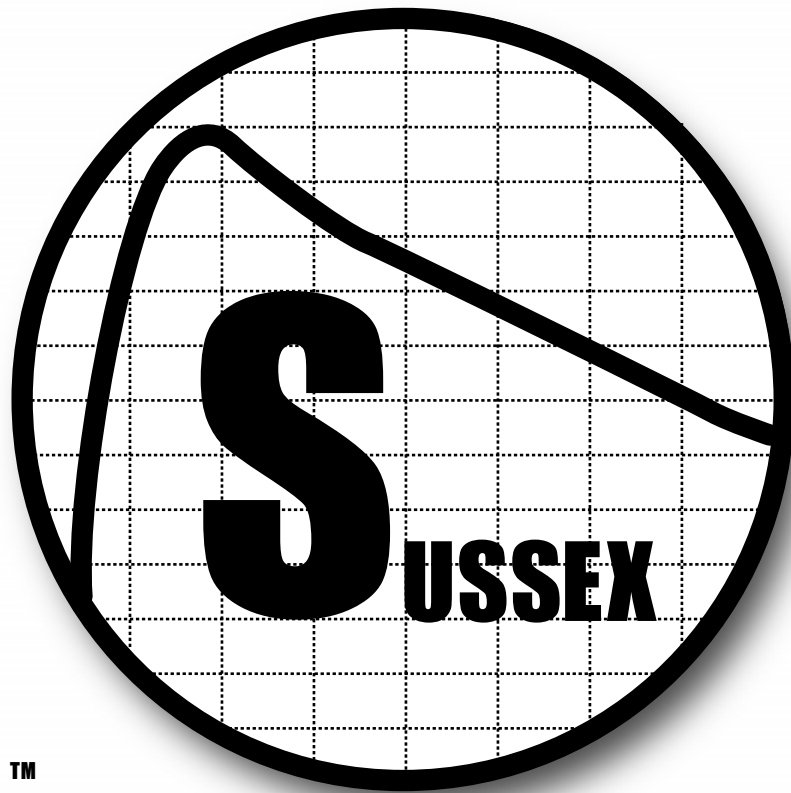




SUSSEX SEMICONDUCTOR, INC.
DIES AND CELLS

SECTION 7



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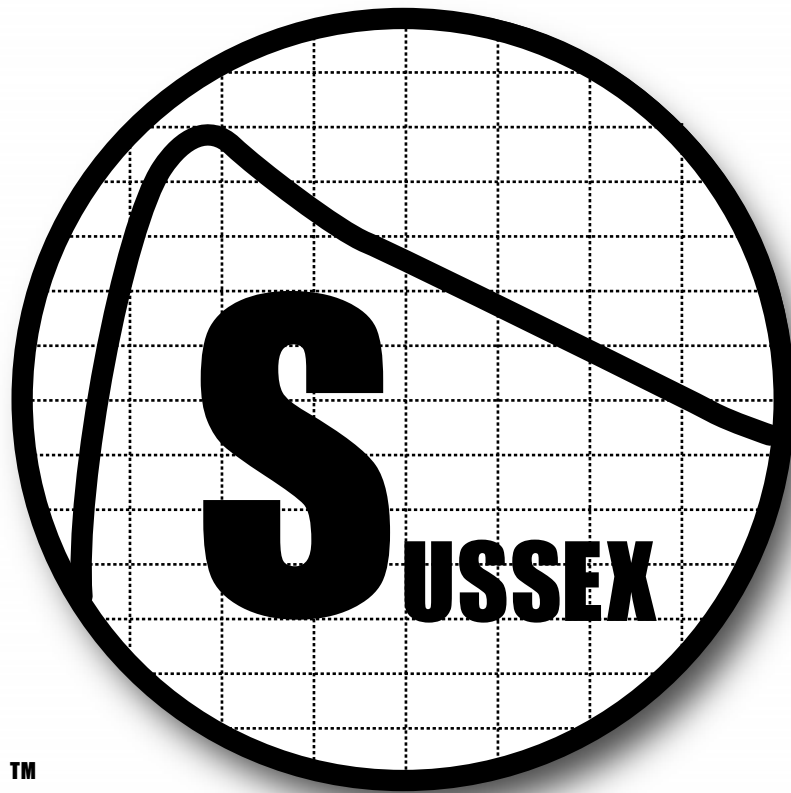
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TM

SUSSEX SEMICONDUCTOR, INC.
TRANSIENT SUPPRESSOR DIE

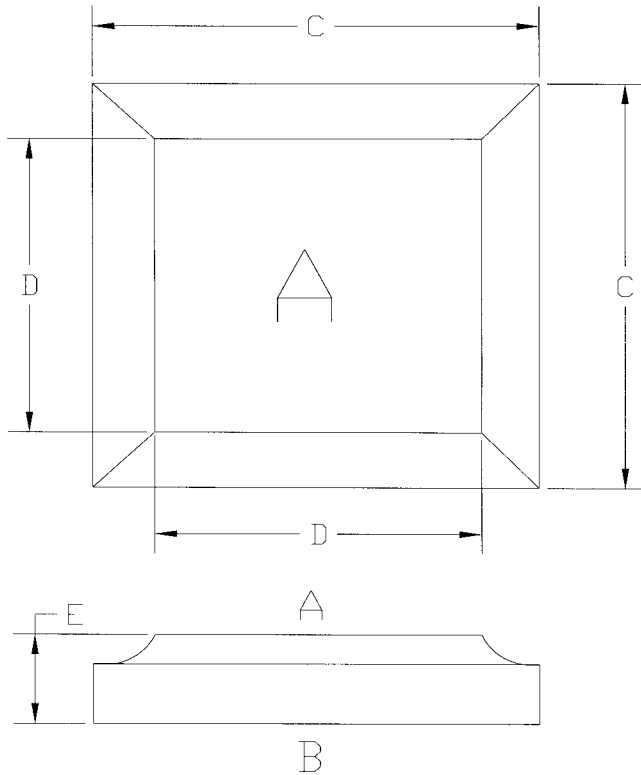


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**400 TO 5000 WATT UNIPOLAR
TRANSIENT SUPPRESSOR DIE**



GLASS PASSIVATED UNIPOLAR DIE

400 TO 5000 WATT MAXIMUM POWER HANDLING

REVERSE VOLTAGES - 6.8 TO 440 VOLTS

400 TO 5000 WATT UNIPOLAR DIE SPECIFICATIONS

- ◆ Each Die Fully Glass Passivated: Needs No Encapsulation
- ◆ Electrical Equivalent to P4KE, P6KE, SA, and 1.5KE Series Axial Leaded Devices
- ◆ Space Saving Substitute For SMA, SMB, and SMC Surface Mount Packages
- ◆ Each Device Individually Inspected
- ◆ Unipolar
- ◆ Operating Temperature: -65 to 150°C
- ◆ Storage Temperature: -65 to 175°C
- ◆ Standard Metallization Ni-Ni-Au
- ◆ For Wire Bond Applications Gold Or Aluminum Metallization is Available
- ◆ Polarity:

6.8 to 10 Breakdown Volts (V_{BR})	11 to 440 Breakdown Volts (V_{BR})
A-Cathode	A-Anode
B-Anode	B-Cathode

TABLE 1A - UNIPOLAR DIE DIMENSION SPECIFICATIONS

◆ ALL TOLERANCES ARE $\pm .005"$ ◆ ALL DIMENSIONS ARE IN INCHES

SIZE CODE	C	D	E
1.5	0.055	0.040	0.012
2	0.070	0.055	0.012
3	0.085	0.070	0.012
16	0.115	0.100	0.012
35	0.200	0.180	0.012

CUSTOM ORDERING SPECIFIER

DIE SPECIFICATIONS																									
SZU UNIPOLAR TRANSIENT SUPPRESSOR DIE CLAMPING VOLTAGE REVERSE BREAKDOWN VOLTAGE (V_{BR}) CONTACT FACTORY FOR ELECTRICAL SPECIFICATIONS ON CUSTOM PARTS																									
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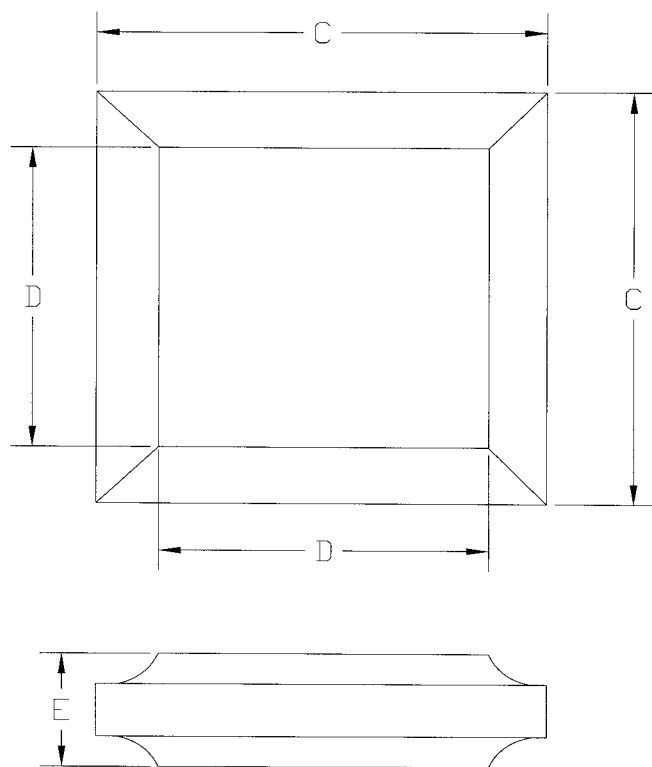


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SEMICONDUCTOR, INC.

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

**400 TO 5000 WATT BIPOLAR
TRANSIENT SUPPRESSOR DIE**



GLASS PASSIVATED BIPOLAR DIE

400 TO 5000 WATT MAXIMUM POWER HANDLING

REVERSE VOLTAGES - 6.8 TO 440 VOLTS

400 TO 5000 WATT BIPOLAR DIE SPECIFICATIONS

- ◆ Each Die Fully Glass Passivated: No Need For Encapsulation
- ◆ Electrical Equivalent to P4KE, P6KE, SA, and 1.5KE Series Axial Leaded Devices
- ◆ Space Saving Substitute For SMA, SMB, and SMC Surface Mount Packages
- ◆ Each Device Individually Inspected
- ◆ Bipolar
- ◆ Operating Temperature: -65 to 150°C
- ◆ Storage Temperature: -65 to 175°C
- ◆ Standard Metallization: Ni-Ni-Au

TABLE 2A - BIPOLAR DIE DIMENSION SPECIFICATIONS

♦ ALL TOLERANCES ARE $\pm 0.005"$ ♦ ALL DIMENSIONS ARE IN INCHES

SIZE CODE	C	D	E
1.5	0.055	0.040	0.015
2	0.070	0.055	0.015
3	0.085	0.070	0.015
16	0.115	0.100	0.015
35	0.200	0.180	0.015

CUSTOM ORDERING SPECIFIER

DIE SPECIFICATIONS

SZZ

BIPOLAR
TRANSIENT
SUPPRESSOR DIE

REVERSE BREAKDOWN
VOLTAGE (V_{BR})

CLAMPING VOLTAGE

%TOLERANCE OF V_{BR}

CONTACT FACTORY FOR ELECTRICAL
SPECIFICATIONS ON CUSTOM PARTS

AVAILABLE SIZES		STANDARD PART LISTING ON PAGE:
CODE	RATING	
1.5	400 WATTS	PAGE 7-5,7-6
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3	600 WATTS	PAGE 7-11,7-12
16	1500 WATTS	PAGE 7-14,7-15
35	5000 WATTS	PAGE 7-17,7-18

TOLERANCES	
CODE	TOLERANCE
5	$\pm 5\%$
10	$\pm 10\%$
20	$\pm 20\%$

HIGHER POWER
RATINGS AVAILABLE.
CONTACT FACTORY FOR
DIE SPECIFICATIONS



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**400 TO 1500 WATT UNIPOLAR
TRANSIENT SUPPRESSOR FLIP-
DIE**

GLASS PASSIVATED SURFACE MOUNT UNIPOLAR FLIP-DIE

400 TO 5000 WATT MAXIMUM POWER HANDLING

REVERSE VOLTAGES - 6.8 TO 440 VOLTS

400 TO 1500 WATT UNIPOLAR FLIP-DIE SPECIFICATIONS

- ◆ Exclusive Sussex Semiconductor Flip-Die Technology
- ◆ Each Die Fully Glass Passivated: Needs No Encapsulation
- ◆ Space Saving Substitute For SMA, SMB, and SMC Packages
- ◆ Electrical Equivalent to P4KE, P6KE, SA, and 1.5KE Series Axial Leaded Devices
- ◆ 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 Breakdown Volts (V_{BR}) 11 to 440 Breakdown Volts (V_{BR})

A-Cathode

A-Anode

B-Anode

B-Cathode

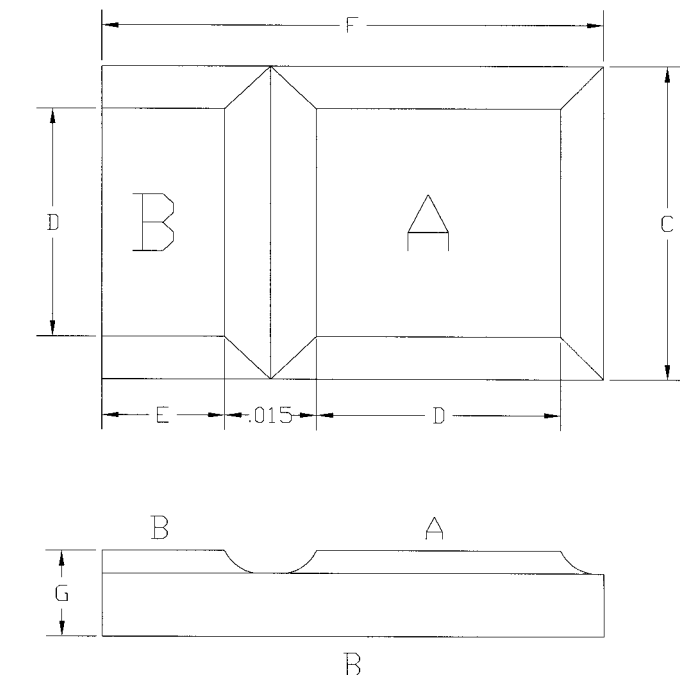


TABLE 3A - FLIP-DIE DIMENSION SPECIFICATIONS

◆ ALL TOLERANCES ARE $\pm .005"$ ◆ ALL DIMENSIONS ARE IN INCHES

SIZE CODE	C	D	E	F	G
FD1.5	0.055	0.040	0.020	0.083	0.015
FD2	0.070	0.055	0.027	0.105	0.015
FD3	0.085	0.070	0.033	0.120	0.015
FD16	0.115	0.100	0.050	0.173	0.015

CUSTOM ORDERING SPECIFIER

SZUFD

UNIPOLAR TRANSIENT
SUPPRESSOR FLIP-DIE

CLAMPING VOLTAGE
REVERSE BREAKDOWN
VOLTAGE (V_{BR})

DIE SPECIFICATIONS

CONTACT FACTORY FOR ELECTRICAL
SPECIFICATIONS ON CUSTOM PARTS

HIGHER POWER
RATINGS AVAILABLE.
CONTACT FACTORY FOR
DIE SPECIFICATIONS

AVAILABLE SIZES		STANDARD PART LISTING ON PAGE:
CODE	RATING	
1.5	400 WATTS	PAGE 7-5, 7-6
2	500 WATTS	PAGE 7-8, 7-9
3	600 WATTS	PAGE 7-11, 7-12
16	1500 WATTS	PAGE 7-14, 7-15

% TOLERANCE OF V_{BR}

TOLERANCES	
CODE	TOLERANCE
5	$\pm 5\%$
10	$\pm 10\%$
20	$\pm 20\%$

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



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**400 TO 1500 WATT BIPOLAR
TRANSIENT SUPPRESSOR
DUAL-DIE**

GLASS PASSIVATED SURFACE MOUNT BIPOLAR DUAL-DIE

400 TO 5000 WATT MAXIMUM POWER HANDLING

REVERSE VOLTAGES - 6.8 TO 440 VOLTS

400 TO 1500 WATT BIPOLAR DUAL-DIE SPECIFICATIONS

- ◆ Exclusive Sussex Semiconductor Dual-Die Technology
- ◆ Each Die Fully Glass Passivated: Needs No Encapsulation
- ◆ Space Saving Substitute For SMA, SMB, and SMC Packages
- ◆ Electrical Equivalent to P4KE, P6KE, SA, and 1.5KE Series Axial Leaded Devices
- ◆ Bipolar
- ◆ 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 Breakdown Volts (V_{BR}) 11 to 440 Breakdown Volts (V_{BR})

A-Cathode

A-Anode

B-Anode

B-Cathode

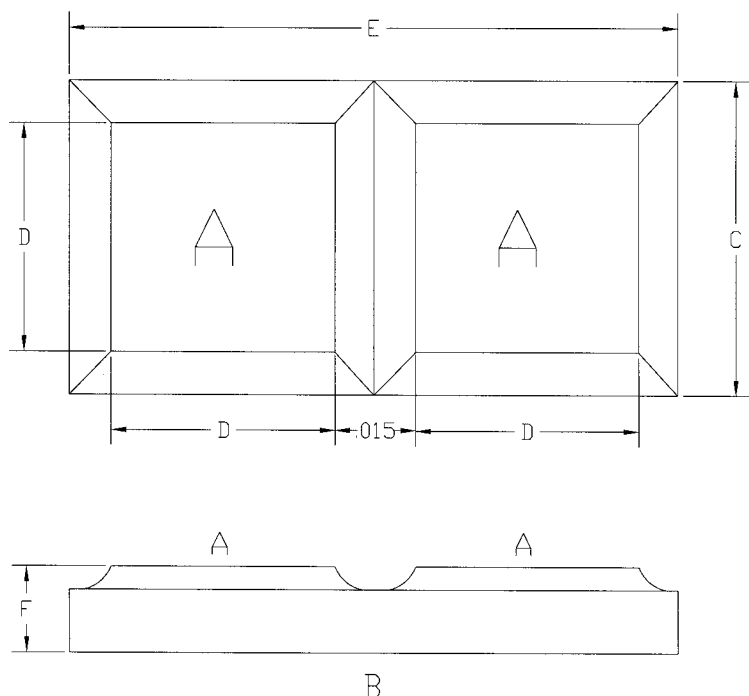


TABLE 4A - DUAL-DIE DIMENSION SPECIFICATIONS

◆ ALL TOLERANCES ARE $\pm 0.005"$ ◆ ALL DIMENSIONS ARE IN INCHES

SIZE CODE	C	D	E	F
D1.5	0.055	0.040	0.110	0.015
D2	0.070	0.055	0.140	0.015
D3	0.085	0.070	0.160	0.015
D16	0.115	0.100	0.230	0.015

CUSTOM ORDERING SPECIFIER

DIE SPECIFICATIONS

CONTACT FACTORY FOR ELECTRICAL
SPECIFICATIONS ON CUSTOM PARTS

SZZD

BIPOLAR TRANSIENT
SUPPRESSOR
DUAL DIE

CLAMPING VOLTAGE
REVERSE BREAKDOWN
VOLTAGE (V_{BR}) (NOTE 1)

AVAILABLE SIZES		STANDARD PART LISTING ON PAGE:
CODE	RATING	
1.5	400 WATTS	PAGE 7-5, 7-6
2	500 WATTS	PAGE 7-8, 7-9
3	600 WATTS	PAGE 7-11, 7-12
16	1500 WATTS	PAGE 7-14, 7-15

%TOLERANCE OF V_{BR}

TOLERANCES	
CODE	TOLERANCE
5	$\pm 5\%$
10	$\pm 10\%$
20	$\pm 20\%$

'A'-SIDE METALLIZATION

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

NOTES

NOTE 1: ◆ DUAL DIE V_{BR} IS MEASURED FROM A TO A.
 V_{BR} MEASURED FROM A TO B WILL RESULT IN A
LOWER V_{BR} . CONTACT THE FACTORY FOR
SPECIFIC INFORMATION.

HIGHER POWER
RATINGS AVAILABLE.
CONTACT FACTORY FOR
DIE SPECIFICATIONS



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400 WATT TRANSIENT SUPPRESSOR DIE SPECIFICATIONS

TABLE 5A - 400 WATT TRANSIENT SUPPRESSOR DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

INDUSTRY STANDARD PART NUMBERS (NOTE 2) 400 WATT P4KE SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-7 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R)@V _{SO} (NOTE 3) µA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T (NOTE 4)		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 5)		MAX. TEMP. COEFFICIENT OF V _{BR} (%/°C)
				MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	
P4KE6.8	6.8-10.8-10	5.50	1000	6.12	7.48	10	10.8	38.0	0.057
P4KE6.8A	6.8-10.5-5	5.80	1000	6.45	7.14	10	10.5	40.0	0.057
P4KE7.5	7.5-11.7-10	6.05	500	6.75	8.25	10	11.7	35.0	0.061
P4KE7.5A	7.5-11.3-5	6.40	500	7.13	7.88	10	11.3	37.0	0.061
P4KE8.2	8.2-12.5-10	6.63	200	7.38	9.02	10	12.5	33.0	0.065
P4KE8.2A	8.2-12.1-5	7.02	200	7.79	8.61	10	12.1	34.0	0.065
P4KE9.1	9.1-13.8-10	7.37	50	8.19	10.00	1	13.8	30.0	0.068
P4KE9.1A	9.1-13.4-5	7.78	50	8.65	9.55	1	13.4	31.0	0.068
P4KE10	10-15.0-10	8.10	10	9.00	11.00	1	15.0	28.0	0.073
P4KE10A	10-14.5-5	8.55	10	9.50	10.50	1	14.5	29.0	0.073
P4KE11	11-16.2-10	8.92	5.0	9.90	12.10	1	16.2	26.0	0.075
P4KE11A	11-15.6-5	9.40	5.0	10.50	11.60	1	15.6	27.0	0.075
P4KE12	12-17.3-10	9.72	5.0	10.80	13.20	1	17.3	24.0	0.078
P4KE12A	12-16.7-5	10.20	5.0	11.40	12.60	1	16.7	25.0	0.078
P4KE13	13-19.0-10	10.50	5.0	11.70	14.30	1	19.0	22.0	0.061
P4KE13A	13-18.2-5	11.10	5.0	12.40	13.70	1	18.2	23.0	0.081
P4KE15	15-22.0-10	12.10	5.0	13.50	16.50	1	22.0	19.0	0.084
P4KE15A	15-21.2-5	12.80	5.0	14.30	15.80	1	21.2	20.0	0.084
P4KE16	16-23.5-10	12.90	5.0	14.40	17.60	1	23.5	17.8	0.086
P4KE16A	16-22.5-5	13.60	5.0	15.20	16.80	1	22.5	18.6	0.086
P4KE18	18-26.5-10	14.50	5.0	16.20	19.80	1	26.5	16.0	0.088
P4KE18A	18-25.2-5	15.30	5.0	17.10	18.90	1	25.2	16.5	0.088
P4KE20	20-29.1-10	16.20	5.0	18.00	22.00	1	29.1	14.0	0.090
P4KE20A	20-27.7-5	17.10	5.0	19.00	21.00	1	27.7	15.0	0.090
P4KE22	22-31.9-10	17.80	5.0	19.80	24.20	1	31.9	13.0	0.092
P4KE22A	22-30.6-5	18.80	5.0	20.90	23.10	1	30.6	13.7	0.092
P4KE24	24-34.7-10	19.40	5.0	21.60	26.40	1	34.7	12.0	0.091
P4KE24A	24-33.2-5	20.50	5.0	22.80	25.20	1	33.2	12.6	0.094
P4KE27	27-39.1-10	21.80	5.0	24.30	29.70	1	39.0	10.7	0.096
P4KE27A	27-37.5-5	23.10	5.0	25.70	28.40	1	37.5	11.0	0.096
P4KE30	30-43.5-10	24.30	5.0	27.00	33.00	1	43.5	9.6	0.097
P4KE30A	30-41.4-5	25.60	5.0	28.50	31.50	1	41.4	10.0	0.097
P4KE33	33-47.7-10	26.80	5.0	29.70	36.30	1	47.7	8.8	0.098
P4KE33A	33-45.7-5	28.20	5.0	31.40	34.70	1	45.7	9.0	0.098
P4KE36	36-52.0-10	29.10	5.0	32.40	39.60	1	52.0	8.0	0.099
P4KE36A	36-49.9-5	30.80	5.0	34.20	37.80	1	49.9	8.4	0.099
P4KE39	39-56.4-10	31.60	5.0	35.10	42.90	1	56.4	7.4	0.100
P4KE39A	39-53.9-5	33.30	5.0	37.10	41.00	1	53.9	7.7	0.100
P4KE43	43-61.9-10	34.80	5.0	38.70	47.30	1	61.9	6.7	0.101
P4KE43A	43-59.3-5	36.80	5.0	40.90	45.20	1	59.3	7.0	0.101
P4KE47	47-67.8-10	38.10	5.0	42.30	51.70	1	67.8	6.2	0.101
P4KE47A	47-64.8-5	40.20	5.0	44.70	49.40	1	64.8	6.4	0.101
P4KE51	51-70.1-10	41.30	5.0	45.90	56.10	1	73.5	5.7	0.102

