175.0	1	500	5.2	0.050	670.0	5
1N4955	3-7.5-5-175	7.5	175.0	1.5	400	5.7	0.060	620.0	5
1N4956	3-8.2-5-150	8.2	150.0	1.5	200	6.2	0.060	570.0	5
1N4957	3-9.1-5-150	9.1	150.0	2	100	6.9	0.060	510.0	5
1N4958	3-10-5-125	10	125.0	2	75	7.6	0.070	470.0	5
1N4959	3-11-5-125	11	125.0	2.5	75	8.3	0.070	435.0	5
1N4960	3-12-5-100	12	100.0	2.5	50	9.1	0.070	385.0	5
1N4961	3-13-5-100	13	100.0	3	25	9.9	0.080	350.0	5
1N4962	3-15-5-75	15	75.0	3.5	15	11.4	0.080	300.0	5
1N4963	3-16-5-75	16	75.0	3.5	10	12.2	0.080	275.0	5
1N4964	3-18-5-65	18	65.0	4	10	13.7	0.085	255.0	5
1N4965	3-20-5-65	20	65.0	4.5	10	15.2	0.085	220.0	5
1N4966	3-22-5-50	22	50.0	5	10	16.7	0.085	195.0	5
1N4967	3-24-5-50	24	50.0	5	10	18.2	0.090	180.0	5
1N4968	3-27-5-50	27	50.0	6	10	20.6	0.090	155.0	5
1N4969	3-30-5-40	30	40.0	8	10	22.8	0.090	140.0	5
1N4970	3-33-5-40	33	40.0	10	5	25.1	0.090	130.0	5
1N4971	3-36-5-30	36	30.0	11	5	27.4	0.095	120.0	5
1N4972	3-39-5-30	39	30.0	14	5	29.6	0.095	105.0	5
1N4973	3-43-5-30	43	30.0	20	5	32.6	0.095	95.0	5
1N4974	3-47-5-25	47	25.0	25	5	35.7	0.095	90.0	5
1N4975	3-51-5-25	51	25.0	27	5	38.0	0.095	85.0	5
1N4976	3-56-5-20	56	20.0	35	5	42.6	0.095	80.0	5
1N4977	3-62-5-20	62	20.0	42	5	47.1	0.100	75.0	5
1N4978	3-68-5-20	68	20.0	44	5	51.6	0.100	65.0	5
1N4979	3-75-5-20	75	20.0	45	5	56.0	0.100	60.0	5
1N4980	3-82-5-15	82	15.0	65	5	62.3	0.100	55.0	5
1N4981	3-91-5-15	91	15.0	75	5	68.4	0.100	50.0	5
1N4982	3-100-5-10	100	12.0	90	5	76.0	0.100	45.0	5
1N4983	3-110-5-10	110	12.0	125	5	83.6	0.100	40.0	5
1N4984	3-120-5-10	120	10.0	170	5	91.2	0.100	38.0	5
1N4985	3-130-5-10	130	10.0	190	5	98.8	0.105	35.0	5
1N4986	3-150-5-8	150	8.0	330	5	114.0	0.105	31.0	5
1N4987	3-160-5-8	160	8.0	350	5	122.0	0.105	30.0	5
1N4988	3-180-5-5	180	5.0	450	5	137.0	0.110	25.0	5
1N4989	3-200-5-5	200	5.0	500	5	152.0	0.110	22.0	5

THIS TABLE CONTINUES

NOTES

- NOTE 1: ♦ ELECTRICAL CHARACTERISTICS MEASURED AT A JUNCTION TEMPERATURE (T_J) OF 25°C UNLESS OTHERWISE STATED
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ZENER DIE SPECIFICATIONS CONTINUED

TABLE 3C (CONTINUED) - ZENER DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