THIS TABLE CONTINUES

NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
- NOTE 2:** ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE
- NOTE 3:** ♦ FOR BIPOLAR DEVICES WITH A V_{BR} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED
- NOTE 4:** ♦ DUAL DIE V_{BR} IS MEASURED FROM TOP TO TOP OF DIE. V_{BR} MEASURED FROM TOP TO BOTTOM WILL RESULT IN A LOWER V_{BR}
- NOTE 5:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE 7-7
♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE 7-7



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**400 WATT TRANSIENT
SUPPRESSOR
DIE SPECIFICATIONS**

TABLE 5A - 400 WATT TRANSIENT SUPPRESSOR DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

INDUSTRY STANDARD PART NUMBERS (NOTE 2) 400 WATT P4KE SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-7 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R)@V _{SO} (NOTE 3) µA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T (NOTE 4)		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 5)		MAX. TEMP. COEFFICIENT OF V _{BR} (%/°C)
				MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	
P4KE51A	51-70.1-5	43.60	5.0	48.50	53.60	1	70.1	6.0	0.102
P4KE56	56-80.5-10	45.40	5.0	50.40	61.60	1	80.5	5.2	0.103
P4KE56A	56-77.0-5	47.80	5.0	53.20	58.80	1	77.0	5.4	0.103
P4KE62	62-89.0-10	50.20	5.0	55.80	68.80	1	89.0	4.7	0.104
P4KE62A	62-85.0-5	53.00	5.0	58.90	65.10	1	85.0	5.0	0.104
P4KE68	68-96.0-10	55.10	5.0	61.20	74.80	1	96.0	4.2	0.104
P4KE68A	68-92.0-5	58.10	5.0	64.60	71.40	1	92.0	4.5	0.104
P4KE75	75-108.0-10	60.70	5.0	67.50	82.50	1	108.0	3.8	0.105
P4KE75A	75-103.0-5	64.10	5.0	71.30	78.80	1	103.0	4.0	0.105
P4KE82	82-118.0-10	66.40	5.0	73.80	90.20	1	118.0	3.5	0.105
P4KE82A	82-113.0-5	70.10	5.0	77.90	86.10	1	113.0	3.7	0.105
P4KE91	91-131.0-10	73.70	5.0	81.90	100.00	1	131.0	3.2	0.106
P4KE91A	91-125.0-5	77.80	5.0	86.50	95.50	1	125.0	3.3	0.106
P4KE100	100-144.0-10	81.00	5.0	90.00	110.00	1	144.0	2.9	0.106
P4KE100A	100-137.0-5	85.50	5.0	95.00	105.00	1	137.0	3.0	0.106
P4KE110	110-158.0-10	89.20	5.0	99.00	121.00	1	158.0	2.6	0.107
P4KE110A	110-152.0-5	94.00	5.0	105.00	116.00	1	152.0	2.7	0.107
P4KE120	120-173.0-10	97.20	5.0	108.00	132.00	1	173.0	2.4	0.107
P4KE120A	120-165.0-5	102.00	5.0	114.00	126.00	1	165.0	2.5	0.107
P4KE130	130-187.0-10	105.00	5.0	117.00	143.00	1	187.0	2.2	0.107
P4KE130A	130-179.0-5	111.00	5.0	124.00	137.00	1	179.0	2.3	0.107
P4KE150	150-215.0-10	121.00	5.0	135.00	165.00	1	215.0	1.9	0.108
P4KE150A	150-207.0-5	128.00	5.0	143.00	158.00	1	207.0	2.0	0.108
P4KE160	160-230.0-10	130.00	5.0	144.00	176.00	1	230.0	1.8	0.108
P4KE160A	160-219.0-5	136.00	5.0	152.00	168.00	1	219.0	1.9	0.108
P4KE170	170-244.0-10	138.00	5.0	153.00	187.00	1	244.0	1.7	0.108
P4KE170A	170-234.0-5	145.00	5.0	162.00	179.00	1	234.0	1.8	0.108
P4KE180	180-256.0-10	146.00	5.0	162.00	198.00	1	256.0	1.6	0.108
P4KE180A	180-246.0-5	154.00	5.0	171.00	189.00	1	246.0	1.7	0.108
P4KE200	200-287.0-10	162.00	5.0	180.00	220.00	1	287.0	1.4	0.108
P4KE200A	200-274.0-5	171.00	5.0	190.00	210.00	1	274.0	1.51	0.108
P4KE220	220-344.0-10	175.00	5.0	198.00	242.00	1	344.0	1.2	0.108
P4KE220A	220-328.0-5	185.00	5.0	209.00	231.00	1	328.0	1.3	0.108
P4KE250	250-360.0-10	202.00	5.0	225.00	275.00	1	360.0	1.1	0.110
P4KE250A	250-344.0-5	214.00	5.0	237.00	267.00	1	344.0	1.2	0.110
P4KE300	300-430.0-10	243.00	5.0	270.00	330.00	1	430.0	0.97	0.110
P4KE300A	300-414.0-5	256.00	5.0	285.00	315.00	1	414.0	1.0	0.110
P4KE350	350-504.0-10	284.00	5.0	315.00	385.00	1	504.0	0.83	0.110
P4KE350A	350-482.0-5	300.00	5.0	332.00	368.00	1	482.0	0.87	0.110
P4KE400	400-574.0-10	324.00	5.0	360.00	440.00	1	571.0	0.73	0.110
P4KE400A	400-548.0-5	342.00	5.0	380.00	420.00	1	548.0	0.76	0.110
P4KE440	440-598.0-10	356.00	5.0	396.00	484.00	1	598.0	0.66	0.110
P4KE440A	440-590.0-5	376.00	5.0	418.00	462.00	1	590.0	0.69	0.110

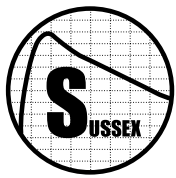
NOTES

NOTE 1: ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
NOTE 2: ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE

NOTE 3: ♦ FOR BIPOLAR DEVICES WITH A V_{BR} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED

NOTE 4: ♦ DUAL DIE V_{BR} IS MEASURED FROM TOP TO TOP OF DIE V_{BR}. MEASURED FROM TOP TO BOTTOM WILL RESULT IN A LOWER V_{BR}

NOTE 5: ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 1A ON PAGE 7-7
♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 2A ON PAGE 7-7



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**400 WATT DIE SPECIFICATIONS
CONTINUED**

ORDERING SPECIFIER

6.8 - 10.8 - 10

ORDER CODE FROM
PREVIOUS PAGES

TABLE 6A - AVAILABLE DIE SIZES

CODE	DIE TYPE	DIE SPECIFICATIONS REFER TO:
SZU1.5	400 WATT UNIPOLAR DIE	PAGE 7-1
SZZ1.5	400 WATT BIPOLAR DIE	PAGE 7-2
SZUFD1.5	400 WATT UNIPOLAR FLIP-DIE	PAGE 7-3
SZZD1.5	400 WATT BIPOLAR DUAL-DIE	PAGE 7-4

FIGURE 1A - TYPICAL JUNCTION CAPACITANCE

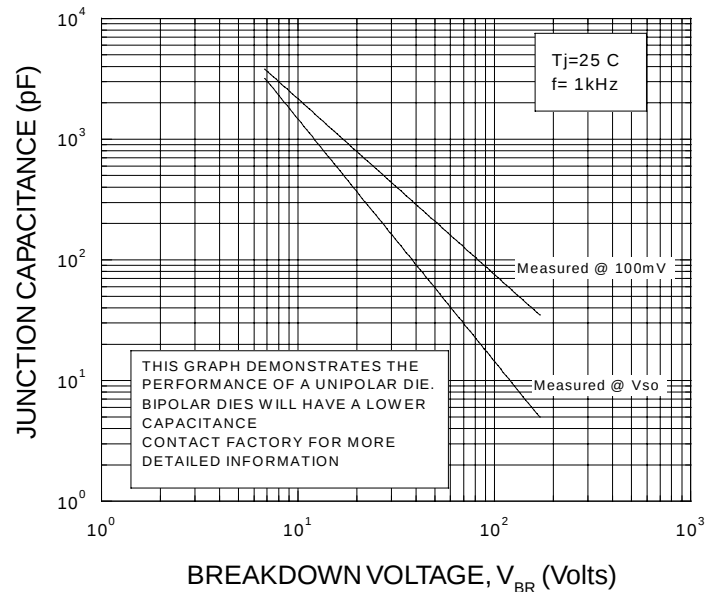


FIGURE 2A - PULSE WAVEFORM

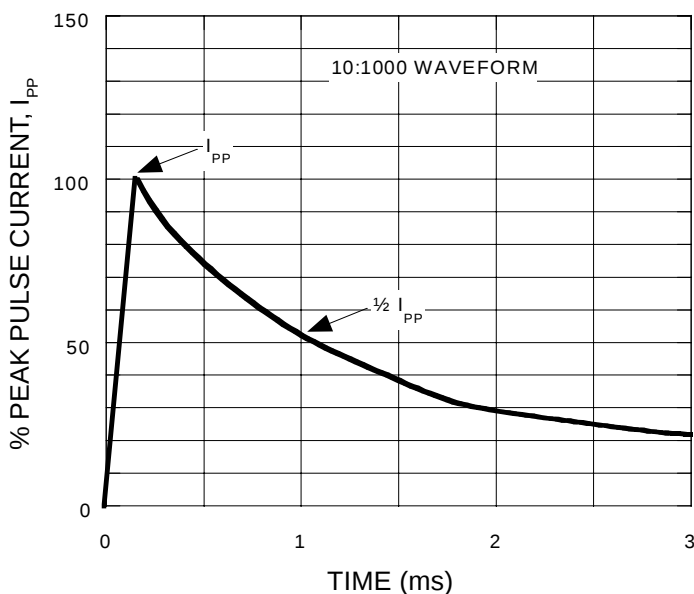
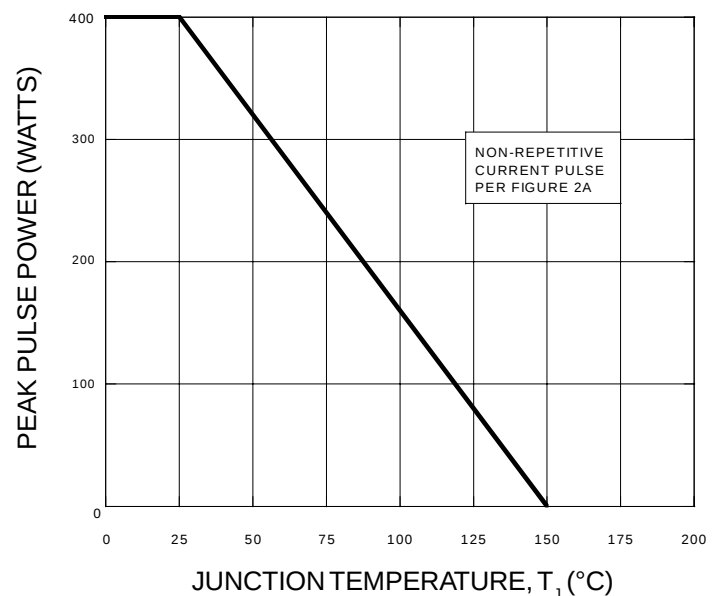


FIGURE 3A - PULSE DERATING CURVE





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**500 WATT TRANSIENT
SUPPRESSOR
DIE SPECIFICATIONS**

TABLE 7A - 500 WATT TRANSIENT SUPPRESSOR DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

INDUSTRY STANDARD PART NUMBERS (NOTE 2) 500 WATT SA SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-10 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V_{SO}) Volts	MAX. REVERSE LEAKAGE (I_R) @ V_{SO} (NOTE 3) μA	REVERSE BREAKDOWN VOLTAGE (V_{BR}) @ I_T (NOTE 4)		TEST CURRENT (I_T) mA	MAX. CLAMPING VOLTAGE (V_{CL}) @ PEAK PULSE CURRENT (I_{PP}) (NOTE 5)		MAX. TEMP. COEFFICIENT OF V_{BR} (mV/°C)
				MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	
SA5.0	6.8-9.6-6.5	5	600	6.4	7.3	10	9.6	54.0	5.00
SA5.0A	6.7-9.2-4.4	5	600	6.4	7.0	10	9.2	57.0	5.00
SA6.0	6.4-11.4-9.9	6	600	6.7	8.2	10	11.4	46.0	5.00
SA6.0A	7.0-10.3-4.9	6	600	6.7	7.4	10	10.3	50.0	5.00
SA6.5	8.0-12.3-9.9	6.5	400	7.2	8.8	10	12.3	42.0	5.00
SA6.5A	7.6-11.2-5	6.5	400	7.2	8.0	10	11.2	46.0	5.00
SA7.0	8.6-13.3-10	7	150	7.8	9.5	10	13.3	39.0	6.00
SA7.0A	8.1-12-5	7	150	7.8	8.6	10	12.0	43.0	6.00
SA7.5	9.2-14.3-10	7.5	50	8.3	10.2	1	14.3	36.0	7.00
SA7.5A	8.7-12.9-5	7.5	50	8.3	9.2	1	12.9	40.0	7.00
SA8.0	9.8-15-10	8	25	8.9	10.9	1	15.0	35.0	7.00
SA8.0A	9.3-13.6-5	8	25	8.9	9.8	1	13.6	38.0	7.00
SA8.5	10.4-15.9-9.8	8.5	10	9.4	11.5	1	15.9	33.0	8.00
SA8.5A	9.9-14.4-4.8	8.5	10	9.4	10.4	1	14.4	36.0	8.00
SA9	11.1-16.9-9.9	9	5	10.0	12.2	1	16.9	31.0	9.00
SA9.0A	10.5-15.4-5.2	9	5	10.0	11.1	1	15.4	34.0	9.00
SA10	12.3-18.8-10	10	1	11.1	13.6	1	18.8	27.0	10.00
SA10A	11.7-17-5.1	10	1	11.1	12.3	1	17.0	30.0	10.00
SA11	13.5-20.1-9.9	11	1	12.2	14.9	1	20.1	26.0	11.00
SA11A	12.8-18.2-5	11	1	12.2	13.5	1	18.2	28.0	11.00
SA12	14.8-22-10	12	1	13.3	16.3	1	22.0	23.0	12.00
SA12A	14-19.9-5	12	1	13.3	14.7	1	19.9	26.3	12.00
SA13	16-23.8-10	13	1	14.4	17.6	1	23.8	22.0	13.00
SA13A	15.1-21.5-4.9	13	1	14.4	15.9	1	21.5	24.0	13.00
SA14	17.3-25.8-10	14	1	15.6	19.1	1	25.8	20.3	14.00
SA14A	16.4-23.2-4.8	14	1	15.6	17.2	1	23.2	22.6	14.00
SA15	18.5-26.9-9.9	15	1	16.7	20.4	1	26.9	19.5	16.00
SA15A	17.6-24.4-5.1	15	1	16.7	18.5	1	24.4	21.0	16.00
SA16	19.8-28.8-10.1	16	1	17.8	21.8	1	28.8	18.0	19.00
SA16A	18.7-26-5	16	1	17.8	19.7	1	26.0	20.0	17.00
SA17	21-30.5-10	17	1	18.9	23.1	1	30.5	17.0	20.00
SA17A	19.9-27.6-5	17	1	18.9	20.9	1	27.6	19.0	19.00
SA18	22.2-32.2-9.9	18	1	20.0	24.4	1	32.2	16.3	21.00
SA18A	21.0-29.2-4.9	18	1	20.0	22.1	1	29.2	17.9	20.00
SA20	24.6-35.8-9.9	20	1	22.2	27.1	1	35.8	14.0	25.00
SA20A	23.3-32.4-4.9	20	1	22.2	24.5	1	32.4	16.0	23.00
SA22	27.1-39.4-9.9	22	1	24.4	29.8	1	39.4	13.0	28.00
SA22A	25.6-35.5-4.8	22	1	24.4	26.9	1	35.5	14.7	25.00
SA24	29.6-43-9.9	24	1	26.7	32.6	1	43.0	12.0	31.00
SA24A	28.1-38.9-4.9	24	1	26.7	29.5	1	38.9	13.4	28.00
SA26	32.1-46.6-9.9	26	1	28.9	35.3	1	46.6	11.0	31.00
SA26A	30.4-42.1-4.9	26	1	28.9	31.9	1	42.1	12.4	30.00
SA28	34.5-50.1-9.9	28	1	31.1	38.0	1	50.1	10.0	35.00
SA28A	32.7-45.4-5	28	1	31.1	34.4	1	45.4	11.5	31.00
SA30	37-53.5-10	30	1	33.3	40.7	1	53.5	9.8	39.00
SA30A	35.0-48.4-4.9	30	1	33.3	36.8	1	48.4	10.8	36.00

THIS TABLE CONTINUES

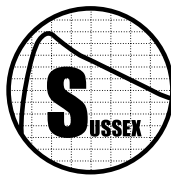
NOTES

NOTE 1: ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
NOTE 2: ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE

NOTE 3: ♦ FOR BIPOLAR DEVICES WITH A V_{BR} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED

NOTE 4: ♦ DUAL DIE V_{BR} IS MEASURED FROM TOP TO TOP OF DIE V_{BR} MEASURED FROM TOP TO BOTTOM WILL RESULT IN A LOWER V_{BR}

NOTE 5: ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE 7-10
♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE 7-10



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500 WATT TRANSIENT SUPPRESSOR DIE SPECIFICATIONS

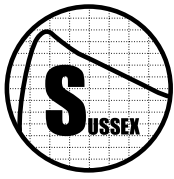
TABLE 7A - 500 WATT TRANSIENT SUPPRESSOR DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

INDUSTRY STANDARD PART NUMBERS (NOTE 2) 500 WATT SA SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-10 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R)@V _{SO} (NOTE 3) μA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T (NOTE 4)		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 5)		MAX. TEMP. COEFFICIENT OF V _{BR} (mV/°C)
				MIN.	MAX.		V _{CL}	I _{PP}	
				Volts	Volts		Volts	Amps	
SA33	40.8-59-10	33	1	36.7	44.9	1	59.0	8.8	42.00
SA33A	38.6-53.3-5	33	1	36.7	40.6	1	53.3	9.8	39.00
SA36	44.4-64.3-10	36	1	40.0	48.9	1	64.3	8.1	46.00
SA36A	42.1-58.1-4.9	36	1	40.0	44.2	1	58.1	9.0	41.00
SA40	49.3-71.4-10	40	1	44.4	54.3	1	71.4	7.3	51.00
SA40A	46.7-64.5-5	40	1	44.4	49.1	1	64.5	8.1	46.00
SA43	53.1-76.7-9.9	43	1	47.8	58.4	1	76.7	6.8	55.00
SA43A	50.3-69.4-4.8	43	1	47.9	52.8	1	69.4	7.5	50.00
SA45	55.5-80.3-9.9	45	1	50.0	61.1	1	80.3	6.5	58.00
SA45A	52.6-72.7-5	45	1	50.0	55.3	1	72.7	7.2	52.00
SA48	59.2-85.5-10	48	1	53.3	65.2	1	85.5	6.1	63.00
SA48A	56.1-77.4-4.9	48	1	53.3	58.9	1	77.4	6.7	56.00
SA51	63-91.1-10	51	1	56.7	69.3	1	91.1	5.7	66.00
SA51A	59.7-82.4-5	51	1	56.7	62.7	1	82.4	6.3	61.00
SA54	66.6-96.3-9.9	54	1	60.0	73.3	1	96.3	5.4	71.00
SA54A	63.1-87.1-4.9	54	1	60.0	66.3	1	87.1	6.0	65.00
SA58	71.5-103-9.9	58	1	64.4	78.7	1	103.0	5.0	78.00
SA58A	67.8-93.6-5	58	1	64.4	71.2	1	93.6	5.6	70.00
SA60	74.1-107-9.9	60	1	66.7	81.5	1	107.0	4.9	80.00
SA60A	70.2-96.8-4.9	60	1	66.7	73.7	1	96.8	5.4	71.00
SA64	79-114-10	64	1	71.1	86.9	1	114	4.6	86.00
SA64A	74.8-103-5	64	1	71.1	78.6	1	103	5.0	76.00
SA70	86.4-125-10	70	1	77.8	95.1	1	125	4.2	94.00
SA70A	81.9-113-5	70	1	77.8	86	1	113	4.6	85.00
SA75	92.6-134-10	75	1	83.3	102	1	134	3.9	101.00
SA75A	87.7-121-5	75	1	83.3	92.1	1	121	4.3	91.00
SA78	96.3-139-10	78	1	86.7	106	1	139	3.7	105.00
SA78A	91.2-126-4.9	78	1	86.7	95.8	1	126	4.1	95.00
SA85	104.7-151-9.8	85	1	94.4	115	1	151	3.4	114.00
SA85A	99.2-137-4.8	85	1	94.4	104	1	137	3.8	103.00
SA90	66-160-9.9	90	1	100.0	122	1	160	3.2	121.00
SA90A	105.5-146-5.2	90	1	100.0	111	1	146	3.5	110.00
SA100	123.5-179-10.1	100	1	111.0	136	1	179	2.9	135.00
SA100A	117-162-5.1	100	1	111.0	123	1	162	3.2	123.00
SA110	135.5-196-9.9	110	1	122.0	149	1	196	2.6	148.00
SA110A	128.5-177-5	110	1	122.0	135	1	177	2.9	133.00
SA120	148-214-10.1	120	1	133.0	163	1	214	2.4	162.00
SA120A	140-193-5	120	1	133.0	147	1	193	2.7	146.00
SA130	160-230-10	130	1	144.0	176	1	230	2.2	175.00
SA130A	151.5-209-4.9	130	1	144.0	159	1	209	2.5	158.00
SA150	185.5-268-9.9	150	1	167.0	204	1	268	1.9	203.00
SA150A	176-243-5.1	150	1	167.0	185	1	243	2.1	184.00
SA160	198-257-10.1	160	1	178.0	218	1	257	2.0	217.00
SA160A	187.5-259-5	160	1	178.0	197	1	259	2.0	196.00
SA170	210-304-10	170	1	189.0	231	1	304	1.7	230.00
SA170A	199-275-5	170	1	189.0	209	1	275	1.9	208.00

NOTES

NOTE 1: ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
NOTE 2: ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE

NOTE 3: ♦ FOR BIPOLAR DEVICES WITH A V_{BR} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED
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NOTE 5: ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE 7-10
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**500 WATT DIE
SPECIFICATIONS CONTINUED**

ORDERING SPECIFIER

6.8 - 9.6 - 6.5

ORDER CODE FROM
PREVIOUS PAGES

TABLE 8A - AVAILABLE DIE SIZES

CODE	DIE TYPE	DIE SPECIFICATIONS REFER TO:
SZU2	500 WATT UNIPOLAR DIE	PAGE 7-1
SZZ2	500 WATT BIPOLAR DIE	PAGE 7-2
SZUFD2	500 WATT UNIPOLAR FLIP-DIE	PAGE 7-3
SZZD2	500 WATT BIPOLAR DUAL-DIE	PAGE 7-4