JEDEC PART NUMBER (NOTE 2)	SUSSEX ORDER CODE <small>REFER TO PAGE 7-36 FOR ORDER SPECIFIER</small>	NOMINAL ZENER VOLTAGE $V_Z @ I_{ZT}$ (NOTE 3) VOLTS	ZENER TEST CURRENT (I_{ZT}) mA	ZENER IMPEDANCE $Z_{ZT} @ I_{ZT}$ (NOTE 4) OHMS	MAX. REVERSE LEAKAGE CURRENT $(I_R) @ V_{DC}$		TYPICAL ZENER VOLTAGE TEMP. COEFF. %/°C	MAX. DC ZENER CURRENT $(I_{ZM}) @ 75^\circ\text{C}$ (NOTE 5) mA	MAX POWER DISSIPATION WATTS
					I_R μA	V_{DC} VOLTS			
1N2970B	16-6.8-5-370	6.8	370	1.2	150	5.2	.040	1320	10
1N2971B	16-7.5-5-335	7.5	335	1.3	100	5.7	.045	1180	10
1N2972B	16-8.2-5-305	8.2	305	1.5	50	6.2	.048	1040	10
1N2973B	16-9.1-5-275	9.1	275	2.0	25	6.9	.051	960	10
1N2974B	16-10-5-250	10.0	250	3.0	25	7.6	.055	860	10
1N2975B	16-11-5-230	11.0	230	3.0	10	8.4	.060	780	10
1N2976B	16-12-5-210	12.0	210	3.0	10	9.1	.065	720	10
1N2977B	16-13-5-190	13.0	190	3.0	10	9.9	.065	660	10
1N2978B	16-14-5-180	14.0	180	3.0	10	10.5	.070	600	10
1N2979B	16-15-5-170	15.0	170	3.0	10	11.4	.070	560	10
1N2980B	16-16-5-155	16.0	155	4.0	10	12.2	.070	530	10
1N2981B	16-17-5-145	17.0	145	4.0	10	13.0	.075	500	10
1N2982B	16-18-5-140	18.0	140	4.0	10	13.7	.075	460	10
1N2983B	16-19-5-130	19.0	130	4.0	10	14.0	.075	440	10
1N2984B	16-20-5-125	20.0	125	4.0	10	15.2	.075	420	10
1N2985B	16-22-5-115	22.0	115	5.0	10	16.7	.080	380	10
1N2986B	16-24-5-105	24.0	105	5.0	10	18.2	.080	350	10
1N2987B	16-25-5-100	25.0	100	6.0	10	18.2	.080	310	10
1N2988B	16-27-5-95	27.0	95	7.0	10	20.6	.085	300	10
1N2989B	16-30-5-85	30.0	85	8.0	10	22.8	.085	280	10
1N2990B	16-33-5-75	33.0	75	9.0	10	25.1	.085	260	10
1N2991B	16-36-5-70	36.0	70	10.0	10	27.4	.085	230	10
1N2992B	16-39-5-65	39.0	65	11.0	10	29.7	.090	210	10
1N2993B	16-43-5-60	43.0	60	12.0	10	32.7	.090	195	10
1N2994B	16-45-5-55	45.0	55	13.0	10	33.0	.090	185	10
1N2995B	16-47-5-55	47.0	55	14.0	10	35.8	.090	175	10
1N2996B	16-50-5-50	50.0	50	15.0	10	36.0	.090	165	10
1N2997B	16-51-5-50	51.0	50	15.0	10	38.8	.090	160	10
1N2998B	16-52-5-50	52.0	50	15.0	10	39.0	.090	160	10
1N2999B	16-56-5-45	56.0	45	16.0	10	42.6	.090	150	10
1N3000B	16-62-5-40	62.0	40	17.0	10	47.1	.090	130	10
1N3001B	16-68-5-37	68.0	37	18.0	10	51.7	.090	120	10
1N3002B	16-75-5-33	75.0	33	22.0	10	56.0	.090	110	10
1N3003B	16-82-5-30	82.0	30	25	10	62.2	.090	100	10
1N3004B	16-91-5-28	91.0	28	35	10	69.2	.090	85	10
1N3005B	16-100-5-25	100.0	25	40	10	76.0	.090	80	10
1N3006B	16-105-5-25	105.0	25	45	10	76.0	.095	75	10
1N3007B	16-110-5-23	110.0	23	55	10	83.6	.095	72	10
1N3008B	16-120-5-20	120.0	20	75	10	91.2	.095	67	10
1N3009B	16-130-5-19	130.0	19	100	10	98.8	.095	62	10
1N3010B	16-140-5-18	140.0	18	125	10	100.0	.095	58	10
1N3011B	16-150-5-17	150.0	17	175	10	114.0	.095	54	10
1N3012B	16-160-5-16	160.0	16	200	10	121.6	.095	50	10
1N3013B	16-175-5-14	175.0	14	250	10	135.0	.095	46	10
1N3014B	16-180-5-14	180.0	14	260	10	136.8	.095	45	10
1N3015B	16-200-5-12	200.0	12	300	10	152.0	.100	40	10