**FIGURE 1A - TYPICAL JUNCTION
CAPACITANCE**

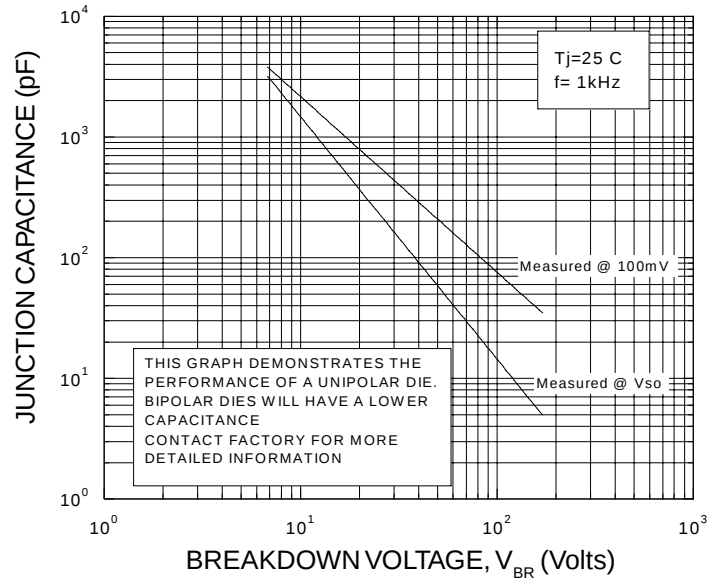


FIGURE 2A - PULSE WAVEFORM

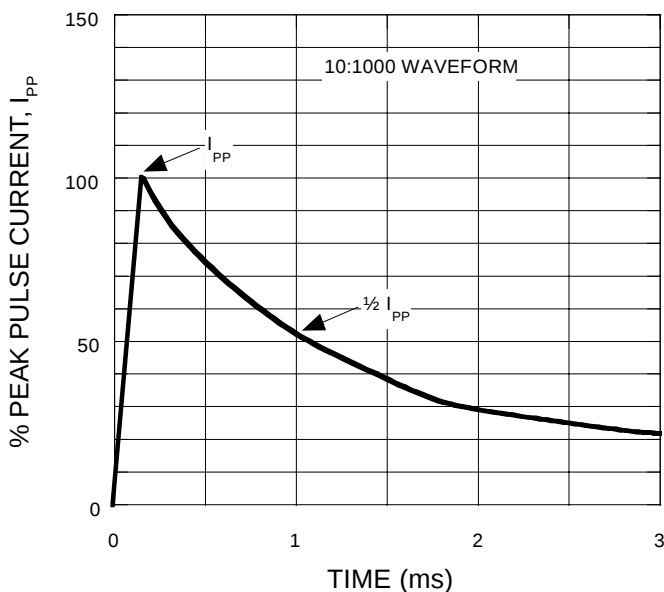
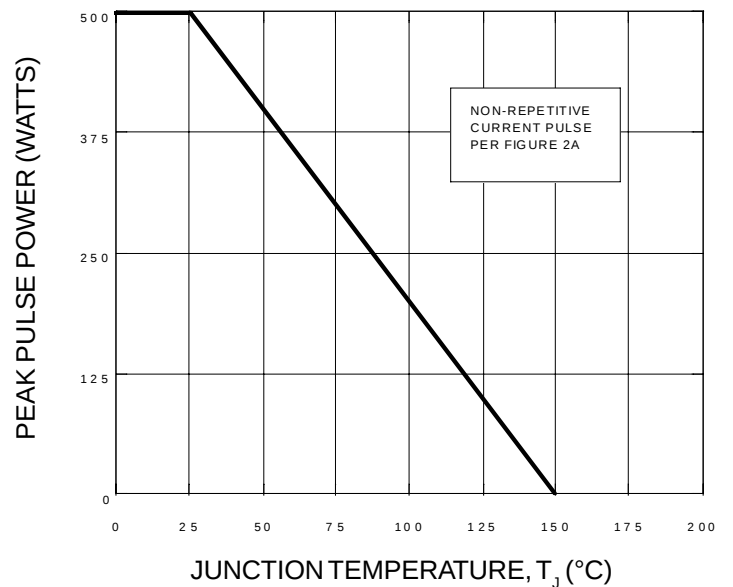


FIGURE 3A - PULSE DERATING CURVE





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600 WATT TRANSIENT SUPPRESSOR DIE SPECIFICATIONS

TABLE 9A - 600 WATT TRANSIENT SUPPRESSOR DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

INDUSTRY STANDARD PART NUMBERS 600 WATT P6KE SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-13 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R)@V _{SO} (NOTE 2) μA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T (NOTE 3)		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 4)		MAX. TEMP. COEFFICIENT OF V _{BR} (%/°C)
				MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	
P6KE6.8	6.8-10.8-10	5.50	1000	6.12	7.48	10	10.8	58.0	0.057
P6KE6.8A	6.8-10.5-5	5.80	1000	6.45	7.14	10	10.5	60.0	0.057
P6KE7.5	7.5-11.7-10	6.05	500	6.75	8.25	10	11.7	53.0	0.061
P6KE7.5A	7.5-11.3-5	6.40	500	7.13	7.88	10	11.3	55.0	0.061
P6KE8.2	8.2-12.5-10	6.63	200	7.38	9.02	10	12.5	50.0	0.065
P6KE8.2A	8.2-12.1-5	7.02	200	7.79	8.61	10	12.1	52.0	0.065
P6KE9.1	9.1-13.8-10	7.37	50	8.19	10.00	1	13.8	45.0	0.068
P6KE9.1A	9.1-13.4-5	7.78	50	8.65	9.55	1	13.4	47.0	0.068
P6KE10	10-15.0-10	8.10	10	9.00	11.00	1	15.0	42.0	0.073
P6KE10A	10-14.5-5	8.55	10	9.50	10.50	1	14.5	43.0	0.073
P6KE11	11-16.2-10	8.92	5.0	9.90	12.10	1	16.2	38.0	0.075
P6KE11A	11-15.6-5	9.40	5.0	10.50	11.60	1	15.6	40.0	0.075
P6KE12	12-17.3-10	9.72	5.0	10.80	13.20	1	17.3	36.0	0.078
P6KE12A	12-16.7-5	10.20	5.0	11.40	12.60	1	16.7	37.0	0.078
P6KE13	13-19.0-10	10.50	5.0	11.70	14.30	1	19.0	33.0	0.061
P6KE13A	13-18.2-5	11.10	5.0	12.40	13.70	1	18.2	34.0	0.081
P6KE15	15-22.0-10	12.10	5.0	13.50	16.50	1	22.0	28.0	0.084
P6KE15A	15-21.2-5	12.80	5.0	14.30	15.80	1	21.2	29.0	0.084
P6KE16	16-23.5-10	12.90	5.0	14.40	17.60	1	23.5	26.0	0.086
P6KE16A	16-22.5-5	13.60	5.0	15.20	16.80	1	22.5	28.0	0.086
P6KE18	18-26.5-10	14.50	5.0	16.20	19.80	1	26.5	23.0	0.088
P6KE18A	18-25.2-5	15.30	5.0	17.10	18.90	1	25.2	25.0	0.088
P6KE20	20-29.1-10	16.20	5.0	18.00	22.00	1	29.1	21.0	0.090
P6KE20A	20-27.7-5	17.10	5.0	19.00	21.00	1	27.7	22.0	0.090
P6KE22	22-31.9-10	17.80	5.0	19.80	24.20	1	31.9	19.0	0.092
P6KE22A	22-30.6-5	18.80	5.0	20.90	23.10	1	30.6	20.0	0.092
P6KE24	24-34.7-10	19.40	5.0	21.60	26.40	1	34.7	18.0	0.091
P6KE24A	24-33.2-5	20.50	5.0	22.80	25.20	1	33.2	19.0	0.094
P6KE27	27-39.1-10	21.80	5.0	24.30	29.70	1	39.0	16.0	0.096
P6KE27A	27-37.5-5	23.10	5.0	25.70	28.40	1	37.5	16.8	0.096
P6KE30	30-43.5-10	24.30	5.0	27.00	33.00	1	43.5	14.0	0.097
P6KE30A	30-41.4-5	25.60	5.0	28.50	31.50	1	41.4	15.0	0.097
P6KE33	33-47.7-10	26.80	5.0	29.70	36.30	1	47.7	13.0	0.098
P6KE33A	33-45.7-5	28.20	5.0	31.40	34.70	1	45.7	13.8	0.098
P6KE36	36-52.0-10	29.10	5.0	32.40	39.60	1	52.0	12.0	0.099
P6KE36A	36-49.9-5	30.80	5.0	34.20	37.80	1	49.9	12.6	0.099
P6KE39	39-56.4-10	31.60	5.0	35.10	42.90	1	56.4	11.1	0.100
P6KE39A	39-53.9-5	33.30	5.0	37.10	41.00	1	53.9	11.6	0.100
P6KE43	43-61.9-10	34.80	5.0	38.70	47.30	1	61.9	10.0	0.101
P6KE43A	43-59.3-5	36.80	5.0	40.90	45.20	1	59.3	10.6	0.101
P6KE47	47-67.8-10	38.10	5.0	42.30	51.70	1	67.8	9.2	0.101
P6KE47A	47-64.8-5	40.20	5.0	44.70	49.40	1	64.8	9.7	0.101
P6KE51	51-70.1-10	41.30	5.0	45.90	56.10	1	73.5	8.5	0.102

THIS TABLE CONTINUES

NOTES

NOTE 1: ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
NOTE 2: ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE

NOTE 3: ♦ FOR BIPOLAR DEVICES WITH A V_{BR} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED

NOTE 4: ♦ DUAL DIE V_{BR} IS MEASURED FROM TOP TO TOP OF DIE V_{BR} MEASURED FROM TOP TO BOTTOM WILL RESULT IN A LOWER V_{BR}

NOTE 5: ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE 7-13
 ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE 7-13



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**600 WATT TRANSIENT
SUPPRESSOR
DIE SPECIFICATIONS**

TABLE 9A - 600 WATT TRANSIENT SUPPRESSOR DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

INDUSTRY STANDARD PART NUMBERS	SUSSEX ORDER CODE	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R)@ V _{SO} (NOTE 2) µA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T (NOTE 3)		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 4)		MAX. TEMP.
				MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	COEFFICIENT OF VBR (%/°C)
600 WATT P6KE SERIES	REFER TO PAGE 7-13 FOR ORDER SPECIFIER								
P6KE51A	51-70.1-5	43.60	5.0	48.50	53.60	1	70.1	8.9	0.102
P6KE56	56-80.5-10	45.40	5.0	50.40	61.60	1	80.5	7.8	0.103
P6KE56A	56-77.0-5	47.80	5.0	53.20	58.80	1	77.0	8.1	0.103
P6KE62	62-89.0-10	50.20	5.0	55.80	68.20	1	89.0	7.0	0.104
P6KE62A	62-85.0-5	53.00	5.0	58.90	65.10	1	85.0	7.4	0.104
P6KE68	68-96.0-10	55.10	5.0	61.20	74.80	1	96.0	6.4	0.104
P6KE68A	68-92.0-5	58.10	5.0	64.60	71.40	1	92.0	6.8	0.104
P6KE75	75-108.0-10	60.70	5.0	67.50	82.50	1	108.0	5.8	0.105
P6KE75A	75-103.0-5	64.10	5.0	71.30	78.80	1	103.0	6.1	0.105
P6KE82	82-118.0-10	66.40	5.0	73.80	90.20	1	118.0	5.3	0.105
P6KE82A	82-113.0-5	70.10	5.0	77.90	86.10	1	113.0	5.5	0.105
P6KE91	91-131.0-10	73.70	5.0	81.90	100.00	1	131.0	4.8	0.106
P6KE91A	91-125.0-5	77.80	5.0	86.50	95.50	1	125.0	5.0	0.106
P6KE100	100-144.0-10	81.00	5.0	90.00	110.00	1	144.0	4.3	0.106
P6KE100A	100-137.0-5	85.50	5.0	95.00	105.00	1	137.0	4.5	0.106
P6KE110	110-158.0-10	89.20	5.0	99.00	121.00	1	158.0	3.9	0.107
P6KE110A	110-152.0-5	94.00	5.0	105.00	116.00	1	152.0	4.1	0.107
P6KE120	120-173.0-10	97.20	5.0	108.00	132.00	1	173.0	3.6	0.107
P6KE120A	120-165.0-5	102.00	5.0	114.00	126.00	1	165.0	3.8	0.107
P6KE130	130-187.0-10	105.00	5.0	117.00	143.00	1	187.0	3.3	0.107
P6KE130A	130-179.0-5	111.00	5.0	124.00	137.00	1	179.0	3.5	0.107
P6KE150	150-215.0-10	121.00	5.0	135.00	165.00	1	215.0	2.9	0.108
P6KE150A	150-207.0-5	128.00	5.0	143.00	158.00	1	207.0	3.0	0.108
P6KE160	160-230.0-10	130.00	5.0	144.00	176.00	1	230.0	2.7	0.108
P6KE160A	160-219.0-5	136.00	5.0	152.00	168.00	1	219.0	2.8	0.108
P6KE170	170-244.0-10	138.00	5.0	153.00	187.00	1	244.0	2.5	0.108
P6KE170A	170-234.0-5	145.00	5.0	162.00	179.00	1	234.0	2.6	0.108
P6KE180	180-256.0-10	146.00	5.0	162.00	198.00	1	256.0	2.4	0.108
P6KE180A	180-246.0-5	154.00	5.0	171.00	189.00	1	246.0	2.5	0.108
P6KE200	200-287.0-10	162.00	5.0	180.00	220.00	1	287.0	2.1	0.108
P6KE200A	200-274.0-5	171.00	5.0	190.00	210.00	1	274.0	2.2	0.108
P6KE220	220-344.0-10	175.00	5.0	198.00	242.00	1	344.0	1.8	0.108
P6KE220A	220-328.0-5	185.00	5.0	209.00	231.00	1	328.0	1.9	0.108
P6KE250	250-360.0-10	202.00	5.0	225.00	275.00	1	360.0	1.7	0.110
P6KE250A	250-344.0-5	214.00	5.0	237.00	263.00	1	344.0	1.8	0.110
P6KE300	300-430.0-10	243.00	5.0	270.00	330.00	1	430.0	1.4	0.110
P6KE300A	300-414.0-5	256.00	5.0	285.00	315.00	1	414.0	1.5	0.110
P6KE350	350-504.0-10	284.00	5.0	315.00	385.00	1	504.0	1.2	0.110
P6KE350A	350-482.0-5	300.00	5.0	332.00	368.00	1	482.0	1.3	0.110
P6KE400	400-574.0-10	324.00	5.0	360.00	440.00	1	571.0	1.9	0.110
P6KE400A	400-548.0-5	342.00	5.0	380.00	420.00	1	548.0	1.1	0.110
P6KE440	440-598.0-10	356.00	5.0	396.00	484.00	1	598.0	0.99	0.110
P6KE440A	440-590.0-5	376.00	5.0	418.00	462.00	1	590.0	1.04	0.110

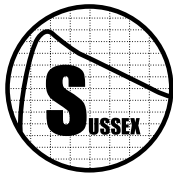
NOTES

NOTE 1: ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
NOTE 2: ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE

NOTE 3: ♦ FOR BIPOLAR DEVICES WITH A V_{BR} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED

NOTE 4: ♦ DUAL DIE V_{BR} IS MEASURED FROM TOP TO TOP OF DIE V_{BR} MEASURED FROM TOP TO BOTTOM WILL RESULT IN A LOWER V_{BR}

NOTE 5: ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE 7-13
♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE 7-13



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**600 WATT DIE
SPECIFICATIONS CONTINUED**

ORDERING SPECIFIER

6.8 - 10.8 - 10

ORDER CODE FROM
PREVIOUS PAGES

TABLE 10A - AVAILABLE DIE SIZES

CODE	DIE TYPE	DIE SPECIFICATIONS REFER TO:
SZU3	600 WATT UNIPOLAR DIE	PAGE 7-1
SZZ3	600 WATT BIPOLAR DIE	PAGE 7-2
SZUFD3	600 WATT UNIPOLAR FLIP-DIE	PAGE 7-3
SZZD3	600 WATT BIPOLAR DUAL-DIE	PAGE 7-4

FIGURE 1A - TYPICAL JUNCTION CAPACITANCE

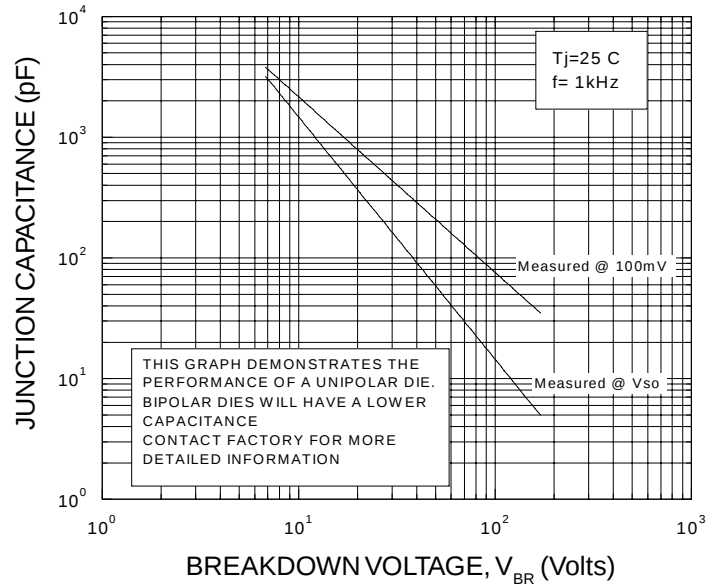


FIGURE 2A - PULSE WAVEFORM

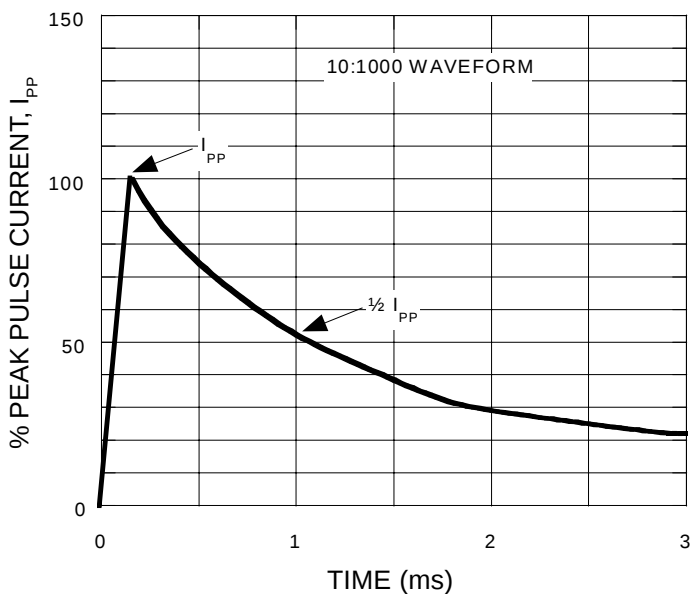
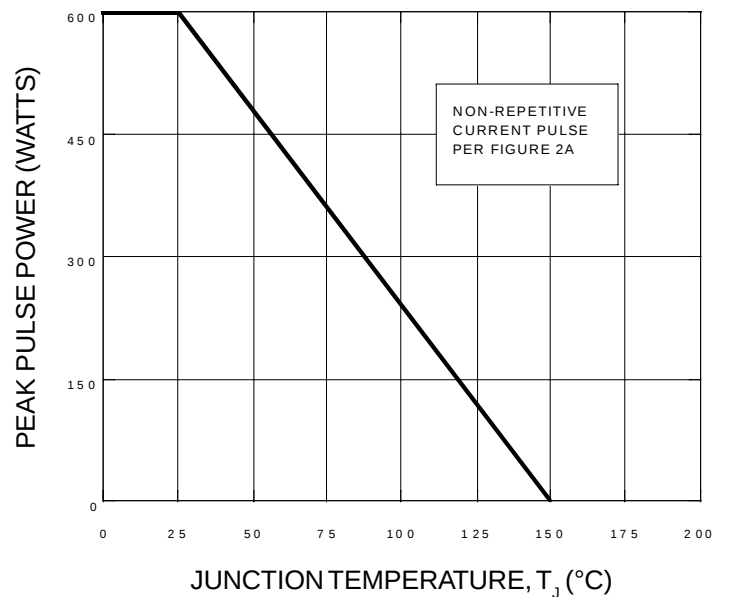


FIGURE 3A - PULSE DERATING CURVE





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**1500 WATT TRANSIENT
SUPPRESSOR
DIE SPECIFICATIONS**

TABLE 11A - 1500 WATT TRANSIENT SUPPRESSOR DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

JEDEC PART NUMBERS (NOTE 2)	INDUSTRY STANDARD PART NUMBERS 1500 WATT 1.5KE SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-16 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R) @ V _{SO} (NOTE 3) μA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T (NOTE 4)		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 5)		MAX. TEMP. COEFFICIENT OF V _{BR} (%/°C)
					MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	
1N6267	1.5KE6.8	6.8-10.8-10	5.50	1000	6.12	7.48	10	10.8	145.0	0.057
1N6267A	1.5KE6.8A	6.8-10.5-5	5.80	1000	6.45	7.14	10	10.5	150.0	0.057
1N6268	1.5KE7.5	7.5-11.7-10	6.05	500	6.75	8.25	10	11.7	134.0	0.061
1N6268A	1.5KE7.5A	7.5-11.3-5	6.40	500	7.13	7.88	10	11.3	139.0	0.061
1N6269	1.5KE8.2	8.2-12.5-10	6.63	200	7.38	9.02	10	12.5	126.0	0.065
1N6269A	1.5KE8.2A	8.2-12.1-5	7.02	200	7.79	8.61	10	12.1	130.0	0.065
1N6270	1.5KE9.1	9.1-13.8-10	7.37	50	8.19	10.00	1	13.8	114.0	0.068
1N6270A	1.5KE9.1A	9.1-13.4-5	7.78	50	8.65	9.55	1	13.4	117.0	0.068
1N6271	1.5KE10	10-15.0-10	8.10	10	9.00	11.00	1	15.0	105.0	0.073
1N6271A	1.5KE10A	10-14.5-5	8.55	10	9.50	10.50	1	14.5	108.0	0.073
1N6272	1.5KE11	11-16.2-10	8.92	5.0	9.90	12.10	1	16.2	97.0	0.075
1N6272A	1.5KE11A	11-15.6-5	9.40	5.0	10.50	11.60	1	15.6	100.0	0.075
1N6273	1.5KE12	12-17.3-10	9.72	5.0	10.80	13.20	1	17.3	91.0	0.078
1N6273A	1.5KE12A	12-16.7-5	10.20	5.0	11.40	12.60	1	16.7	94.0	0.078
1N6274	1.5KE13	13-19.0-10	10.50	5.0	11.70	14.30	1	19.0	82.0	0.061
1N6274A	1.5KE13A	13-18.2-5	11.10	5.0	12.40	13.70	1	18.2	86.0	0.081
1N6275	1.5KE15	15-22.0-10	12.10	5.0	13.50	16.50	1	22.0	71.0	0.084
1N6275A	1.5KE15A	15-21.2-5	12.80	5.0	14.30	15.80	1	21.2	74.0	0.084
1N6276	1.5KE16	16-23.5-10	12.90	5.0	14.40	17.60	1	23.5	67.0	0.086
1N6276A	1.5KE16A	16-22.5-5	13.60	5.0	15.20	16.80	1	22.5	70.0	0.086
1N6277	1.5KE18	18-26.5-10	14.50	5.0	16.20	19.80	1	26.5	59.0	0.088
1N6277A	1.5KE18A	18-25.2-5	15.30	5.0	17.10	18.90	1	25.2	60.0	0.088
1N6278	1.5KE20	20-29.1-10	16.20	5.0	18.00	22.00	1	29.1	54.0	0.090
1N6278A	1.5KE20A	20-27.7-5	17.10	5.0	19.00	21.00	1	27.7	56.0	0.090
1N6279	1.5KE22	22-31.9-10	17.80	5.0	19.80	24.20	1	31.9	49.0	0.092
1N6279A	1.5KE22A	22-30.6-5	18.80	5.0	20.90	23.10	1	30.6	51.0	0.092
1N6280	1.5KE24	24-34.7-10	19.40	5.0	21.60	26.40	1	34.7	45.0	0.091
1N6280A	1.5KE24A	24-33.2-5	20.50	5.0	22.80	25.20	1	33.2	47.0	0.094
1N6281	1.5KE27	27-39.1-10	21.80	5.0	24.30	29.70	1	39.1	40.0	0.096
1N6281A	1.5KE27A	27-37.5-5	23.10	5.0	25.70	28.40	1	37.5	42.0	0.096
1N6282	1.5KE30	30-43.5-10	24.30	5.0	27.00	33.00	1	43.5	36.0	0.097
1N6282A	1.5KE30A	30-41.4-5	25.60	5.0	28.50	31.50	1	41.4	38.0	0.097
1N6283	1.5KE33	33-47.7-10	26.80	5.0	29.70	36.30	1	47.7	33.0	0.098
1N6283A	1.5KE33A	33-45.7-5	28.20	5.0	31.40	34.70	1	45.7	34.0	0.098
1N6284	1.5KE36	36-52.0-10	29.10	5.0	32.40	39.60	1	52.0	30.0	0.099
1N6284A	1.5KE36A	36-49.9-5	30.80	5.0	34.20	37.80	1	49.9	31.0	0.099
1N6285	1.5KE39	39-56.4-10	31.60	5.0	35.10	42.90	1	56.4	27.0	0.100
1N6285A	1.5KE39A	39-53.9-5	33.30	5.0	37.10	41.00	1	53.9	29.0	0.100
1N6286	1.5KE43	43-61.9-10	34.80	5.0	38.70	47.30	1	61.9	25.0	0.101
1N6286A	1.5KE43A	43-59.3-5	36.80	5.0	40.90	45.20	1	59.3	26.0	0.101
1N6287	1.5KE47	47-67.8-10	36.10	5.0	42.30	51.70	1	67.8	23.0	0.101
1N6287A	1.5KE47A	47-64.8-5	40.20	5.0	44.70	49.40	1	64.8	24.0	0.101
1N6288	1.5KE51	51-70.1-10	41.30	5.0	45.90	56.10	1	73.5	21.0	0.102

THIS TABLE CONTINUES

NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
- NOTE 2:** ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE
- NOTE 3:** ♦ FOR BIPOLAR DEVICES WITH A V_{BR} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED
- NOTE 4:** ♦ DUAL DIE V_{BR} IS MEASURED FROM TOP TO TOP OF DIE V_{BR} MEASURED FROM TOP TO BOTTOM WILL RESULT IN A LOWER V_{BR}
- NOTE 5:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE 7-16
♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE 7-16



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**1500 WATT TRANSIENT
SUPPRESSOR
DIE SPECIFICATIONS**

TABLE 11A - 1500 WATT TRANSIENT SUPPRESSOR DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

JEDEC PART NUMBERS (NOTE 2)	INDUSTRY STANDARD PART NUMBERS 1500 WATT 1.5KE SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-16 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R)@ V _{SO} (NOTE 3) µA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T (NOTE 4)		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 5)		MAX. TEMP. COEFFICIENT OF V _{BR} (%/°C)
					MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	
1N6288A	1.5KE51A	51-70.1-5	43.60	5.0	48.50	53.60	1	70.1	22.0	0.102
1N6289	1.5KE56	56-80.5-10	45.60	5.0	50.40	61.80	1	80.5	19.0	0.103
1N6289A	1.5KE56A	56-77.0-5	47.80	5.0	53.20	58.80	1	77.0	20.0	0.103
1N6290	1.5KE62	62-89.0-10	50.20	5.0	55.80	68.20	1	89.0	17.0	0.104
1N6290A	1.5KE62A	62-85.0-5	53.00	5.0	58.90	65.10	1	85.0	18.0	0.104
1N6291	1.5KE68	68-96.0-10	55.10	5.0	61.20	74.80	1	96.0	16.0	0.104
1N6291A	1.5KE68A	68-92.0-5	58.10	5.0	64.60	71.40	1	92.0	17.0	0.104
1N6292	1.5KE75	75-108.0-10	60.70	5.0	67.50	82.50	1	108.0	14.0	0.105
1N6292A	1.5KE75A	75-103.0-5	64.10	5.0	71.30	78.80	1	103.0	15.0	0.105
1N6293	1.5KE82	82-118.0-10	66.40	5.0	73.80	90.20	1	118.0	13.0	0.105
1N6293A	1.5KE82A	82-113.0-5	70.10	5.0	77.90	86.10	1	113.0	13.9	0.105
1N6294	1.5KE91	91-131.0-10	73.70	5.0	81.90	100.00	1	131.0	12.0	0.106
1N6294A	1.5KE91A	91-125.0-5	77.80	5.0	86.50	95.50	1	125.0	12.6	0.106
1N6295	1.5KE100	100-144.0-10	81.00	5.0	90.00	110.00	1	144.0	10.9	0.106
1N6295A	1.5KE100A	100-137.0-5	85.50	5.0	95.00	105.00	1	137.0	11.4	0.106
1N6296	1.5KE110	110-158.0-10	89.20	5.0	99.00	121.00	1	158.0	9.9	0.107
1N6296A	1.5KE110A	110-152.0-5	94.00	5.0	106.00	116.00	1	152.0	10.3	0.107
1N6297	1.5KE120	120-173.0-10	97.20	5.0	108.00	132.00	1	173.0	9.1	0.107
1N6297A	1.5KE120A	120-165.0-5	102.00	5.0	114.00	126.00	1	165.0	9.5	0.107
1N6298	1.5KE130	130-187.0-10	106.00	5.0	117.00	143.00	1	187.0	8.4	0.107
1N6298A	1.5KE130A	130-179.0-5	111.00	5.0	124.00	137.00	1	179.0	8.7	0.107
1N6299	1.5KE150	150-215.0-10	121.00	5.0	136.00	165.00	1	215.0	7.3	0.108
1N6299A	1.5KE150A	150-207.0-5	128.00	5.0	143.00	158.00	1	207.0	7.6	0.108
1N6300	1.5KE160	160-230.0-10	130.00	5.0	144.00	176.00	1	230.0	6.8	0.108
1N6300A	1.5KE160A	160-219.0-5	136.00	5.0	152.00	168.00	1	219.0	7.1	0.108
1N6301	1.5KE170	170-244.0-10	138.00	5.0	153.00	187.00	1	244.0	6.4	0.108
1N6301A	1.5KE170A	170-234.0-5	145.00	5.0	162.00	179.00	1	234.0	6.7	0.108
1N6302	1.5KE180	180-256.0-10	146.00	5.0	162.00	198.00	1	256.0	6.1	0.108
1N6302A	1.5KE180A	180-246.0-5	154.00	5.0	171.00	189.00	1	246.0	6.4	0.108
1N6303	1.5KE200	200-287.0-10	162.00	5.0	180.00	220.00	1	287.0	5.4	0.108
1N6303A	1.5KE200A	200-274.0-5	171.00	5.0	190.00	210.00	1	274.0	5.7	0.108
N/A	1.5KE220	220-344.0-10	175.00	5.0	196.00	242.00	1	344.0	4.5	0.108
N/A	1.5KE220A	220-328.0-5	185.00	5.0	209.00	231.00	1	328.0	4.8	0.108
N/A	1.5KE250	250-360.0-10	202.00	5.0	225.00	275.00	1	360.0	4.3	0.110
N/A	1.5KE250A	250-344.0-5	214.00	5.0	237.00	263.00	1	344.0	4.5	0.110
N/A	1.5KE300	300-430.0-10	243.00	5.0	270.00	330.00	1	430.0	3.6	0.110
N/A	1.5KE300A	300-414.0-5	256.00	5.0	285.00	315.00	1	414.0	3.8	0.110
N/A	1.5KE350	350-504.0-10	284.00	5.0	315.00	385.00	1	504.0	3.1	0.110
N/A	1.5KE350A	350-482.0-5	300.00	5.0	333.00	368.00	1	482.0	3.2	0.110
N/A	1.5KE400	400-574.0-10	324.00	5.0	360.00	440.00	1	574.0	2.7	0.110
N/A	1.5KE400A	400-548.0-5	342.00	5.0	380.00	420.00	1	548.0	2.8	0.110
N/A	1.5KE440	440-598.0-10	356.00	5.0	396.00	484.00	1	598.0	2.4	0.110
N/A	1.5KE440A	440-590.0-5	376.00	5.0	418.00	462.00	1	590.0	2.6	0.110

NOTES

NOTE 1: ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
NOTE 2: ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE

NOTE 3: ♦ FOR BIPOLAR DEVICES WITH A V_{BR} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED

NOTE 4: ♦ DUAL DIE V_{BR} IS MEASURED FROM TOP TO TOP OF DIE V_{BR} MEASURED FROM TOP TO BOTTOM WILL RESULT IN A LOWER V_{BR}

NOTE 5: ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE 7-16
♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE 7-16



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**1500 WATT DIE
SPECIFICATIONS
CONTINUED**

ORDERING SPECIFIER

6.8 - 10.8 - 10

ORDER CODE FROM
PREVIOUS PAGES

TABLE 12A - AVAILABLE DIE SIZES

CODE	DIE TYPE	DIE SPECIFICATIONS REFER TO:
SZU16	1500 WATT UNIPOLAR DIE	PAGE 7-1
SZZ16	1500 WATT BIPOLAR DIE	PAGE 7-2
SZUFD16	1500 WATT UNIPOLAR FLIP-DIE	PAGE 7-3
SZZD16	1500 WATT BIPOLAR DUAL-DIE	PAGE 7-4

FIGURE 1A - TYPICAL JUNCTION CAPACITANCE

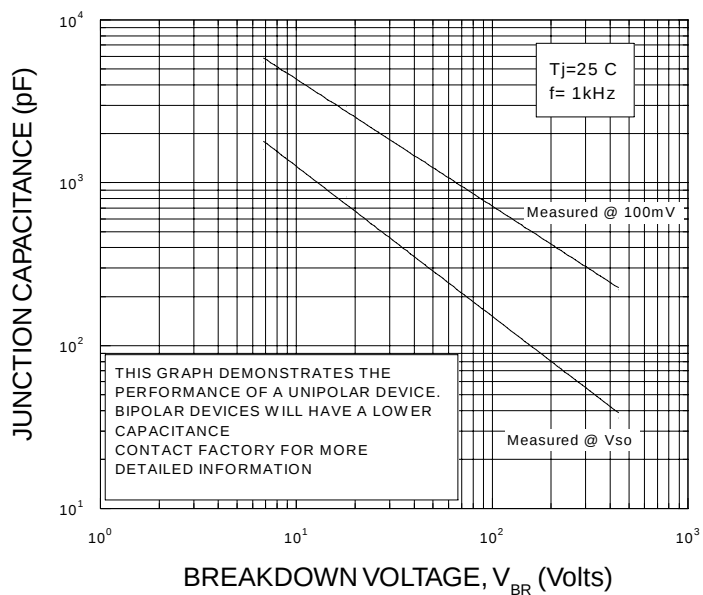


FIGURE 2A - PULSE WAVEFORM

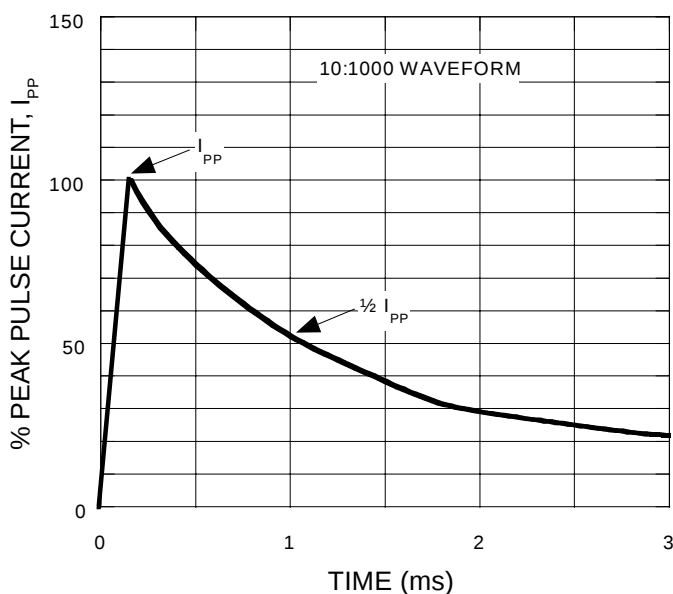
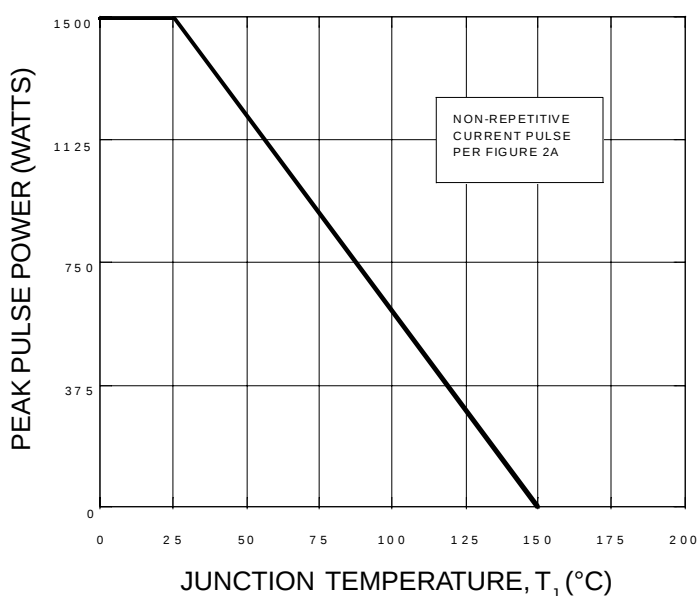
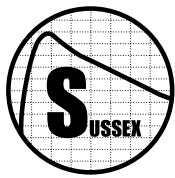


FIGURE 3A - PULSE DERATING CURVE





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**5000 WATT TRANSIENT
SUPPRESSOR
DIE SPECIFICATIONS**

TABLE 13A - 5000 WATT TRANSIENT SUPPRESSOR DIE ELECTRICAL SPECIFICATIONS									
INDUSTRY STANDARD PART NUMBERS (NOTE 2) 5000 WATT 5KP SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-19 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R)@ V _{SO} (NOTE 3) μA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T		TEST CURRE NT (I _T) m A	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK		MAX. TEMP. COEFFIC IENT OF V _{BR} (% /°C)
				MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} A m p s	
5KP5.0	6.8-9.6-6.5	5.0	2000	6.4	7.3	50	9.6	546	0.057
5KP5.0A	6.7-9.2-4.4	5.0	2000	6.4	7.0	50	9.2	570	0.057
5KP6.0	7.4-11.4-9.9	6.0	5000	6.7	8.2	50	11.4	460	0.061
5KP6.0A	7.0-10.3-4.9	6.0	5000	6.7	7.4	50	10.3	509	0.061
5KP6.5	8.0-12.3-9.9	6.5	2000	7.2	8.8	50	12.3	426	0.065
5KP6.5A	7.6-11.2-5	6.5	2000	7.2	8.0	50	11.2	468	0.065
5KP7.0	8.6-13.3-10	7.0	1000	7.8	9.5	50	13.3	394	0.068
5KP7.0A	8.1-12-5	7.0	1000	7.8	8.6	50	12.0	437	0.068
5KP7.5	9.2-14.3-10	7.5	250	8.3	10.2	5.0	14.3	367	0.073
5KP7.5A	8.7-12.9-5	7.5	250	8.3	9.2	5.0	12.9	406	0.073
5KP8.0	9.8-15-10	8.0	150	8.9	10.9	5.0	15.0	350	0.075
5KP8.0A	9.3-13.6-5	8.0	150	8.9	9.8	5.0	13.6	386	0.075
5KP8.5	10.4-15.9-9.8	8.5	50	9.4	11.5	5.0	15.9	330	0.078
5KP8.5A	9.9-14.4-4.8	8.5	50	9.4	10.4	5.0	14.4	364	0.078
5KP9.0	11.1-16.9-9.9	9.0	20	10.0	12.2	5.0	16.9	310	0.081
5KP9.0A	10.5-15.4-5.2	9.0	20	10.0	11.1	5.0	15.4	340	0.081
5KP10	12.3-18.8-10.1	10	15	11.1	13.6	5.0	18.8	279	0.084
5KP10A	11.7-17-5.1	10	15	11.1	12.3	5.0	17.0	308	0.084
5KP11	13.5-20.1-9.9	11	10	12.2	14.9	5.0	20.1	261	0.086
5KP11A	12.8-18.2-5	11	10	12.2	13.5	5.0	18.2	288	0.086
5KP12	14.8-22-10.1	12	10	13.3	16.3	5.0	22.0	238	0.088
5KP12A	14-19.9-5	12	10	13.3	14.7	5.0	19.9	263	0.088
5KP13	16-23.8-10	13	10	14.4	17.6	5.0	23.8	220	0.090
5KP13A	15.1-21.5-4.9	13	10	14.4	15.9	5.0	21.5	244	0.090
5KP14	17.3-25.8-10	14	10	15.6	19.1	5.0	25.8	203	0.092
5KP14A	16.4-23.2-4.8	14	10	15.6	17.2	5.0	23.2	226	0.092
5KP15	18.5-26.9-9.9	15	10	16.7	20.4	5.0	26.9	195	0.094
5KP15A	17.6-24.4-5.1	15	10	16.7	18.5	5.0	24.4	215	0.094
5KP16	19.8-28.8-10.1	16	10	17.8	21.8	5.0	28.8	182	0.096
5KP16A	18.7-26-5	16	10	17.8	19.7	5.0	26.0	201	0.096
5KP17	21-30.5-10	17	10	18.9	23.1	5.0	30.5	172	0.097
5KP17A	19.9-27.6-5	17	10	18.9	20.9	5.0	27.6	190	0.097
5KP18	22.2-32.2-9.9	18	10	20.0	24.4	5.0	32.2	163	0.098
5KP18A	21.0-29.2-4.9	18	10	20.0	22.1	5.0	29.2	179	0.098
5KP20	24.6-35.8-9.9	20	10	22.2	27.1	5.0	35.8	146	0.099
5KP20A	23.3-32.4-4.9	20	10	22.2	24.5	5.0	32.4	162	0.099
5KP22	27.1-39.4-9.9	22	10	24.4	29.8	5.0	39.4	133	0.100
5KP22A	25.6-35.5-4.8	22	10	24.4	26.9	5.0	35.5	147	0.100
5KP24	29.6-43-9.9	24	10	26.7	32.6	5.0	43.0	122	0.101
5KP24A	28.1-38.9-4.9	24	10	26.7	29.5	5.0	38.9	134	0.101
5KP26	32.1-46.6-9.9	26	10	28.9	35.3	5.0	46.6	112	0.101
5KP26A	30.4-42.1-4.9	26	10	28.9	31.9	5.0	42.1	124	0.101
5KP28	34.5-50.1-9.9	28	10	31.1	38.0	5.0	50.1	104	0.102
5KP28A	32.7-45.4-5	28	10	31.1	34.4	5.0	45.4	115	0.102
5KP30	37-53.5-10	30	10	33.3	40.7	5.0	53.5	98	0.103
5KP30A	35-48.4-4.9	30	10	33.3	36.8	5.0	48.4	108	0.103
5KP33	40.8-59-10	33	10	36.7	44.9	5.0	59.0	88	0.104
5KP33A	38.6-53.3-5	33	10	36.7	40.6	5.0	53.3	98	0.104
5KP36	44.4-64.3-10	36	10	40.0	48.9	5.0	64.3	81	0.104
5KP36A	42.1-58.1-4.9	36	10	40.0	44.2	5.0	58.1	90	0.104
5KP40	49.3-71.4-10	40	10	44.4	54.3	5.0	71.4	73	0.105

THIS TABLE CONTINUES

NOTES

NOTE 1: ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
NOTE 2: ♦ FOR BIPOLAR DEVICES WITH A V_{SO} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED
NOTE 3: ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE.

NOTE 4: ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2D ON PAGE 7-19
 ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3D ON PAGE 7-19



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5000 WATT TRANSIENT SUPPRESSOR DIE SPECIFICATIONS

TABLE 13A - 5000 WATT TRANSIENT SUPPRESSOR DIE ELECTRICAL SPECIFICATIONS

INDUSTRY STANDARD PART NUMBERS (NOTE 2) 5000 WATT 5KP SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-19 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R) @ V _{SO} (NOTE 3) μA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK		MAX. TEMP. COEFFIC IENT OF V _{BR} (% / °C)
				MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	
5KP40A	46.7-64.5-5	40	10	44.4	49.1	5.0	64.5	81	0.105
5KP43	53.1-76.7-9.9	43	10	47.8	58.4	5.0	76.7	68	0.105
5KP43A	50.3-69.4-4.9	43	10	47.8	52.8	5.0	69.4	75	0.105
5KP45	55.5-80.3-9.9	45	10	50.0	61.1	5.0	80.3	65	0.106
5KP45A	52.6-72.7-5	45	10	50.0	55.3	5.0	72.7	72	0.106
5KP48	59.2-85.5-10	48	10	53.3	65.2	5.0	85.5	61	0.106
5KP48A	56.1-77.4-4.9	48	10	53.3	58.9	5.0	77.4	67	0.106
5KP51	62.7-91.1-10	51	10	56.1	69.3	5.0	91.1	57	0.107
5KP51A	59.7-82.4-5	51	10	56.7	62.7	5.0	82.4	63	0.107
5KP54	66.6-96.3-9.9	54	10	60.0	73.3	5.0	96.3	54	0.107
5KP54A	63.1-87.1-4.9	54	10	60.0	66.3	5.0	87.1	60	0.107
5KP58	71.5-103-9.9	58	10	64.4	78.7	5.0	103.0	50	0.107
5KP58A	67.8-94-5	58	10	64.4	71.2	5.0	94.0	55	0.107
5KP60	74.1-107-9.9	60	10	66.7	81.5	5.0	107.0	49	0.108
5KP60A	70.2-97-4.9	60	10	66.7	73.7	5.0	97.0	54	0.108
5KP64	84-114-15.3	64	10	71.1	96.9	5.0	114.0	46	0.108
5KP64A	74.8-103-5	64	10	71.1	78.6	5.0	103.0	50	0.108
5KP70	86.3-125-10.1	70	10	77.6	95.1	5.0	125.0	42	0.108
5KP70A	81.9-113-5	70	10	77.8	86.0	5.0	113.0	46	0.108
5KP75	92.6-134-10	75	10	83.3	102.0	5.0	134.0	39	0.108
5KP75A	87.7-121-5	75	10	83.3	92.1	5.0	121.0	43	0.108
5KP78	96.3-139-10	78	10	86.7	106.0	5.0	139.0	37	0.108
5KP78A	91.2-126-4.9	78	10	86.7	95.8	5.0	126.0	41	0.108
5KP85	104.7-151-9.8	85	10	94.4	115.0	5.0	151.0	34	0.108
5KP85A	99.2-137-4.8	85	10	94.4	104.0	5.0	137.0	38	0.110
5KP90	111-160-9.9	90	10	100	122.0	5.0	160.0	32	0.110
5KP90A	105.5-146-5.2	90	10	100	111.0	5.0	146.0	35	0.110
5KP100	123.5-179-10.1	100	10	111	136.0	5.0	179.0	29	0.110
5KP100A	117-162-5.1	100	10	111	123.0	5.0	162.0	32	0.110
5KP110	135.5-196-9.9	110	10	122	149.0	5.0	196.0	26	0.112
5KP110A	128.5-177-5	110	10	122	135.0	5.0	177.0	29	0.112
5KP120	148-214-10.1	120.0	10	133	163.0	5.0	214.0	23	0.121
5KP120A	140.5-194-5	120.0	10	133	148.0	5.0	194.0	26	0.121
5KP160	197-285-10.1	160.0	10	177	217.0	5.0	285.0	18	0.135
5KP160A	187-259-5	160.0	10	177	197.0	5.0	259.0	19	0.135
5KP180	221.5-321-10.1	180.0	10	199	244.0	5.0	321.0	16	0.150
5KP180A	210.5-291-5	180.0	10	199	222.0	5.0	291.0	17	0.150
5KP200	247-356-10.1	200.0	10	222	272.0	5.0	356.0	14	0.200
5KP200A	234.5-323-5	200.0	10	222	247.0	5.0	323.0	15	0.200
5KP220	271.5-392-10.1	220.0	10	244	299.0	5.0	392.0	13	0.200
5KP220A	257.5-356-5	220.0	10	244	271.0	5.0	356.0	14	0.200
5KP250	308.5-445-10.1	250.0	10	277	340.0	5.0	445.0	11	0.222
5KP250A	292.5-404-5	250.0	10	277	308.0	5.0	404.0	12	0.222
5KP320	395-570-10.1	320.0	10	355	435.0	5.0	570.0	9	0.235
5KP320A	375-517-5	320.0	10	355	395.0	5.0	517.0	10	0.235
5KP360	444-641-10.1	360.0	10	399	489.0	5.0	641.0	8	0.240
5KP360A	421.5-582-5	360.0	10	399	444.0	5.0	582.0	9	0.240
5KP400	493-715-10.1	400.0	10	443	543.0	5.0	715.0	7	0.250
5KP400A	468-647-5	400.0	10	443	493.0	5.0	647.0	8	0.250
5KP440	543-784-10.1	440.0	10	488	598.0	5.0	784.0	6	0.260
5KP440A	515.5-711-5	440.0	10	488	543.0	5.0	711.0	7	0.260

NOTES

NOTE 1: ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
NOTE 2: ♦ FOR BIPOLAR DEVICES WITH A V_{SO} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED
NOTE 3: ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE.