THIS TABLE CONTINUES

NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS MEASURED AT A JUNCTION TEMPERATURE (T_J) OF 25°C UNLESS OTHERWISE STATED
- NOTE 2:** ♦ JEDEC PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE
- NOTE 3:** ♦ V_Z MEASURED AT JUNCTION AND CASE TEMPERATURE BOTH AT 25°C
- NOTE 4:** ♦ ZENER IMPEDANCE IS DERIVED FROM 60HZ AC VOLTAGE WHICH RESULTS WHEN AN AC CURRENT RMS VALUE EQUAL TO 10% OF D.C ZENER CURRENT IS SUPERIMPOSED ON I_{ZT}
- NOTE 5:** ♦ I_{ZM} VALUES DERIVED FOR A $\pm 5\%$ V_Z TOLERANCE
♦ I_{ZM} IS THE VALUE OF ZENER CURRENT AT WHICH POINT DIE POWER DISSIPATION RESULTS



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ZENER DIE SPECIFICATIONS CONTINUED

TABLE 3C (CONTINUED) - ZENER DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

JEDEC PART NUMBER (NOTE 2)	SUSSEX ORDER CODE <small>REFER TO PAGE 7-36 FOR ORDER SPECIFIER</small>	NOMINAL ZENER VOLTAGE $V_Z @ I_{ZT}$ (NOTE 3) VOLTS	ZENER TEST CURRENT (I_{ZT}) mA	ZENER IM PEDANCE $Z_{ZT} @ I_{ZT}$ (NOTE 4) OHMS	MAX. REVERSE LEAKAGE CURRENT $(I_R) @ V_{DC}$		TYPICAL ZENER VOLTAGE TEMP. COEFF. %/°C	MAX. DC ZENER CURRENT $(I_{ZM}) @ 75°C$ (NOTE 5) mA	MAX POWER DISSIPATION WATTS
					I_R μA	V_{DC} VOLTS			
1N3305B	35-6.8-5-1850	6.8	1850	0.2	150	4.5	.040	6600	50
1N3306B	35-7.5-5-1700	7.5	1700	0.3	100	5.0	.045	5900	50
1N3307B	35-8.2-5-1500	8.2	1500	0.4	50	5.4	.048	5200	50
1N3308B	35-9.1-5-1370	9.1	1370	0.5	25	6.1	.050	4800	50
1N3309B	35-10-5-1200	10.0	1200	0.6	25	6.7	.055	4300	50
1N3310B	35-11-5-1100	11.0	1100	0.8	10	8.4	.060	3900	50
1N3311B	35-12-5-1000	12.0	1000	1.0	10	9.1	.065	3800	50
1N3312B	35-13-5-960	13.0	960	1.1	10	9.9	.065	3300	50
1N3313B	35-14-5-890	14.0	890	1.2	10	11.4	.070	3000	50
1N3314B	35-15-5-830	15.0	830	1.4	10	11.4	.070	2800	50
1N3315B	35-16-5-780	16.0	780	1.6	10	12.2	.070	2650	50
1N3316B	35-17-5-740	17.0	740	1.8	10	13.0	.075	2500	50
1N3317B	35-18-5-700	18.0	700	2.0	10	13.7	.075	2300	50
1N3318B	35-19-5-660	19.0	660	2.2	10	13.7	.075	2200	50
1N3319B	35-20-5-630	20.0	630	2.4	10	15.2	.075	2100	50
1N3320B	35-22-5-570	22.0	570	2.5	10	16.7	.080	1900	50
1N3321B	35-24-5-520	24.0	520	2.6	10	18.2	.080	1750	50
1N3322B	35-25-5-500	25.0	500	2.7	10	18.2	.080	1550	50
1N3323B	35-27-5-460	27.0	460	2.8	10	20.6	.085	1500	50
1N3324B	35-30-5-420	30.0	420	3.0	10	22.8	.085	1400	50
1N3325B	35-33-5-380	33.0	380	3.2	10	25.1	.085	1300	50
1N3326B	35-36-5-350	36.0	350	3.5	10	27.4	.085	1150	50
1N3327B	35-39-5-320	39.0	320	4.0	10	29.7	.090	1050	50
1N3328B	35-43-5-290	43.0	290	4.5	10	32.7	.090	975	50
1N3329B	35-45-5-280	45.0	280	4.5	10	32.7	.090	930	50
1N3330B	35-47-5-270	47.0	270	5.0	10	35.8	.090	880	50
1N3331B	35-50-5-250	50.0	250	5.0	10	38.0	.090	830	50
1N3332B	35-51-5-245	51.0	245	5.2	10	38.8	.090	810	50
1N3333B	35-52-5-240	52.0	240	5.5	10	42.6	.090	790	50
1N3334B	35-56-5-220	56.0	220	6.0	10	42.6	.090	740	50
1N3335B	35-62-5-200	62.0	200	7.0	10	47.1	.090	660	50
1N3336B	35-68-5-180	68.0	180	8.0	10	51.7	.090	600	50
1N3337B	35-75-5-170	75.0	170	9.0	10	56.0	.090	540	50
1N3338B	35-82-5-150	82.0	150	11	10	62.2	.090	490	50
1N3339B	35-91-5-140	91.0	140	15	10	69.2	.090	420	50
1N3340B	35-100-5-120	100.0	120	20	10	76.0	.090	400	50
1N3341B	35-105-5-120	105.0	120	25	10	83.0	.095	380	50
1N3342B	35-110-5-110	110.0	110	30	10	83.0	.095	365	50
1N3343B	35-120-5-100	120.0	100	40	10	91.2	.095	335	50
1N3344B	35-130-5-95	130.0	95	50	10	99.8	.095	310	50
1N3345B	35-140-5-90	140.0	90	60	10	114.0	.095	290	50
1N3346B	35-150-5-85	150.0	85	75	10	114.0	.095	270	50
1N3347B	35-160-5-80	160.0	80	80	10	121.6	.095	250	50
1N3348B	35-175-5-70	175.0	70	85	10	121.6	.095	230	50
1N3349B	35-180-5-68	180.0	68	90	10	136.8	.095	220	50
1N3350B	35-200-5-65	200.0	65	100	10	152.0	.100	200	50