NOTE 4: ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2D ON PAGE 7-19
♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3D ON PAGE 7-19



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**5000 WATT DIE
SPECIFICATIONS CONTINUED**

ORDERING SPECIFIER

6.8 - 9.6 - 6.5

ORDER CODE FROM
PREVIOUS PAGES

TABLE 14A - AVAILABLE DIE SIZES

CODE	DIE TYPE	DIE SPECIFICATIONS REFER TO:
SZU35	5000 WATT UNIPOLAR DIE	PAGE 7-1
SZZ35	5000 WATT BIPOLAR DIE	PAGE 7-2

FIGURE 1A - TYPICAL JUNCTION CAPACITANCE

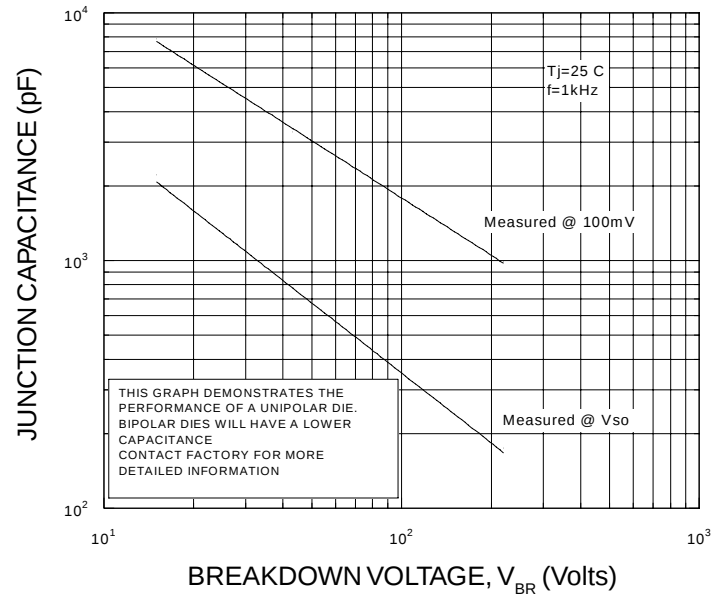


FIGURE 2A - PULSE WAVEFORM

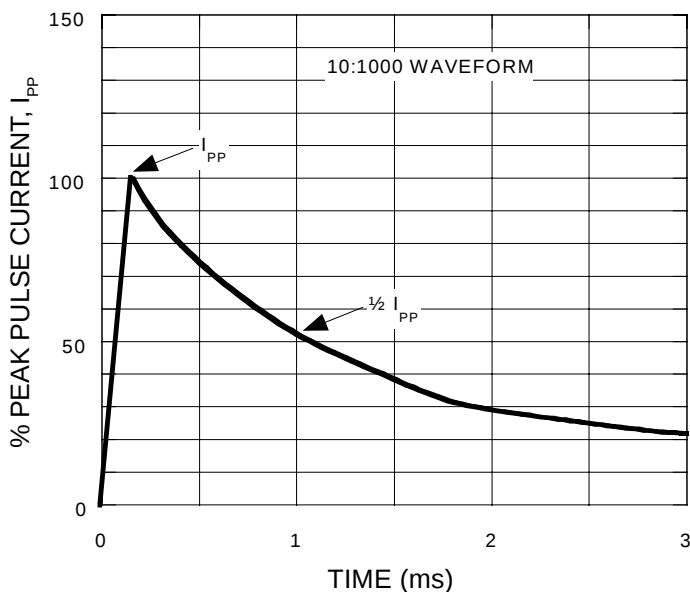
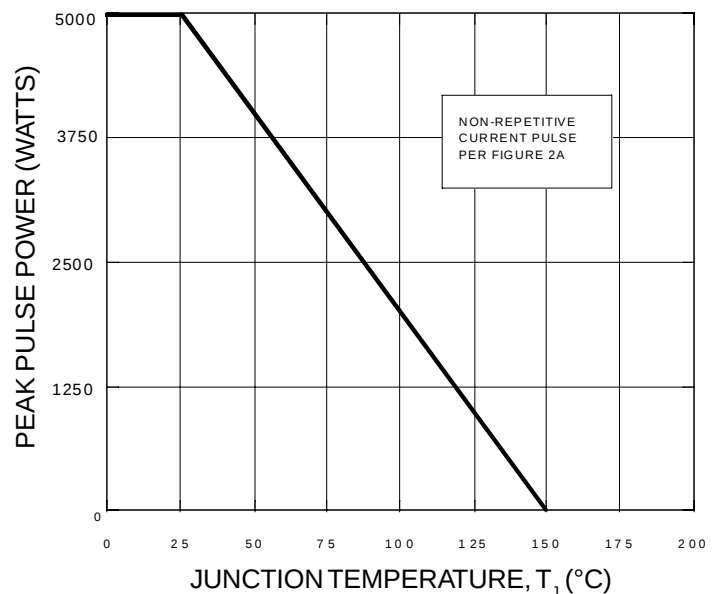
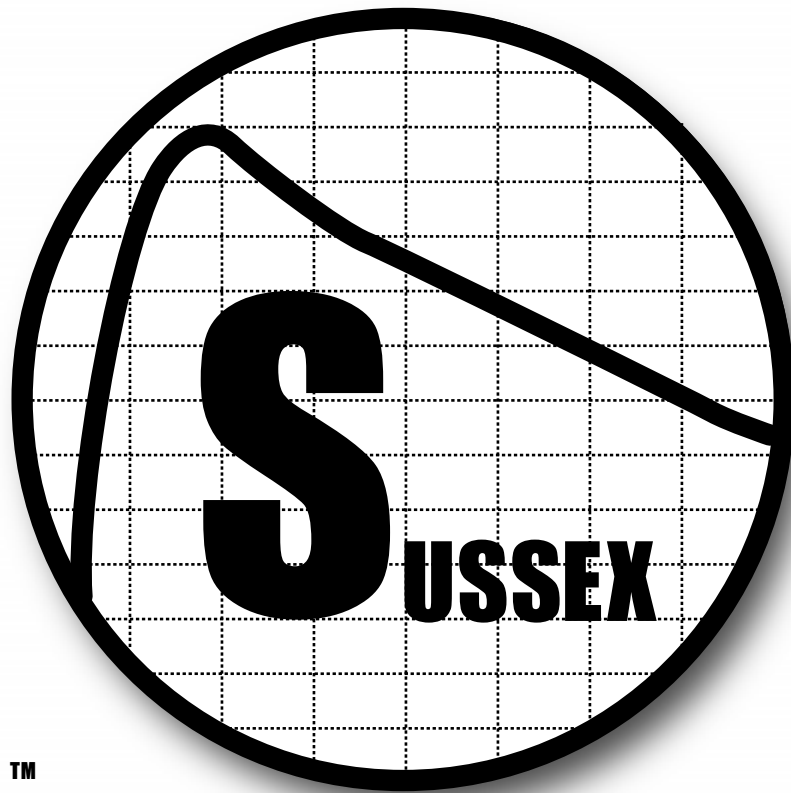


FIGURE 3A - PULSE DERATING CURVE

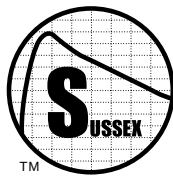




TM

SUSSEX SEMICONDUCTOR, INC.
RECTIFIER DIE





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**.25 TO 100 AMP STANDARD
RECOVERY RECTIFIER DIE**

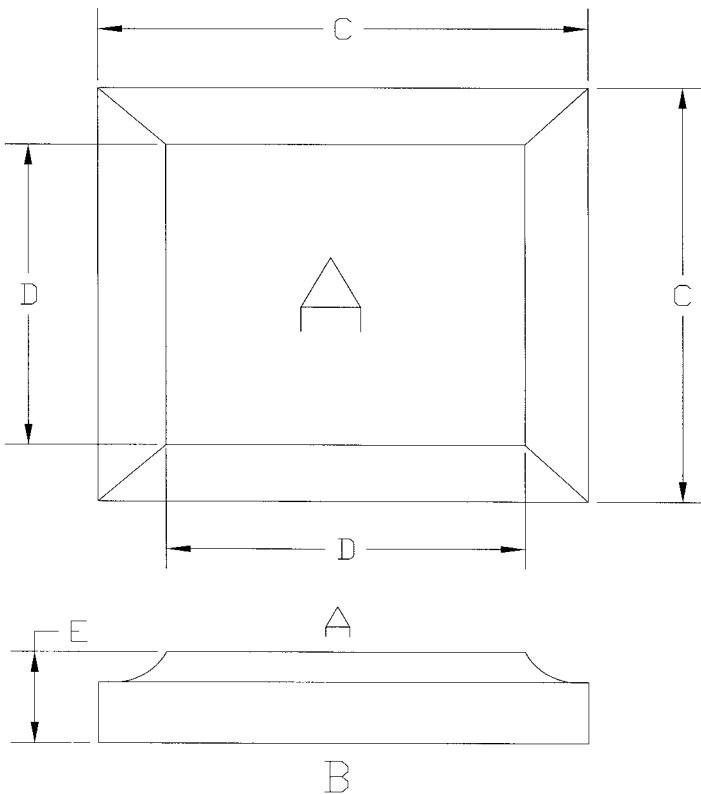
GLASS PASSIVATED STANDARD RECOVERY RECTIFIER DIE

REVERSE VOLTAGES - 50 TO 1000 VOLTS

FORWARD CURRENT - .25 TO 100 AMPS

.25 TO 100 AMP STANDARD RECOVERY DIE SPECIFICATIONS

- ◆ Standard Recovery Time Greater Than 500 nanoseconds
- ◆ Each Die Fully Glass Passivated: Needs No Encapsulation
- ◆ Each Die Individually Tested
- ◆ Unipolar
- ◆ Operating Temperature: -65 to 150°C
- ◆ Storage Temperature: -65 to 175°C
- ◆ Standard Metallization Ni-Ni-Au
- ◆ For Wire Bond Applications Gold Or Aluminum Metallization is Available
- ◆ Polarity: A-Anode B-Cathode



CUSTOM ORDERING SPECIFIER

DIE SPECIFICATIONS

S
UNIPOLAR
RECTIFIER
DIE

-
PEAK
INVERSE
VOLTAGE (PIV)

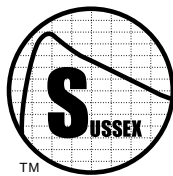
'A'-SIDE METALLIZATION	
CODE	MATERIAL
A	ALUMINUM
E	GOLD
BLANK	NI-NI-AU (STANDARD)

CONTACT FACTORY FOR ELECTRICAL
SPECIFICATIONS ON CUSTOM PARTS

TABLE 1B - UNIPOLAR DIE DIMENSION SPECIFICATIONS

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

SIZE CODE	C	D	E	FORWARD CURRENT	SIZE CODE	C	D	E	FORWARD CURRENT	SIZE CODE	C	D	E	FORWARD CURRENT
0.25	0.018	0.010	0.010	.25 AMPS	5	0.095	0.080	0.010	5 AMPS	30	0.180	0.160	0.010	30 AMPS
0.75	0.030	0.020	0.010	.75 AMPS	8	0.100	0.085	0.010	8 AMPS	35	0.200	0.180	0.010	35 AMPS
1	0.040	0.030	0.010	1 AMP	16	0.115	0.100	0.010	16 AMPS	40	0.227	0.200	0.010	40 AMPS
1.5	0.055	0.040	0.010	1.5 AMPS	20	0.125	0.110	0.010	20 AMPS	70	0.260	0.240	0.010	70 AMPS
2	0.070	0.055	0.010	2 AMPS	22	0.132	0.120	0.010	22 AMPS	100	0.360	0.330	0.010	100 AMPS
3	0.085	0.070	0.010	3 AMPS	25	0.165	0.150	0.010	25 AMPS					



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**.25 TO 16 AMP STANDARD
RECOVERY RECTIFIER FLIP-DIE**

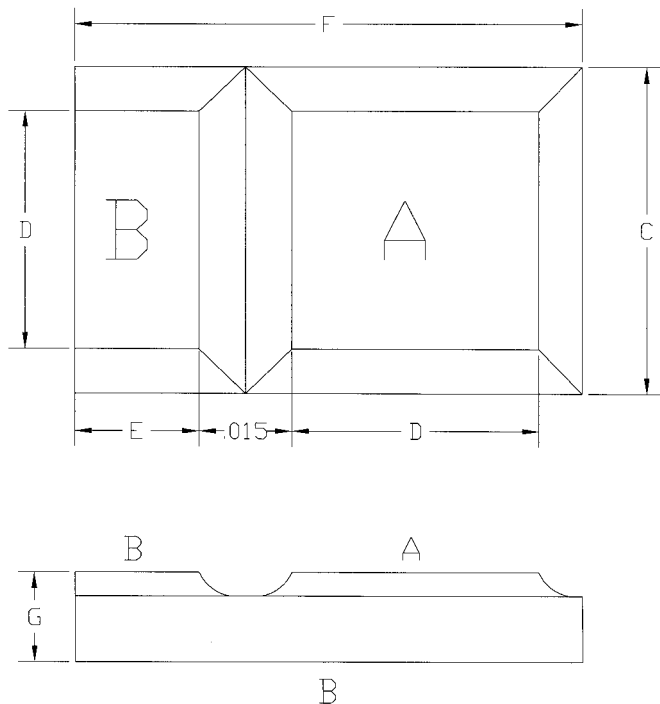
GLASS PASSIVATED STANDARD RECOVERY FLIP-DIE

REVERSE VOLTAGES - 50 TO 1000 VOLTS

FORWARD CURRENT - .25 TO 16 AMPS

**.25 TO 16 AMP STANDARD
RECOVERY FLIP-DIE
SPECIFICATIONS**

- ◆ Standard Recovery Greater Than 500 nanosec.
- ◆ Exclusive Sussex Semiconductor Flip-Die Technology
- ◆ Each Die Fully Glass Passivated; Needs No Encapsulation
- ◆ Each Die Individually Tested
- ◆ Unipolar
- ◆ Operating Temperature: -65 to 150°C
- ◆ Storage Temperature: -65 to 175°C
- ◆ Standard Metallization Ni-Ni-Au
- ◆ Polarity: A-Anode B-Cathode



CUSTOM ORDERING SPECIFIER

DIE SPECIFICATIONS

SFD

UNIPOLAR
RECTIFIER
FLIP DIE

PEAK INVERSE
VOLTAGE (PIV)

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

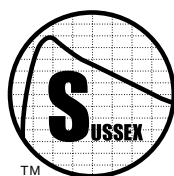
**FOR ELECTRICAL
SPECIFICATIONS
REFER TO STANDARD
RECOVERY
UNIPOLAR RECTIFIER
DIE ON PAGE 7-21**

CONTACT FACTORY FOR ELECTRICAL
SPECIFICATIONS ON CUSTOM PARTS

TABLE 6B - FLIP-DIE DIMENSION SPECIFICATIONS

◆ ALL TOLERANCES ARE $\pm .005"$ ◆ ALL DIMENSIONS ARE IN INCHES

SIZE CODE	C	D	E	F	G	FORWARD CURRENT	SIZE CODE	C	D	E	F	G	FORWARD CURRENT
0.25	0.018	0.010	0.005	0.027	0.011	.25 AMPS	5	0.095	0.080	0.040	0.143	0.011	5 AMPS
0.75	0.030	0.020	0.010	0.045	0.011	.75 AMPS	8	0.100	0.085	0.042	0.150	0.011	8 AMPS
1	0.040	0.028	0.014	0.060	0.011	1 AMP	16	0.115	0.100	0.051	0.173	0.011	16 AMPS
1.5	0.055	0.040	0.020	0.082	0.011	1.5 AMPS							
2	0.070	0.055	0.027	0.105	0.011	2 AMPS							
3	0.085	0.070	0.033	0.120	0.011	3 AMPS							



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**.25 TO 100 AMP STANDARD
RECOVERY RECTIFIER DIE
CONTINUED**

TABLE 2B - STANDARD RECOVERY RECTIFIER DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

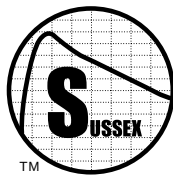
JEDEC PART NUMBER (NOTE 2)	SUSSEX PART NUMBER	MAX. AVERAGE FORWARD RECTIFIED OUTPUT CURRENT AMPS	MAX. INSTANTANEOUS FORWARD VOLTAGE		MAX. LEAKAGE CURRENT (I _R) @ V _{DC}		PEAK FORWARD SURGE CURRENT (NOTE 3) AMPS	PEAK INVERSE VOLTAGE (PIV) VOLTS	MAX. RMS INPUT VOLTAGE V _{RMS} VOLTS
			FORWARD VOLTAGE TEST CURRENT (I _F) AMPS	PEAK FORWARD VOLTAGE @ I _F VOLTS	V _{DC} VOLTS	I _R μA			
1N645	S.75-200	0.75	0.75	1.0	200	0.2	30	200	140
1N647	S.75-400	0.75	0.75	1.0	400	0.2	30	400	280
1N649	S.75-600	0.75	0.75	1.0	600	0.2	30	600	420
N/A	S.75-800	0.75	0.75	1.1	800	5	30	800	560
N/A	S.75-1000	0.75	0.75	1.1	1000	5	30	1000	700
1N4001	S1-50	1.0	1	1.2	50	5	40	50	35
1N4002	S1-100	1.0	1	1.2	100	5	40	100	70
1N4003	S1-200	1.0	1	1.2	200	5	40	200	140
1N4004	S1-400	1.0	1	1.2	400	5	40	400	280
1N4005	S1-600	1.0	1	1.2	600	5	40	600	420
1N4006	S1-800	1.0	1	1.2	800	5	40	800	560
1N4007	S1-1000	1.0	1	1.2	1000	5	40	1000	700
N/A	S1.5-200	1.5	1.5	1.2	20	5	50	200	140
N/A	S1.5-400	1.5	1.5	1.2	400	5	50	400	280
N/A	S1.5-600	1.5	1.5	1.2	600	5	50	600	420
N/A	S1.5-800	1.5	1.5	1.2	800	5	50	800	560
N/A	S1.5-1000	1.5	1.5	1.2	1000	10	50	1000	700
1N5402	S3-200	3.0	3.0	1.2	200	10	200	200	140
1N5404	S3-400	3.0	3.0	1.2	400	10	200	400	280
1N5406	S3-600	3.0	3.0	1.2	600	10	200	600	420
1N5407	S3-800	3.0	3.0	1.2	800	10	200	800	560
1N5408	S3-1000	3.0	3.0	1.2	1000	10	200	1000	700
N/A	S16-200	16	16	1.2	200	10	300	200	140
N/A	S16-400	16	16	1.2	400	10	300	400	280
N/A	S16-600	16	16	1.2	600	10	300	600	420
N/A	S16-800	16	16	1.3	800	10	300	800	560
N/A	S16-1000	16	16	1.3	1000	10	300	1000	700
N/A	S25-200	25	25	1.0	200	20	500	200	140
N/A	S25-600	25	25	1.2	600	20	500	600	420
N/A	S25-1000	25	25	1.4	1000	20	500	1000	700
N/A	S30-200	30	30	1.0	200	20	600	200	140
N/A	S30-600	30	30	1.2	600	20	600	600	420
N/A	S30-1000	30	30	1.4	1000	20	600	1000	700
N/A	S35-200	35	35	1.0	200	20	700	200	140
N/A	S35-600	35	35	1.2	600	20	700	600	420
N/A	S35-1000	35	35	1.4	1000	20	700	1000	700
N/A	S40-200	40	40	1.0	200	20	1000	200	140
N/A	S40-600	40	40	1.2	600	20	1000	600	420
N/A	S40-1000	40	40	1.4	1000	25	1000	1000	700
N/A	S70-200	70	70	1.0	200	20	1200	200	140
N/A	S70-600	70	70	1.2	600	20	1200	600	420
N/A	S70-1000	70	70	1.4	1000	25	1200	1000	700
N/A	S100-200	100	100	1.0	200	20	1800	200	140
N/A	S100-600	100	100	1.2	600	20	1800	600	420
N/A	S100-1000	100	100	1.4	1000	25	1800	1000	700

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: ♦ PEAK FORWARD SURGE CURRENT MEASURED FROM A SINGLE SINE-WAVE BEING SUPERIMPOSED ON A RATED LOAD (JEDEC METHOD)



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**.25 TO 100 AMP STANDARD
RECOVERY RECTIFIER DIE
CONTINUED**

FIGURE 1B - TYPICAL FORWARD CHARACTERISTICS

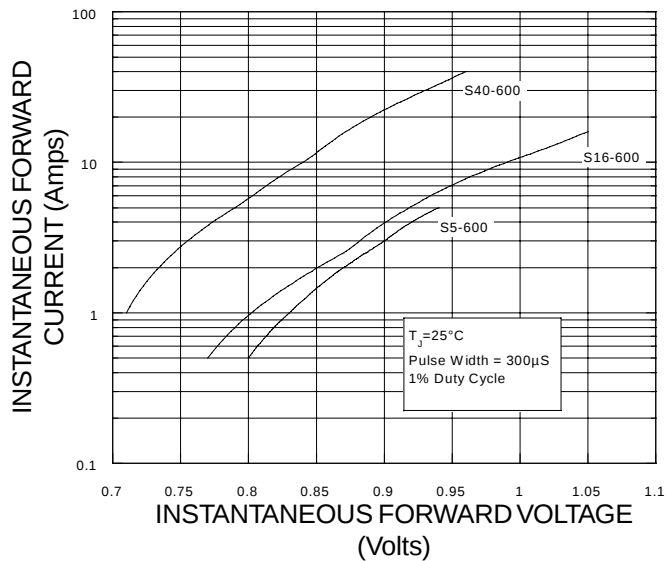
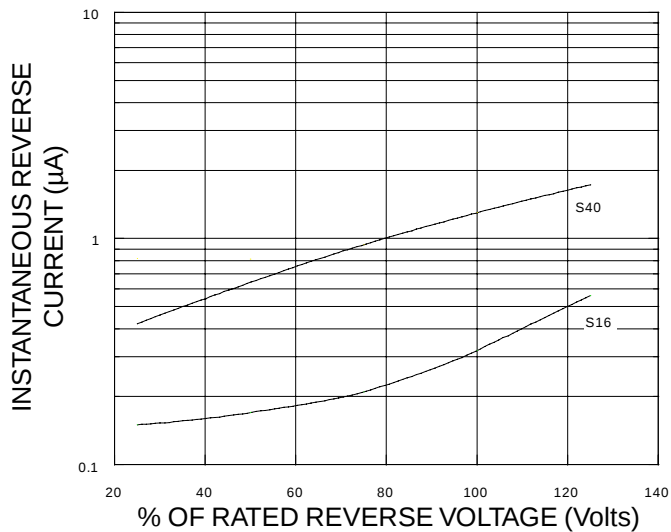
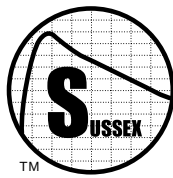


FIGURE 2B - TYPICAL REVERSE CHARACTERISTICS @25°C





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**.25 TO 100 AMP FAST AND
ULTRA-FAST RECOVERY
RECTIFIER DIE**

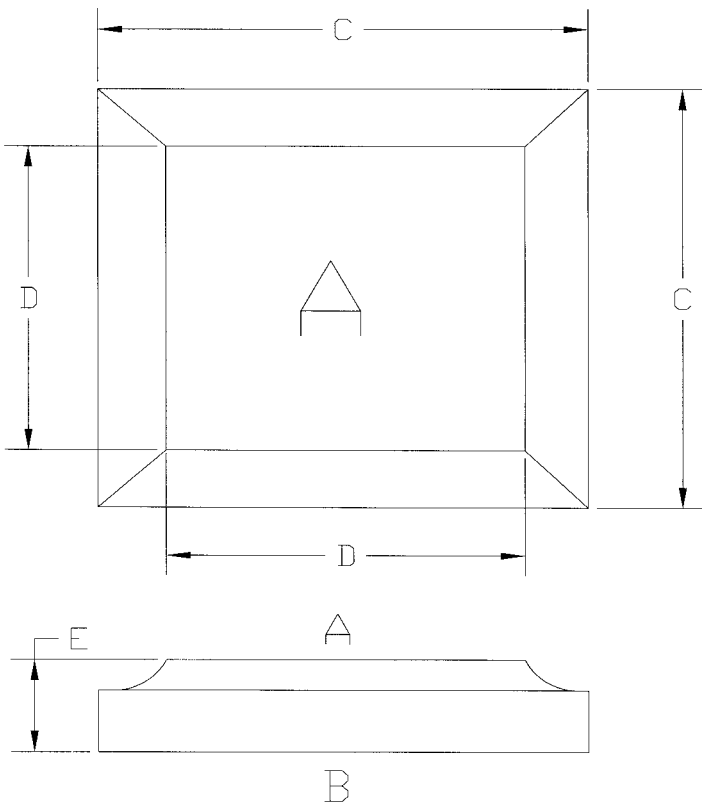
GLASS PASSIVATED FAST AND ULTRA-FAST RECOVERY DIE

REVERSE VOLTAGES - 50 TO 1000 VOLTS

FORWARD CURRENT - .25 TO 100 AMPS

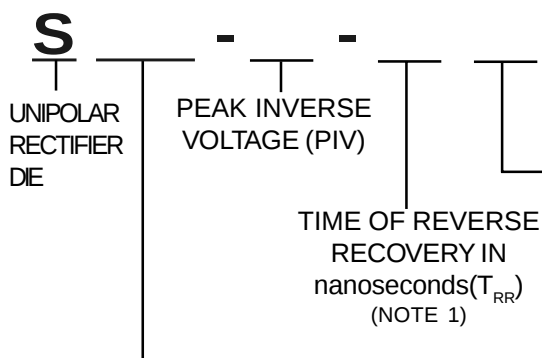
.25 TO 100 AMP FAST AND ULTRA FAST RECOVERY DIE SPECIFICATIONS

- ◆ Fast Recovery Time: 150 nanoseconds Max.
- ◆ Ultra Fast Recovery Time: 30 to 50 nanoseconds Max.
- ◆ Each Die Fully Glass Passivated; Needs No Encapsulation
- ◆ Each Die Individually Tested
- ◆ Unipolar
- ◆ Operating Temperature: -65 to 150°C
- ◆ Storage Temperature: -65 to 175°C
- ◆ Standard Metallization Ni-Ni-Au
- ◆ For Wire Bond Applications Gold Or Aluminum Metallization is Available
- ◆ Polarity: A-Anode B-Cathode