NOTES

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- NOTE 5:** ♦ I_{ZM} VALUES DERIVED FOR A ±5% V_Z TOLERANCE
♦ I_{ZM} IS THE VALUE OF ZENER CURRENT AT WHICH POINT DIE POWER DISSIPATION RESULTS



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**ZENER DIE
SPECIFICATIONS CONTINUED**

ORDERING SPECIFIER

6.8 - 10 - 75

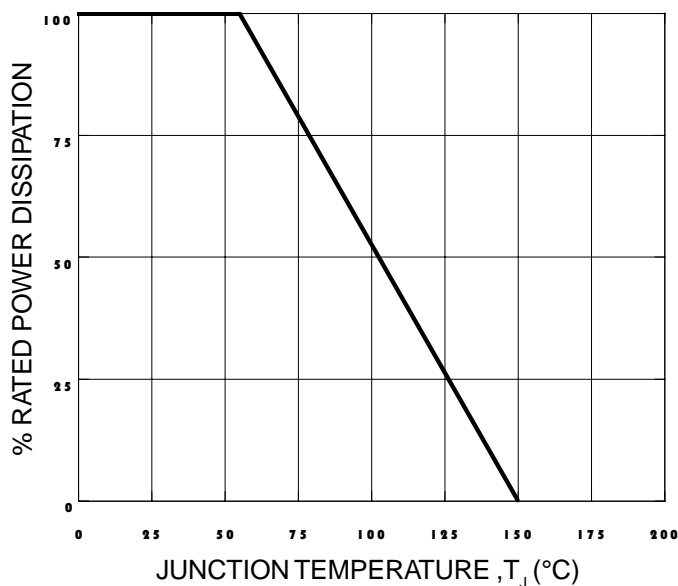
ORDER CODE FROM
PREVIOUS PAGE

CODE	DESCRIPTION
SZ	STANDARD UNIPOLAR DIE
SZFD	FLIP-DIE (1/2 TO 10 WATT ONLY)

TABLE 4C - AVAILABLE DIE SIZES

CODE	DIE TYPE	DIE SPECIFICATIONS REFER TO:	CODE	DIE TYPE	DIE SPECIFICATIONS REFER TO:
0.25	1/2 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30	16	16 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30
0.75	3/4 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30	25	25 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30
1	1 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30	30	40 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30
1.5	3 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30	35	50 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30
2	4 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30	40	60 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30
3	5 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30	70	75 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30
8	8 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30	100	100 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30

**FIGURE 1C - STEADY-STATE
DERATING CURVE**



**FIGURE 2C - ZENER IMPEDANCE VS.
ZENER CURRENT**