CUSTOM ORDERING SPECIFIER

DIE SPECIFICATIONS



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

NOTES

- NOTE 1:** ◆ T_{RR} REVERSE RECOVERY TEST CONDITIONS: FORWARD CURRENT (I_F) = 1AMP, REVERSE CURRENT (I_R) = 1AMP, REVERSE CURRENT RECOVERY (I_{RR}) = .5 AMP
- ◆ BREAKDOWN VOLTAGES GREATER THAN 400 VOLTS ON ULTRA-FAST RECOVERY DIE WILL RESULT IN A HIGHER FORWARD VOLTAGE

CONTACT FACTORY FOR ELECTRICAL SPECIFICATIONS ON CUSTOM PARTS

TABLE 3B - UNIPOLAR DIE DIMENSION SPECIFICATIONS

◆ ALL TOLERANCES ARE $\pm .005"$ ◆ ALL DIMENSIONS ARE IN INCHES

SIZE CODE	C	D	E	FORWARD CURRENT	SIZE CODE	C	D	E	FORWARD CURRENT	SIZE CODE	C	D	E	FORWARD CURRENT
0.25	0.018	0.010	0.009	.25 AMPS	5	0.095	0.080	0.009	5 AMPS	30	0.180	0.160	0.009	30 AMPS
0.75	0.030	0.020	0.009	.75 AMPS	8	0.100	0.085	0.009	8 AMPS	35	0.200	0.180	0.009	35 AMPS
1	0.040	0.030	0.015	1 AMP	16	0.115	0.100	0.009	16 AMPS	40	0.227	0.200	0.009	40 AMPS
1.5	0.055	0.040	0.009	1.5 AMPS	20	0.125	0.110	0.009	20 AMPS	70	0.260	0.240	0.009	70 AMPS
2	0.070	0.055	0.009	2 AMPS	22	0.132	0.120	0.009	22 AMPS	100	0.360	0.330	0.009	100 AMPS
3	0.085	0.070	0.009	3 AMPS	25	0.165	0.150	0.009	25 AMPS					



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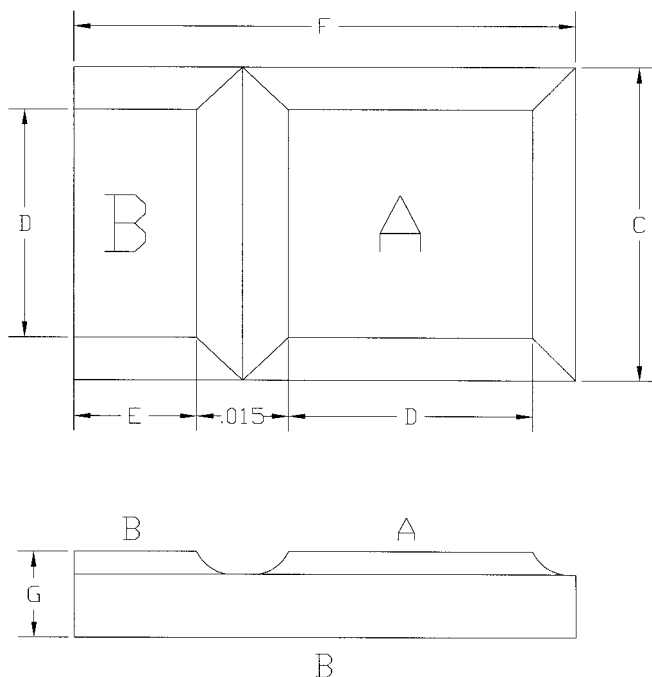
12251 TOWNE LAKE DRIVE, FORT MYERS, FLORIDA, 33913 • TEL: (941) 768-6800 • FAX: (941) 768-6868

**.25 TO 16 AMP FAST AND ULTRA
FAST RECOVERY RECTIFIER
FLIP-DIE**

**GLASS PASSIVATED FAST AND ULTRA FAST
RECOVERY FLIP DIE**

REVERSE VOLTAGES - 50 TO 1000 VOLTS

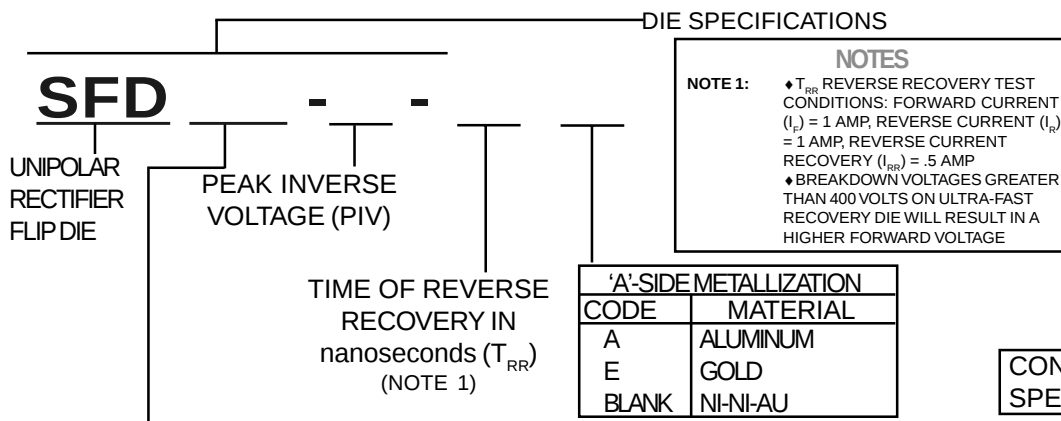
FORWARD CURRENT - .25 TO 16 AMPS



.25 TO 16 AMP FAST AND ULTRA FAST RECOVERY FLIP-DIE SPECIFICATIONS

- ◆ Exclusive Sussex Semiconductor Flip-Die Technology
- ◆ Each Die Fully Glass Passivated; Needs No Encapsulation
- ◆ Each Die Individually Tested
- ◆ Unipolar
- ◆ Operating Temperature: -65 to 150°C
- ◆ Storage Temperature: -65 to 175°C
- ◆ Standard Metallization Ni-Ni-Au
- ◆ Polarity: A-Anode B-Cathode

CUSTOM ORDERING SPECIFIER



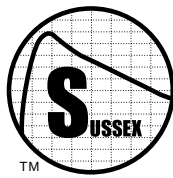
**FOR ELECTRICAL
SPECIFICATIONS
REFER TO FAST AND
ULTRA FAST
UNIPOLAR
RECTIFIER DIE
ON PAGES 7-24
AND 7-25**

CONTACT FACTORY FOR ELECTRICAL
SPECIFICATIONS ON CUSTOM PARTS

TABLE 7B - FLIP-DIE DIMENSION SPECIFICATIONS

◆ ALL TOLERANCES ARE $\pm .005"$ ◆ ALL DIMENSIONS ARE IN INCHES

SIZE CODE	C	D	E	F	G	FORWARD CURRENT	SIZE CODE	C	D	E	F	G	FORWARD CURRENT
0.25	0.018	0.010	0.005	0.027	0.011	.25 AMPS	5	0.095	0.080	0.040	0.143	0.011	5 AMPS
0.75	0.030	0.020	0.010	0.045	0.011	.75 AMPS	8	0.100	0.085	0.042	0.150	0.011	8 AMPS
1	0.040	0.028	0.014	0.060	0.011	1 AMP	16	0.115	0.100	0.051	0.173	0.011	16 AMPS
1.5	0.055	0.040	0.020	0.082	0.011	1.5 AMPS							
2	0.070	0.055	0.027	0.105	0.011	2 AMPS							
3	0.085	0.070	0.033	0.120	0.011	3 AMPS							



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**.25 TO 100 AMP FAST
RECOVERY RECTIFIER DIE
ELECTRICAL SPECIFICATIONS**

TABLE 4B - FAST RECOVERY RECTIFIER DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

JEDEC PART NUMBER (NOTE 2)	SUSSEX PART NUMBER	MAX. AVERAGE FORWARD RECTIFIED OUTPUT CURRENT $T_J = 25^\circ\text{C}$ AMPS	MAX. INSTANTANEOUS FORWARD VOLTAGE		MAX. LEAKAGE CURRENT (I_R) @ V_{DC}		PEAK FORWARD SURGE CURRENT (NOTE 3) AMPS	PEAK INVERSE VOLTAGE (PIV) VOLTS	MAX. RMS INPUT VOLTAGE V_{RMS} VOLTS	TIME OF RECOVERY (T_{RR}) (NOTE 4) nanosec
			FORWARD VOLTAGE TEST CURRENT (I_F) AMPS	PEAK FORWARD VOLTAGE @ I_F VOLTS	V_{DC} VOLTS	I_R μA				
1N5615	S1-200-150	1.0	1.0	1.6	200	1	40	200	140	150
1N5617	S1-400-150	1.0	1.0	1.6	400	1	40	400	280	150
1N5619	S1-600-150	1.0	1.0	1.6	600	1	40	600	420	150
1N5621	S1-800-150	1.0	1.0	1.6	800	1	40	800	560	150
1N5623	S1-1000-150	1.0	1.0	1.6	1000	5	40	1000	700	150
N/A	S1.5-200-150	1.5	1.5	1.4	200	5	50	200	140	150
N/A	S1.5-400-150	1.5	1.5	1.4	400	5	50	400	280	150
N/A	S1.5-600-200	1.5	1.5	1.4	600	5	50	600	420	150
N/A	S1.5-800-200	1.5	1.5	1.4	800	5	50	800	560	150
N/A	S1.5-1000-200	1.5	1.5	1.4	1000	5	50	1000	700	150
1N5415	S3-50-150	3.0	3.0	1.5	50	1	200	50	35	150
1N5416	S3-100-150	3.0	3.0	1.5	100	1	200	100	70	150
1N5417	S3-200-150	3.0	3.0	1.5	200	1	200	200	140	150
1N5418	S3-400-150	3.0	3.0	1.5	400	1	200	400	280	150
1N5419	S3-500-150	3.0	3.0	1.5	500	1	200	500	350	150
1N5420	S3-600-200	3.0	3.0	1.5	600	1	200	600	420	200
N/A	S3-800-200	3.0	3.0	1.5	800	5	200	800	560	200
N/A	S3-1000-300	3.0	3.0	1.5	1000	10	200	1000	700	300
N/A	S16-200-150	16.0	16.0	1.5	200	10	300	200	140	150
N/A	S16-400-150	16.0	16.0	1.5	400	10	300	400	280	150
N/A	S16-600-200	16.0	16.0	1.5	600	10	300	600	420	200
N/A	S16-800-200	16.0	16.0	1.5	800	10	300	800	560	200
N/A	S16-1000-300	16.0	16.0	1.5	1000	10	300	1000	700	300

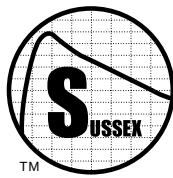
NOTES

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: ♦ PEAK FORWARD SURGE CURRENT MEASURED FROM A SINGLE SINE-WAVE BEING SUPERIMPOSED ON A RATED LOAD (JEDEC METHOD)

NOTE 4: ♦ T_{RR} - REVERSE RECOVERY TEST CONDITIONS:
FORWARD CURRENT (I_F) = 1 AMP, REVERSE CURRENT (I_R) = 1 AMP, REVERSE CURRENT RECOVERY (I_{RR}) = .5 AMP



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.25 TO 100 AMP ULTRA-FAST RECOVERY RECTIFIER DIE ELECTRICAL SPECIFICATIONS

TABLE 5B - ULTRA FAST RECOVERY RECTIFIER DIE ELECTRICAL SPECIFICATIONS (NOTE 1)

JEDEC PART NUMBER (NOTE 2)	SUSSEX PART NUMBER (NOTE 3)	MAX. AVERAGE FORWARD RECTIFIED OUTPUT CURRENT $T_J=25^\circ\text{C}$ AMPS	MAX. INSTANTANEOUS FORWARD VOLTAGE		MAX. LEAKAGE CURRENT (I_R) @ V_{DC}		PEAK FORWARD SURGE CURRENT (NOTE 4) AMPS	PEAK INVERSE VOLTAGE (PIV) VOLTS	MAX. RMS INPUT VOLTAGE V_{RMS} VOLTS	TIME OF RECOVERY (T_{RR}) (NOTE 5) nanosec
			FORWARD VOLTAGE TEST CURRENT (I_F) AMPS	PEAK FORWARD VOLTAGE @ I_F VOLTS	V_{DC} VOLTS	I_R mA				
N/A	S1-100-50	1.0	1.0	0.975	100	1	40	100	70	50
N/A	S1-200-50	1.0	1.0	0.975	200	1	40	200	140	50
N/A	S1-400-50	1.0	1.0	1.000	400	1	40	400	280	50
N/A	S1-600-50	1.0	1.0	1.300	600	1	40	600	420	50
N/A	S1-800-50	1.0	1.0	1.500	800	1	40	800	560	50
N/A	S1-1000-50	1.0	1.0	1.600	1000	10	40	1000	700	50
1N5802	HOUSE NUMBER	2.5	1.0	0.875	50	1	50	50	35	25
1N5803	HOUSE NUMBER	2.5	1.0	0.875	75	1	50	75	52.5	25
1N5804	HOUSE NUMBER	2.5	1.0	0.875	100	1	50	100	70	25
1N5805	HOUSE NUMBER	2.5	1.0	0.875	125	1	50	125	87.5	25
1N5806	HOUSE NUMBER	2.5	1.0	0.875	150	1	50	150	105	25
N/A	S3-200-50	3.0	3.0	0.975	200	10	200	200	140	50
N/A	S3-400-50	3.0	3.0	1.000	400	10	200	400	280	50
N/A	S3-600-50	3.0	3.0	1.500	600	10	200	600	420	50
N/A	S3-800-50	3.0	3.0	1.600	800	10	200	800	560	50
N/A	S3-1000-50	3.0	3.0	1.800	1000	10	200	1000	700	50
1N5807	HOUSE NUMBER	6.0	4.0	0.875	50	5	300	50	35	30
1N5808	HOUSE NUMBER	6.0	4.0	0.875	75	5	300	75	52.5	30
1N5809	HOUSE NUMBER	6.0	4.0	0.875	100	5	300	100	70	30
1N5810	HOUSE NUMBER	6.0	4.0	0.875	125	5	300	125	87.5	30
1N5811	HOUSE NUMBER	6.0	4.0	0.875	150	5	300	150	105	30
N/A	S16-50-35	16.0	16.0	0.975	50	10	300	50	35	35
N/A	S16-100-35	16.0	16.0	0.975	100	10	300	100	70	35
N/A	S16-200-35	16.0	16.0	0.975	200	10	300	200	140	35
N/A	S16-400-50	16.0	16.0	1.000	400	10	300	400	280	50
N/A	S16-600-50	16.0	16.0	1.800	600	10	300	600	420	50
N/A	S16-800-50	16.0	16.0	1.800	800	10	300	800	560	50
N/A	S16-1000-50	16.0	16.0	2.000	1000	10	300	1000	700	50
N/A	S25-50-50	25.0	25.0	0.975	50	20	500	50	35	50
N/A	S25-100-50	25.0	25.0	0.975	100	20	500	100	70	50
N/A	S25-200-50	25.0	25.0	0.975	200	20	500	200	140	50
N/A	S25-400-50	25.0	25.0	1.000	400	20	500	400	280	50
N/A	S25-600-50	25.0	25.0	1.800	600	20	500	600	420	50
N/A	S25-800-75	25.0	25.0	1.800	800	25	500	800	560	75
N/A	S25-1000-75	25.0	25.0	2.000	1000	25	500	1000	700	75
N/A	S40-50-50	40.0	40.0	0.975	50	20	1000	50	35	50
N/A	S40-100-50	40.0	40.0	0.975	100	20	1000	100	70	50
N/A	S40-200-50	40.0	40.0	0.975	200	20	1000	200	140	50
N/A	S40-400-50	40.0	40.0	1.000	400	20	1000	400	280	50
N/A	S40-600-50	40.0	40.0	1.800	600	20	1000	600	420	50
N/A	S40-800-50	40.0	40.0	1.800	800	25	1000	800	560	50
N/A	S40-1000-50	40.0	40.0	2.000	1000	25	1000	1000	700	50
N/A	S70-50-50	70.0	70.0	0.975	50	20	1200	50	35	50
N/A	S70-100-50	70.0	70.0	0.975	100	20	1200	100	70	50
N/A	S70-200-50	70.0	70.0	0.975	200	20	1200	200	140	50

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: ♦ CONTACT FACTORY DIRECTLY FOR INFORMATION REGARDING A HOUSE NUMBER

NOTE 4: ♦ PEAK FORWARD SURGE CURRENT MEASURED FROM A SINGLE SINE-WAVE BEING SUPERIMPOSED ON A RATED LOAD (JEDEC METHOD)

NOTE 5: ♦ T_{RR} - REVERSE RECOVERY TEST CONDITIONS:
FORWARD CURRENT (I_F) = 1AMP, REVERSE CURRENT (I_R) = 1 AMP, REVERSE CURRENT RECOVERY (I_{RR}) = .5 AMP



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**.25 TO 100 AMP FAST AND
ULTRA-FAST RECOVERY
RECTIFIER DIE CONTINUED**

FIGURE 3B - TYPICAL FORWARD
CHARACTERISTICS

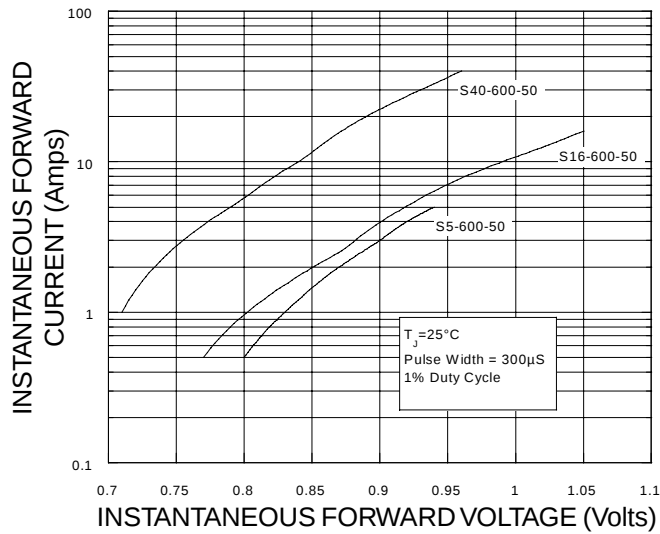
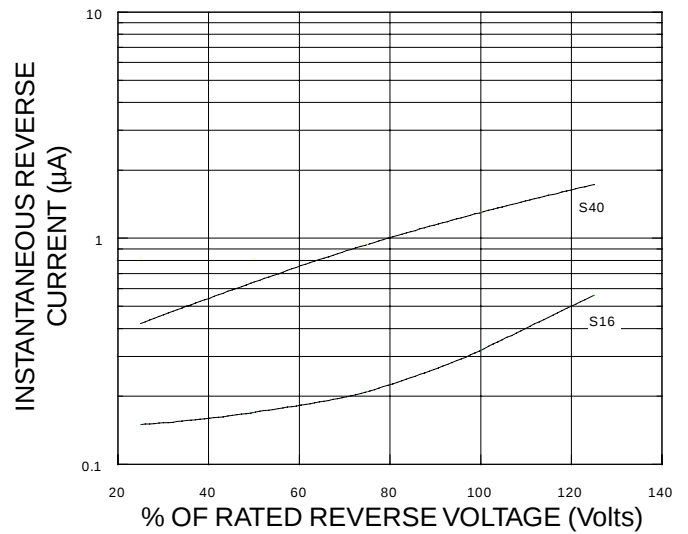
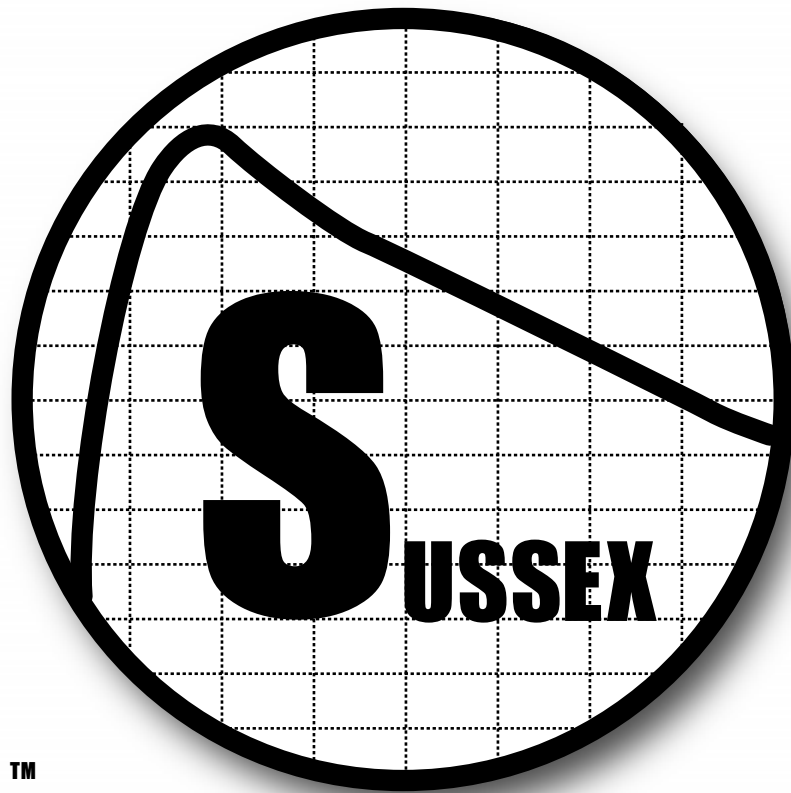


FIGURE 4B - TYPICAL REVERSE
CHARACTERISTICS @25°C





TM

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ZENER DIE





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**.5 TO 100 WATT UNIPOLAR
ZENER DIE**

GLASS PASSIVATED UNIPOLAR DIE

ZENER VOLTAGE - 6.8 TO 200 VOLTS

.5 TO 100 WATT MAXIMUM POWER DISSIPATION

.5 TO 100 WATT ZENER DIE SPECIFICATIONS

- ◆ Each Die Fully Glass Passivated: Needs No Encapsulation
- ◆ Each Device Individually Inspected
- ◆ Unipolar
- ◆ Operating Temperature: -65 to 150°C
- ◆ Storage Temperature: -65 to 175°C
- ◆ Standard Metallization Ni-Ni-Au
- ◆ For Wire Bond Applications Gold Or Aluminum Metallization is Available
- ◆ Polarity:

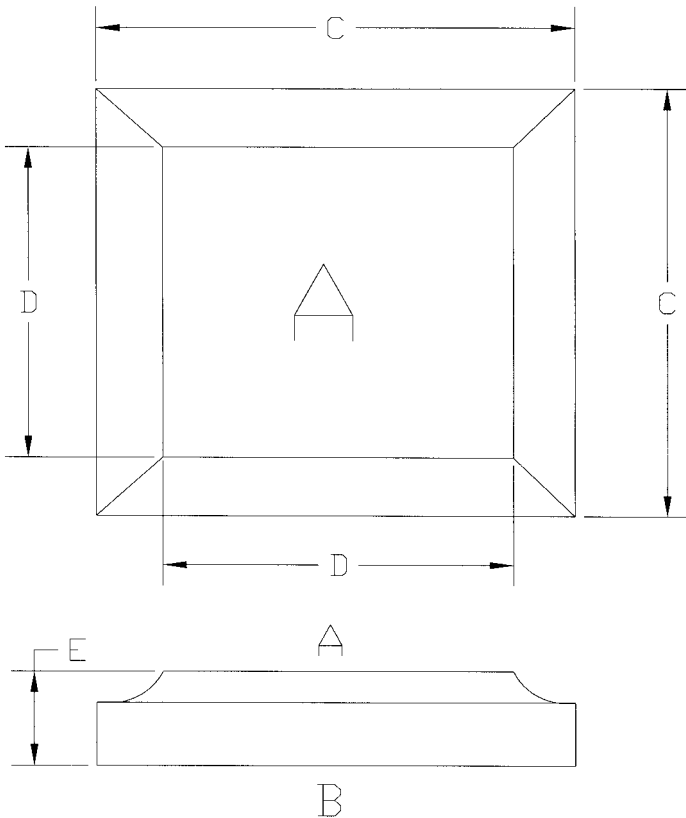
6.8 to 10 Nominal Zener Volts (V_z) 11 to 200 Nominal Zener Volts (V_z)

A-Cathode

A-Anode

B-Anode

B-Cathode



CUSTOM ORDERING SPECIFIER

DIE SPECIFICATIONS

SZ

UNIPOLAR
ZENER
DIE

NOMINAL ZENER
VOLTAGE

ZENER TEST
CURRENT(mA)

%TOLERANCE OF V_z

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 1C - UNIPOLAR DIE DIMENSION SPECIFICATIONS

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

SIZE CODE	C	D	E	FORWARD CURRENT	SIZE CODE	C	D	E	FORWARD CURRENT	SIZE CODE	C	D	E	FORWARD CURRENT
0.25	0.018	0.010	0.011	1/2 WATT	8	0.100	0.085	0.011	8 WATTS	70	0.260	0.250	0.011	75 WATTS
0.75	0.030	0.020	0.011	3/4 WATT	16	0.115	0.100	0.011	10 WATTS	100	0.360	0.330	0.011	100 WATTS
1	0.040	0.030	0.011	1 WATT	25	0.165	0.150	0.011	25 WATTS					
1.5	0.055	0.040	0.011	3 WATTS	30	0.180	0.166	0.011	40 WATTS					
2	0.070	0.055	0.011	4 WATTS	35	0.200	0.180	0.011	50 WATTS					
3	0.080	0.070	0.011	5 WATTS	40	0.220	0.205	0.011	60 WATTS					



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**.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:

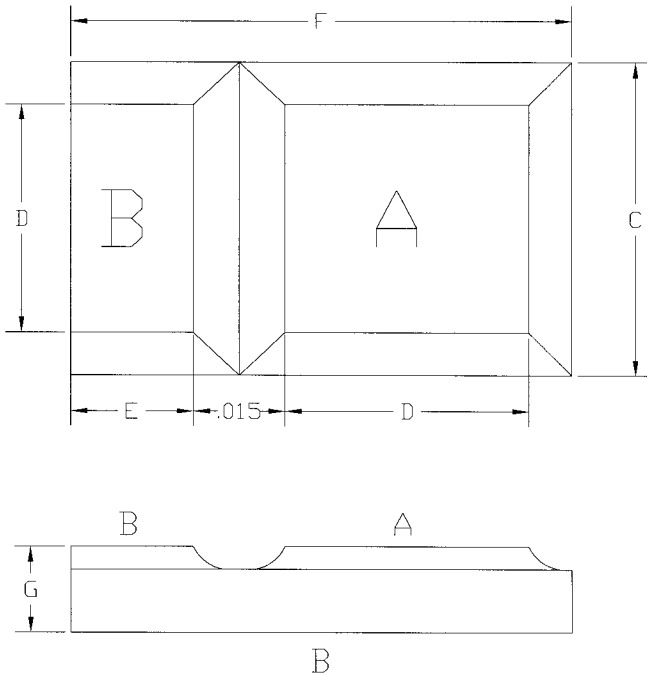
6.8 to 10 Nominal Zener Volts (V_z) 11 to 200 Nominal Zener Volts (V_z)

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 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		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 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			
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 REFER TO PAGE 7-36 FOR ORDER SPECIFIER	NOMINAL ZENER VOLTAGE $V_Z @ I_{ZT}$ (NOTE 3) VOLTS	ZENER TEST CURRENT (I_{ZT}) m A	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) m A	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
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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 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

- 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 ±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

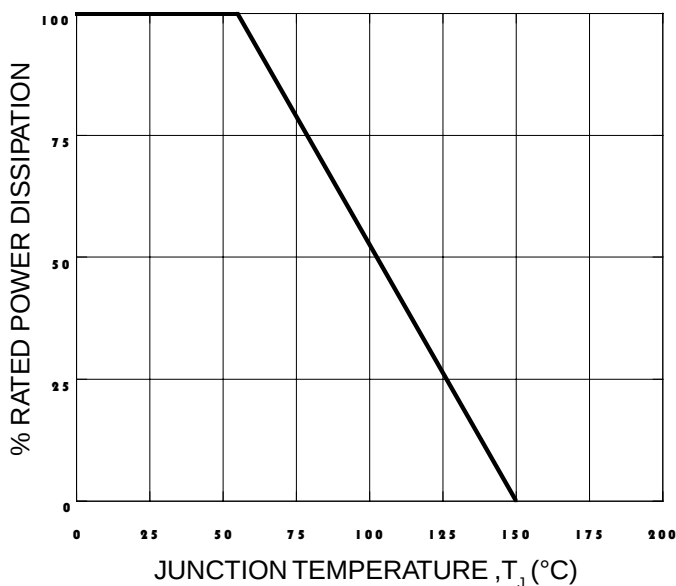
ORDER CODE FROM
PREVIOUS PAGE

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

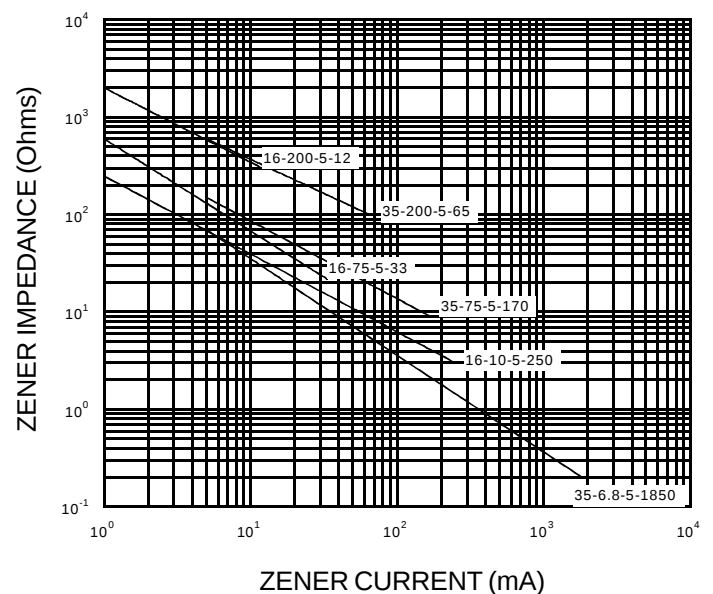
TABLE 4C - AVAILABLE DIE SIZES

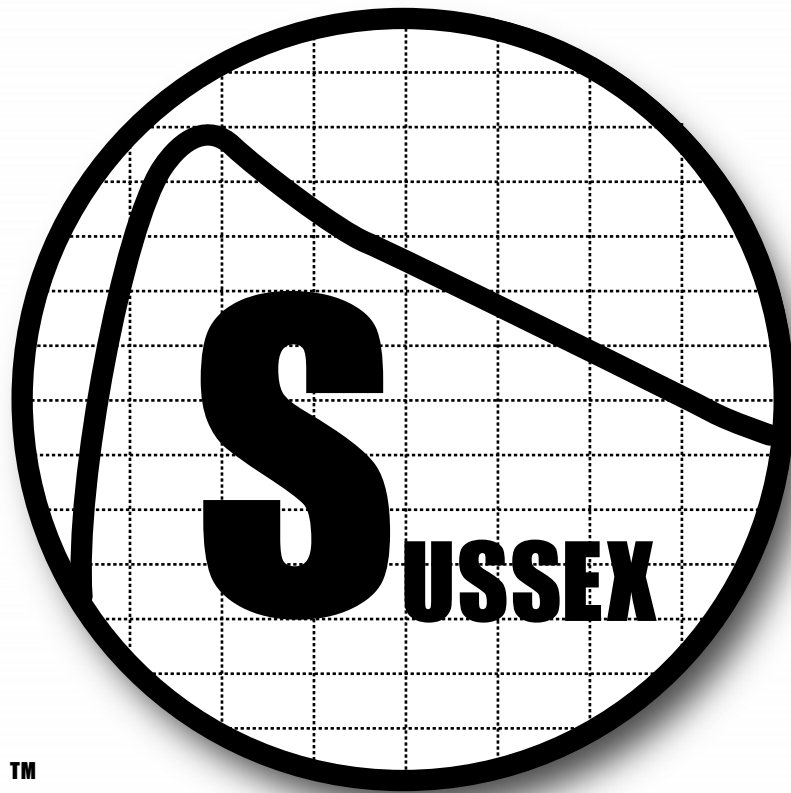
CODE	DIE TYPE	DIE SPECIFICATIONS REFER TO:	CODE	DIE TYPE	DIE SPECIFICATIONS REFER TO:
0.25	1/2 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30	16	16 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30
0.75	3/4 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30	25	25 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30
1	1 WATT UNIPOLAR DIE	PAGE 7-29 AND 7-30	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**

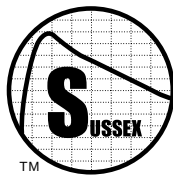


**FIGURE 2C - ZENER IMPEDANCE VS.
ZENER CURRENT**





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TRANSIENT SUPPRESSOR
CELLS

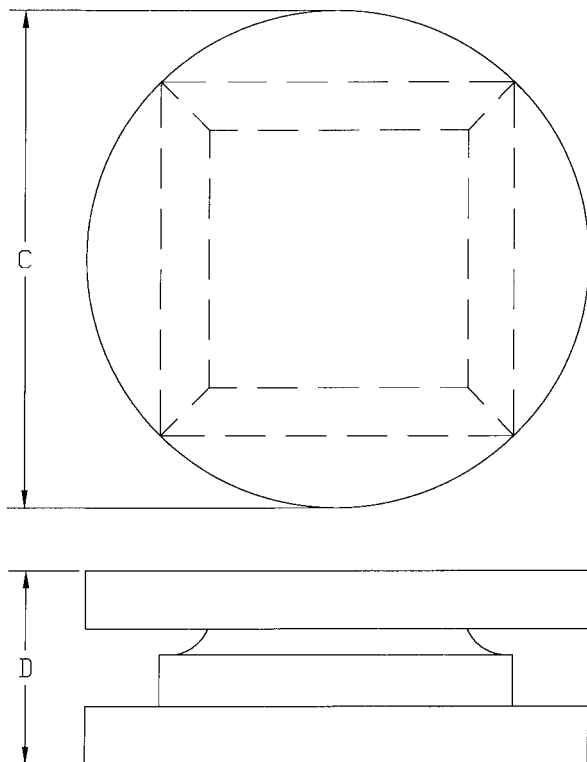


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**600 AND 1500 WATT UNIPOLAR
TRANSIENT SUPPRESSOR CELL**



PLEASE NOTE: DRAWINGS ARE NOT TO SCALE.
REFER TO TABLE 1D FOR COMPLETE DIMENSIONS

TABLE 1D - CELL DIMENSION SPECIFICATIONS

♦ ALL TOLERANCES ARE $\pm .005"$ ♦ ALL DIMENSIONS ARE IN

SIZE CODE	C	D	CHIP DIMENSION
3	0.130	0.033	.085 SQUARE
16	0.160	0.033	.115 SQUARE

GLASS PASSIVATED UNIPOLAR TRANSIENT SUPPRESSOR CELL

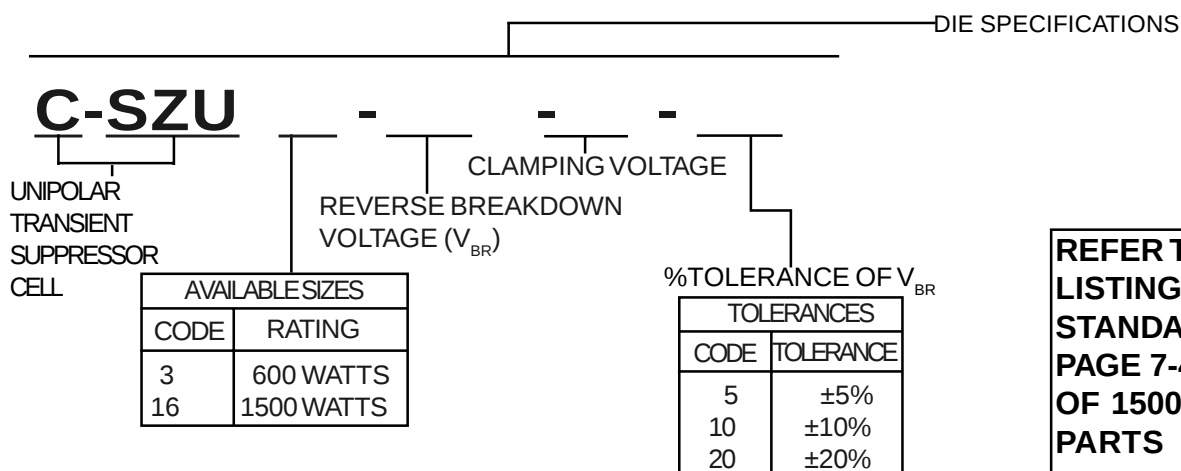
600 AND 1500 WATT MAXIMUM POWER HANDLING

REVERSE VOLTAGES - 6.8 TO 440 VOLTS

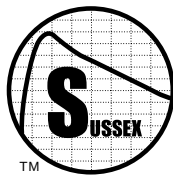
600 AND 1500 WATT UNIPOLAR CELL SPECIFICATIONS

- ♦ Used in Hybrid Connector and Telecom Applications Where Axial Leaded Devices Are Physically Too Large or Have Too Great an Inductance
- ♦ Each Die Fully Glass Passivated: Needs No Encapsulation
- ♦ Electrical Equivalent to P6KE and 1.5KE Axial Leaded Devices
- ♦ Each Device Individually Inspected
- ♦ Unipolar
- ♦ Operating Temperature: -65 to 150°C
- ♦ Storage Temperature: -65 to 175°C
- ♦ Tab Metallization OFHC Copper Solder Plated: 95Pb/5Sn

CUSTOM ORDERING SPECIFIER



**REFER TO PAGE 7-39 FOR A
LISTING OF 600 WATT
STANDARD PARTS AND
PAGE 7-42 FOR A LISTING
OF 1500 WATT STANDARD
PARTS**

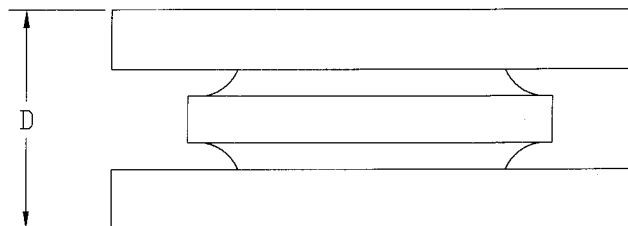
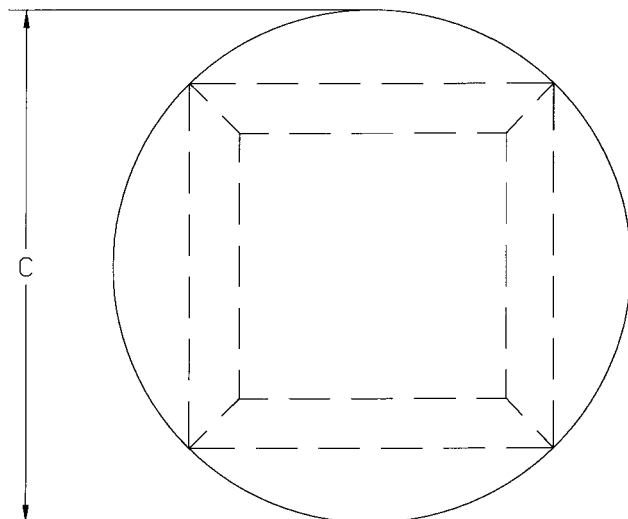


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**600 AND 1500 WATT BIPOLAR
TRANSIENT SUPPRESSOR CELL**



PLEASE NOTE: DRAWINGS ARE NOT TO SCALE.
REFER TO TABLE 2D FOR COMPLETE DIMENSIONS

TABLE 2D - CELL DIMENSION SPECIFICATIONS

♦ ALL TOLERANCES ARE $\pm .005"$ ♦ ALL DIMENSIONS ARE IN

SIZE CODE	C	D	CHIP DIMENSION
3	0.130	0.033	.085 SQUARE
16	0.160	0.033	.115 SQUARE

GLASS PASSIVATED BIPOLAR TRANSIENT SUPPRESSOR CELL

600 AND 1500 WATT MAXIMUM POWER HANDLING

REVERSE VOLTAGES - 6.8 TO 440 VOLTS

600 AND 1500 WATT BIPOLAR CELL SPECIFICATIONS

- ♦ Used In Hybrid Connector And Telecom Applications Where Axial Leaded Devices Are Physically Too Large Or Have Too Great An Inductance
- ♦ Each Die Fully Glass Passivated: Needs No Encapsulation
- ♦ Electrical Equivalent to P6KE and 1.5KE Axial Leaded Devices
- ♦ Each Device Individually Inspected
- ♦ Bipolar
- ♦ Operating Temperature: -65 to 150°C
- ♦ Storage Temperature: -65 to 175°C
- ♦ Tab Metallization OFHC Copper Solder Plated: 95Pb/5Sn

CUSTOM ORDERING SPECIFIER

C-SZZ

BIPOLAR
TRANSIENT
SUPPRESSOR
CELL

REVERSE BREAKDOWN
VOLTAGE (V_{BR})

CLAMPING VOLTAGE

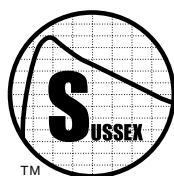
DIE SPECIFICATIONS

AVAILABLE SIZES	
CODE	RATING
3	600 WATTS
16	1500 WATTS

% TOLERANCE OF V_{BR}

TOLERANCES	
CODE	TOLERANCE
5	$\pm 5\%$
10	$\pm 10\%$
20	$\pm 20\%$

**REFER TO PAGE 7-39 FOR A
LISTING OF 600 WATT
STANDARD PARTS AND
PAGE 7-42 FOR A LISTING
OF 1500 WATT STANDARD
PARTS**



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600 WATT TRANSIENT SUPPRESSOR CELL SPECIFICATIONS

TABLE 3D - 600 WATT TRANSIENT SUPPRESSOR CELL ELECTRICAL SPECIFICATIONS (NOTE 1)

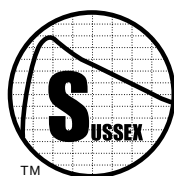
INDUSTRY STANDARD PART NUMBERS (NOTE 2) 600 WATT P6KE SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-41 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R)@V _{SO} (NOTE 3) μA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 4)		MAX. TEMP. COEFFICIENT OF V _{BR} (%/°C)
				MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	
P6KE6.8	6.8-10.8-10	5.50	1000	6.12	7.48	10	10.8	58.0	0.057
P6KE6.8A	6.8-10.5-5	5.80	1000	6.45	7.14	10	10.5	60.0	0.057
P6KE7.5	7.5-11.7-10	6.05	500	6.75	8.25	10	11.7	53.0	0.061
P6KE7.5A	7.5-11.3-5	6.40	500	7.13	7.88	10	11.3	55.0	0.061
P6KE8.2	8.2-12.5-10	6.63	200	7.38	9.02	10	12.5	50.0	0.065
P6KE8.2A	8.2-12.1-5	7.02	200	7.79	8.61	10	12.1	52.0	0.065
P6KE9.1	9.1-13.8-10	7.37	50	8.19	10.00	1	13.8	45.0	0.068
P6KE9.1A	9.1-13.4-5	7.78	50	8.65	9.55	1	13.4	47.0	0.068
P6KE10	10-15.0-10	8.10	10	9.00	11.00	1	15.0	42.0	0.073
P6KE10A	10-14.5-5	8.55	10	9.50	10.50	1	14.5	43.0	0.073
P6KE11	11-16.2-10	8.92	5.0	9.90	12.10	1	16.2	38.0	0.075
P6KE11A	11-15.6-5	9.40	5.0	10.50	11.60	1	15.6	40.0	0.075
P6KE12	12-17.3-10	9.72	5.0	10.80	13.20	1	17.3	36.0	0.078
P6KE12A	12-16.7-5	10.20	5.0	11.40	12.60	1	16.7	37.0	0.078
P6KE13	13-19.0-10	10.50	5.0	11.70	14.30	1	19.0	33.0	0.061
P6KE13A	13-18.2-5	11.10	5.0	12.40	13.70	1	18.2	34.0	0.081
P6KE15	15-22.0-10	12.10	5.0	13.50	16.50	1	22.0	28.0	0.084
P6KE15A	15-21.2-5	12.80	5.0	14.30	15.80	1	21.2	29.0	0.084
P6KE16	16-23.5-10	12.90	5.0	14.40	17.60	1	23.5	26.0	0.086
P6KE16A	16-22.5-5	13.60	5.0	15.20	16.80	1	22.5	28.0	0.086
P6KE18	18-26.5-10	14.50	5.0	16.20	19.80	1	26.5	23.0	0.088
P6KE18A	18-25.2-5	15.30	5.0	17.10	18.90	1	25.2	25.0	0.088
P6KE20	20-29.1-10	16.20	5.0	18.00	22.00	1	29.1	21.0	0.090
P6KE20A	20-27.7-5	17.10	5.0	19.00	21.00	1	27.7	22.0	0.090
P6KE22	22-31.9-10	17.80	5.0	19.80	24.20	1	31.9	19.0	0.092
P6KE22A	22-30.6-5	18.80	5.0	20.90	23.10	1	30.6	20.0	0.092
P6KE24	24-34.7-10	19.40	5.0	21.60	26.40	1	34.7	18.0	0.091
P6KE24A	24-33.2-5	20.50	5.0	22.80	25.20	1	33.2	19.0	0.094
P6KE27	27-39.1-10	21.80	5.0	24.30	29.70	1	39.0	16.0	0.096
P6KE27A	27-37.5-5	23.10	5.0	25.70	28.40	1	37.5	16.8	0.096
P6KE30	30-43.5-10	24.30	5.0	27.00	33.00	1	43.5	14.0	0.097
P6KE30A	30-41.4-5	25.60	5.0	28.50	31.50	1	41.4	15.0	0.097
P6KE33	33-47.7-10	26.80	5.0	29.70	36.30	1	47.7	13.0	0.098
P6KE33A	33-45.7-5	28.20	5.0	31.40	34.70	1	45.7	13.8	0.098
P6KE36	36-52.0-10	29.10	5.0	32.40	39.60	1	52.0	12.0	0.099
P6KE36A	36-49.9-5	30.80	5.0	34.20	37.80	1	49.9	12.6	0.099
P6KE39	39-56.4-10	31.60	5.0	35.10	42.90	1	56.4	11.1	0.100
P6KE39A	39-53.9-5	33.30	5.0	37.10	41.00	1	53.9	11.6	0.100
P6KE43	43-61.9-10	34.80	5.0	38.70	47.30	1	61.9	10.0	0.101
P6KE43A	43-59.3-5	36.80	5.0	40.90	45.20	1	59.3	10.6	0.101
P6KE47	47-67.8-10	38.10	5.0	42.30	51.70	1	67.8	9.2	0.101
P6KE47A	47-64.8-5	40.20	5.0	44.70	49.40	1	64.8	9.7	0.101
P6KE51	51-70.1-10	41.30	5.0	45.90	56.10	1	73.5	8.5	0.102

THIS TABLE CONTINUES

NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
- NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A V_{BR} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED
- NOTE 3:** ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE.

- NOTE 4:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2D ON PAGE 7-41
- ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3D ON PAGE 7-41



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600 WATT TRANSIENT SUPPRESSOR CELL SPECIFICATIONS

TABLE 3D - 600 WATT TRANSIENT SUPPRESSOR CELL ELECTRICAL SPECIFICATIONS (NOTE 1)

INDUSTRY STANDARD PART NUMBERS (NOTE 2) 600 WATT P6KE SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-41 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R)@V _{SO} (NOTE 3) μA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 4)		MAX. TEMP. COEFFICIENT OF V _{BR} (%/°C)
				MIN.	MAX.		V _{CL}	I _{PP}	
				Volts	Volts		Volts	Amps	
P6KE51A	51-70.1-5	43.60	5.0	48.50	53.60	1	70.1	8.9	0.102
P6KE56	56-80.5-10	45.40	5.0	50.40	61.60	1	80.5	7.8	0.103
P6KE56A	56-77.0-5	47.80	5.0	53.20	58.80	1	77.0	8.1	0.103
P6KE62	62-89.0-10	50.20	5.0	55.80	68.20	1	89.0	7.0	0.104
P6KE62A	62-85.0-5	53.00	5.0	58.90	65.10	1	85.0	7.4	0.104
P6KE68	68-96.0-10	55.10	5.0	61.20	74.80	1	96.0	6.4	0.104
P6KE68A	68-92.0-5	58.10	5.0	64.60	71.40	1	92.0	6.8	0.104
P6KE75	75-108.0-10	60.70	5.0	67.50	82.50	1	108.0	5.8	0.105
P6KE75A	75-103.0-5	64.10	5.0	71.30	78.80	1	103.0	6.1	0.105
P6KE82	82-118.0-10	66.40	5.0	73.80	90.20	1	118.0	5.3	0.105
P6KE82A	82-113.0-5	70.10	5.0	77.90	86.10	1	113.0	5.5	0.105
P6KE91	91-131.0-10	73.70	5.0	81.90	100.00	1	131.0	4.8	0.106
P6KE91A	91-125.0-5	77.80	5.0	86.50	95.50	1	125.0	5.0	0.106
P6KE100	100-144.0-10	81.00	5.0	90.00	110.00	1	144.0	4.3	0.106
P6KE100A	100-137.0-5	85.50	5.0	95.00	105.00	1	137.0	4.5	0.106
P6KE110	110-158.0-10	89.20	5.0	99.00	121.00	1	158.0	3.9	0.107
P6KE110A	110-152.0-5	94.00	5.0	105.00	116.00	1	152.0	4.1	0.107
P6KE120	120-173.0-10	97.20	5.0	108.00	132.00	1	173.0	3.6	0.107
P6KE120A	120-165.0-5	102.00	5.0	114.00	126.00	1	165.0	3.8	0.107
P6KE130	130-187.0-10	105.00	5.0	117.00	143.00	1	187.0	3.3	0.107
P6KE130A	130-179.0-5	111.00	5.0	124.00	137.00	1	179.0	3.5	0.107
P6KE150	150-215.0-10	121.00	5.0	135.00	165.00	1	215.0	2.9	0.108
P6KE150A	150-207.0-5	128.00	5.0	143.00	158.00	1	207.0	3.0	0.108
P6KE160	160-230.0-10	130.00	5.0	144.00	176.00	1	230.0	2.7	0.108
P6KE160A	160-219.0-5	136.00	5.0	152.00	168.00	1	219.0	2.8	0.108
P6KE170	170-244.0-10	138.00	5.0	153.00	187.00	1	244.0	2.5	0.108
P6KE170A	170-234.0-5	145.00	5.0	162.00	179.00	1	234.0	2.6	0.108
P6KE180	180-256.0-10	146.00	5.0	162.00	198.00	1	256.0	2.4	0.108
P6KE180A	180-246.0-5	154.00	5.0	171.00	189.00	1	246.0	2.5	0.108
P6KE200	200-287.0-10	162.00	5.0	180.00	220.00	1	287.0	2.1	0.108
P6KE200A	200-274.0-5	171.00	5.0	190.00	210.00	1	274.0	2.2	0.108
P6KE220	220-344.0-10	175.00	5.0	198.00	242.00	1	344.0	1.8	0.108
P6KE220A	220-328.0-5	185.00	5.0	209.00	231.00	1	328.0	1.9	0.108
P6KE250	250-360.0-10	202.00	5.0	225.00	275.00	1	360.0	1.7	0.110
P6KE250A	250-344.0-5	214.00	5.0	237.00	263.00	1	344.0	1.8	0.110
P6KE300	300-430.0-10	243.00	5.0	270.00	330.00	1	430.0	1.4	0.110
P6KE300A	300-414.0-5	256.00	5.0	285.00	315.00	1	414.0	1.5	0.110
P6KE350	350-504.0-10	284.00	5.0	315.00	385.00	1	504.0	1.2	0.110
P6KE350A	350-482.0-5	300.00	5.0	332.00	368.00	1	482.0	1.3	0.110
P6KE400	400-574.0-10	324.00	5.0	360.00	440.00	1	571.0	1.9	0.110
P6KE400A	400-548.0-5	342.00	5.0	380.00	420.00	1	548.0	1.1	0.110
P6KE440	440-598.0-10	356.00	5.0	396.00	484.00	1	598.0	0.99	0.110
P6KE440A	440-590.0-5	376.00	5.0	418.00	462.00	1	590.0	1.04	0.110

NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
- NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A V_{BR} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED
- NOTE 3:** ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE.

- NOTE 4:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2D ON PAGE 7-41
- ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3D ON PAGE 7-41



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**600 WATT CELL
SPECIFICATIONS CONTINUED**

ORDERING SPECIFIER

6.8 - 10.8 - 10

ORDER CODE FROM
PREVIOUS PAGES

TABLE 4D - AVAILABLE CELL SIZES

CODE	DIE TYPE	CELL SPECIFICATIONS REFER TO:
C-SZU3	600 WATT UNIPOLAR CELL	PAGE 7-37
C-SZZ3	600 WATT BIPOLAR CELL	PAGE 7-38

**FIGURE 1D - TYPICAL JUNCTION
CAPACITANCE**

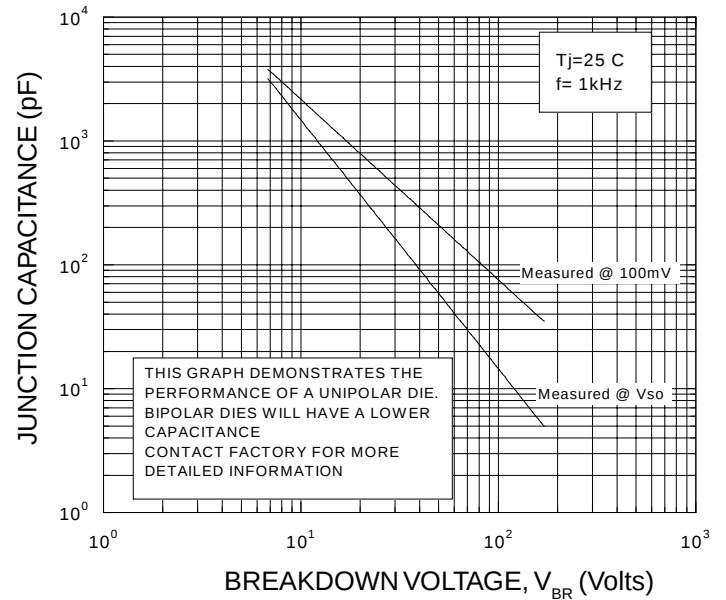


FIGURE 2D - PULSE WAVEFORM

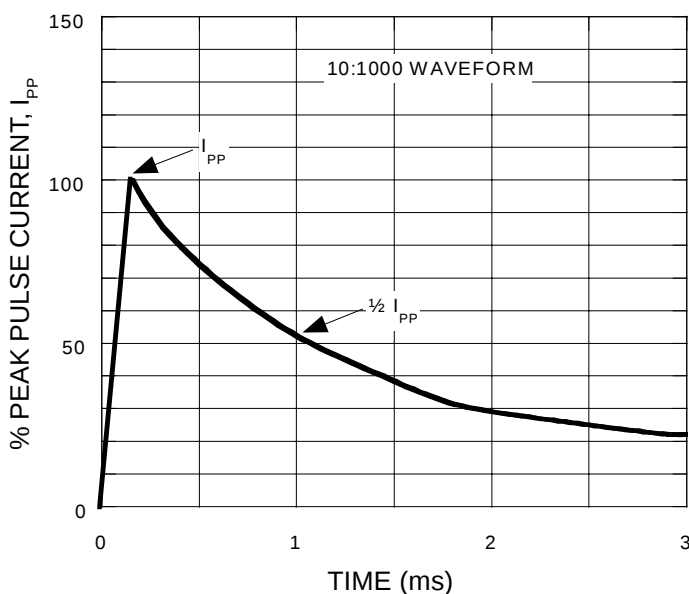
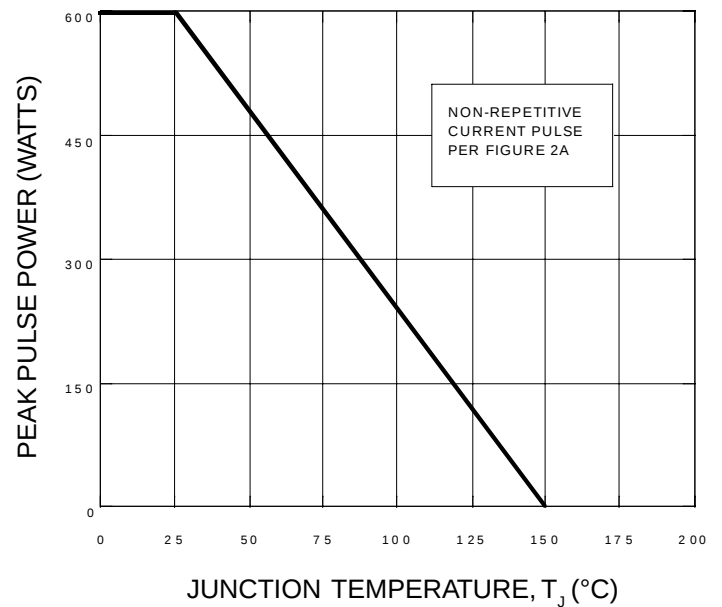
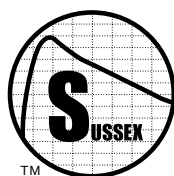


FIGURE 3D - PULSE DERATING CURVE





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1500 WATT TRANSIENT SUPPRESSOR CELL SPECIFICATIONS

TABLE 5D - 1500 WATT TRANSIENT SUPPRESSOR CELL ELECTRICAL SPECIFICATIONS (NOTE 1)

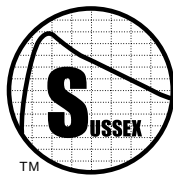
JEDEC PART NUMBERS (NOTE 2)	INDUSTRY STANDARD PART NUMBERS (NOTE 3) 1500 WATT 1.5KE SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-44 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R) @ V _{SO} (NOTE 4) μA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 5)		MAX. TEMP. COEFFICIENT OF V _{BR} (%/°C)
					MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	
1N6267	1.5KE6.8	6.8-10.8-10	5.50	1000	6.12	7.48	10	10.8	139	0.057
1N6267A	1.5KE6.8A	6.8-10.5-5	5.80	1000	6.45	7.14	10	10.5	143	0.057
1N6268	1.5KE7.5	7.5-11.7-10	6.05	500	6.75	8.25	10	11.7	128	0.061
1N6268A	1.5KE7.5A	7.5-11.3-5	6.40	500	7.13	7.88	10	11.3	132	0.061
1N6269	1.5KE8.2	8.2-12.5-10	6.63	200	7.38	9.02	10	12.5	120	0.065
1N6269A	1.5KE8.2A	8.2-12.1-5	7.02	200	7.79	8.61	10	12.1	124	0.065
1N6270	1.5KE9.1	9.1-13.8-10	7.37	50	8.19	10.00	1	13.8	109	0.068
1N6270A	1.5KE9.1A	9.1-13.4-5	7.78	50	8.65	9.55	1	13.4	112	0.068
1N6271	1.5KE10	10-15.0-10	8.10	10	9.00	11.00	1	15.0	100	0.073
1N6271A	1.5KE10A	10-14.5-5	8.55	10	9.50	10.50	1	14.5	103	0.073
1N6272	1.5KE11	11-16.2-10	8.92	5.0	9.90	12.10	1	16.2	93	0.075
1N6272A	1.5KE11A	11-15.6-5	9.40	5.0	10.50	11.60	1	15.6	96	0.075
1N6273	1.5KE12	12-17.3-10	9.72	5.0	10.80	13.20	1	17.3	87	0.078
1N6273A	1.5KE12A	12-16.7-5	10.20	5.0	11.40	12.60	1	16.7	90	0.078
1N6274	1.5KE13	13-19.0-10	10.50	5.0	11.70	14.30	1	19.0	79	0.061
1N6274A	1.5KE13A	13-18.2-5	11.10	5.0	12.40	13.70	1	18.2	82	0.081
1N6275	1.5KE15	15-22.0-10	12.10	5.0	13.50	16.50	1	22.0	68	0.084
1N6275A	1.5KE15A	15-21.2-5	12.80	5.0	14.30	15.80	1	21.2	71	0.084
1N6276	1.5KE16	16-23.5-10	12.90	5.0	14.40	17.60	1	23.5	64	0.086
1N6276A	1.5KE16A	16-22.5-5	13.60	5.0	15.20	16.80	1	22.5	67	0.086
1N6277	1.5KE18	18-26.5-10	14.50	5.0	16.20	19.80	1	26.5	56.5	0.088
1N6277A	1.5KE18A	18-25.2-5	15.30	5.0	17.10	18.90	1	25.2	59.5	0.088
1N6278	1.5KE20	20-29.1-10	16.20	5.0	18.00	22.00	1	29.1	51.5	0.090
1N6278A	1.5KE20A	20-27.7-5	17.10	5.0	19.00	21.00	1	27.7	54	0.090
1N6279	1.5KE22	22-31.9-10	17.80	5.0	19.80	24.20	1	31.9	47	0.092
1N6279A	1.5KE22A	22-30.6-5	18.80	5.0	20.90	23.10	1	30.6	49	0.092
1N6280	1.5KE24	24-34.7-10	19.40	5.0	21.60	26.40	1	34.7	43	0.091
1N6280A	1.5KE24A	24-33.2-5	20.50	5.0	22.80	25.20	1	33.2	45	0.094
1N6281	1.5KE27	27-39.1-10	21.80	5.0	24.30	29.70	1	39.1	38.5	0.096
1N6281A	1.5KE27A	27-37.5-5	23.10	5.0	25.70	28.40	1	37.5	40	0.096
1N6282	1.5KE30	30-43.5-10	24.30	5.0	27.00	33.00	1	43.5	34.5	0.097
1N6282A	1.5KE30A	30-41.4-5	25.60	5.0	28.50	31.50	1	41.4	36	0.097
1N6283	1.5KE33	33-47.7-10	26.80	5.0	29.70	36.30	1	47.7	31.5	0.098
1N6283A	1.5KE33A	33-45.7-5	28.20	5.0	31.40	34.70	1	45.7	33	0.098
1N6284	1.5KE36	36-52.0-10	29.10	5.0	32.40	39.60	1	52.0	29	0.099
1N6284A	1.5KE36A	36-49.9-5	30.80	5.0	34.20	37.80	1	49.9	30	0.099
1N6285	1.5KE39	39-56.4-10	31.60	5.0	35.10	42.90	1	56.4	26.5	0.100
1N6285A	1.5KE39A	39-53.9-5	33.30	5.0	37.10	41.00	1	53.9	28	0.100
1N6286	1.5KE43	43-61.9-10	34.80	5.0	38.70	47.30	1	61.9	24	0.101
1N6286A	1.5KE43A	43-59.3-5	36.80	5.0	40.90	45.20	1	59.3	25	0.101
1N6287	1.5KE47	47-67.8-10	36.10	5.0	42.30	51.70	1	67.8	22.2	0.101
1N6287A	1.5KE47A	47-64.8-5	40.20	5.0	44.70	49.40	1	64.8	23.2	0.101
1N6288	1.5KE51	51-70.1-10	41.30	5.0	45.90	56.10	1	73.5	20.4	0.102

THIS TABLE CONTINUES

NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
- NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A V_{BR} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED
- NOTE 3:** ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE.

- NOTE 4:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2D ON PAGE 7-44
- ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3D ON PAGE 7-44



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1500 WATT TRANSIENT SUPPRESSOR CELL SPECIFICATIONS

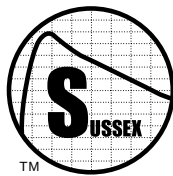
TABLE 5D - 1500 WATT TRANSIENT SUPPRESSOR CELL ELECTRICAL SPECIFICATIONS (NOTE 1)

JEDEC PART NUMBERS (NOTE 2)	INDUSTRY STANDARD PART NUMBERS (NOTE 3) 1500 WATT 1.5KE SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-44 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R) @ V _{SO} (NOTE 4) μA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 5)		MAX. TEMP. COEFFICIENT OF V _{BR} (%/°C)
					MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	
1N6288A	1.5KE51A	51-70.1-5	43.60	5.0	48.50	53.60	1	70.1	21.4	0.102
1N6289	1.5KE56	56-80.5-10	45.60	5.0	50.40	61.80	1	80.5	18.6	0.103
1N6289A	1.5KE56A	56-77.0-5	47.80	5.0	53.20	58.80	1	77.0	19.5	0.103
1N6290	1.5KE62	62-89.0-10	50.20	5.0	55.80	68.20	1	89.0	16.9	0.104
1N6290A	1.5KE62A	62-85.0-5	53.00	5.0	58.90	65.10	1	85.0	17.7	0.104
1N6291	1.5KE68	68-96.0-10	55.10	5.0	61.20	74.80	1	96.0	15.3	0.104
1N6291A	1.5KE68A	68-92.0-5	58.10	5.0	64.60	71.40	1	92.0	16.3	0.104
1N6292	1.5KE75	75-108.0-10	60.70	5.0	67.50	82.50	1	108.0	13.9	0.105
1N6292A	1.5KE75A	75-103.0-5	64.10	5.0	71.30	78.80	1	103.0	14.6	0.105
1N6293	1.5KE82	82-118.0-10	66.40	5.0	73.80	90.20	1	118.0	12.7	0.105
1N6293A	1.5KE82A	82-113.0-5	70.10	5.0	77.90	86.10	1	113.0	13.3	0.105
1N6294	1.5KE91	91-131.0-10	73.70	5.0	81.90	100.00	1	131.0	11.4	0.106
1N6294A	1.5KE91A	91-125.0-5	77.80	5.0	86.50	95.50	1	125.0	12	0.106
1N6295	1.5KE100	100-144.0-10	81.00	5.0	90.00	110.00	1	144.0	10.4	0.106
1N6295A	1.5KE100A	100-137.0-5	85.50	5.0	95.00	105.00	1	137.0	11	0.106
1N6296	1.5KE110	110-158.0-10	89.20	5.0	99.00	121.00	1	158.0	9.5	0.107
1N6296A	1.5KE110A	110-152.0-5	94.00	5.0	106.00	116.00	1	152.0	9.9	0.107
1N6297	1.5KE120	120-173.0-10	97.20	5.0	108.00	132.00	1	173.0	8.7	0.107
1N6297A	1.5KE120A	120-165.0-5	102.00	5.0	114.00	126.00	1	165.0	9.1	0.107
1N6298	1.5KE130	130-187.0-10	106.00	5.0	117.00	143.00	1	187.0	8	0.107
1N6298A	1.5KE130A	130-179.0-5	111.00	5.0	124.00	137.00	1	179.0	8.4	0.107
1N6299	1.5KE150	150-215.0-10	121.00	5.0	136.00	165.00	1	215.0	7	0.108
1N6299A	1.5KE150A	150-207.0-5	128.00	5.0	143.00	158.00	1	207.0	7.2	0.108
1N6300	1.5KE160	160-230.0-10	130.00	5.0	144.00	176.00	1	230.0	6.5	0.108
1N6300A	1.5KE160A	160-219.0-5	136.00	5.0	152.00	168.00	1	219.0	6.8	0.108
1N6301	1.5KE170	170-244.0-10	138.00	5.0	153.00	187.00	1	244.0	6.2	0.108
1N6301A	1.5KE170A	170-234.0-5	145.00	5.0	162.00	179.00	1	234.0	6.4	0.108
1N6302	1.5KE180	180-256.0-10	146.00	5.0	162.00	198.00	1	256.0	5.8	0.108
1N6302A	1.5KE180A	180-246.0-5	154.00	5.0	171.00	189.00	1	246.0	6.1	0.108
1N6303	1.5KE200	200-287.0-10	162.00	5.0	180.00	220.00	1	287.0	5.2	0.108
1N6303A	1.5KE200A	200-274.0-5	171.00	5.0	190.00	210.00	1	274.0	5.5	0.108
N/A	1.5KE220	220-344.0-10	175.00	5.0	196.00	242.00	1	344.0	4.3	0.108
N/A	1.5KE220A	220-328.0-5	185.00	5.0	209.00	231.00	1	328.0	4.6	0.108
N/A	1.5KE250	250-360.0-10	202.00	5.0	225.00	275.00	1	360.0	5	0.110
N/A	1.5KE250A	250-344.0-5	214.00	5.0	237.00	263.00	1	344.0	5	0.110
N/A	1.5KE300	300-430.0-10	243.00	5.0	270.00	330.00	1	430.0	5	0.110
N/A	1.5KE300A	300-414.0-5	256.00	5.0	285.00	315.00	1	414.0	5	0.110
N/A	1.5KE350	350-504.0-10	284.00	5.0	315.00	385.00	1	504.0	4	0.110
N/A	1.5KE350A	350-482.0-5	300.00	5.0	333.00	368.00	1	482.0	4	0.110
N/A	1.5KE400	400-574.0-10	324.00	5.0	360.00	440.00	1	574.0	4	0.110
N/A	1.5KE400A	400-548.0-5	342.00	5.0	380.00	420.00	1	548.0	4	0.110
N/A	1.5KE440	440-598.0-10	356.00	5.0	396.00	484.00	1	598.0	4	0.110
N/A	1.5KE440A	440-590.0-5	376.00	5.0	418.00	462.00	1	590.0	4	0.110

NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
- NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A V_{BR} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED
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- NOTE 4:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2D ON PAGE 7-44
- ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3D ON PAGE 7-44



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**1500 WATT CELL
SPECIFICATIONS CONTINUED**

ORDERING SPECIFIER

6.8 - 10.8 - 10

ORDER CODE FROM
PREVIOUS PAGES

TABLE 6D - AVAILABLE CELL SIZES

CODE	DIE TYPE	CELL SPECIFICATIONS REFER TO:
C-SZU16	1500 WATT UNIPOLAR CELL	PAGE 7-37
C-SZZ16	1500 WATT BIPOLAR CELL	PAGE 7-38

**FIGURE 1D - TYPICAL JUNCTION
CAPACITANCE**

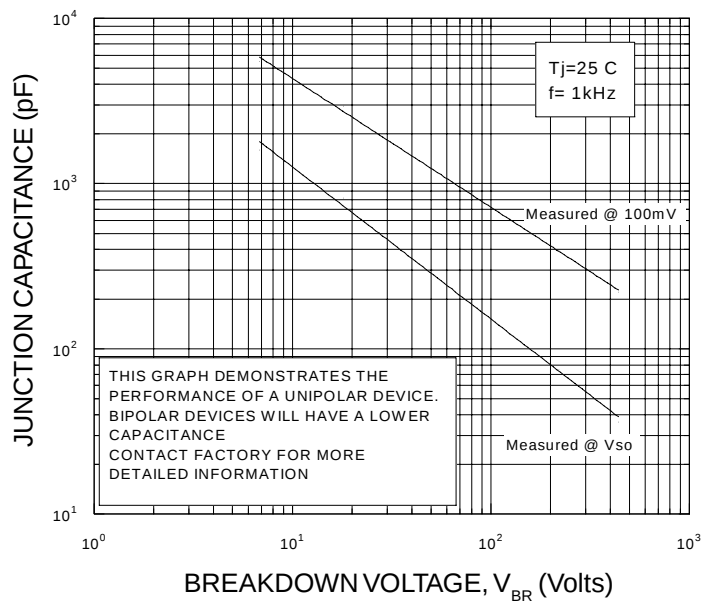


FIGURE 2D - PULSE WAVEFORM

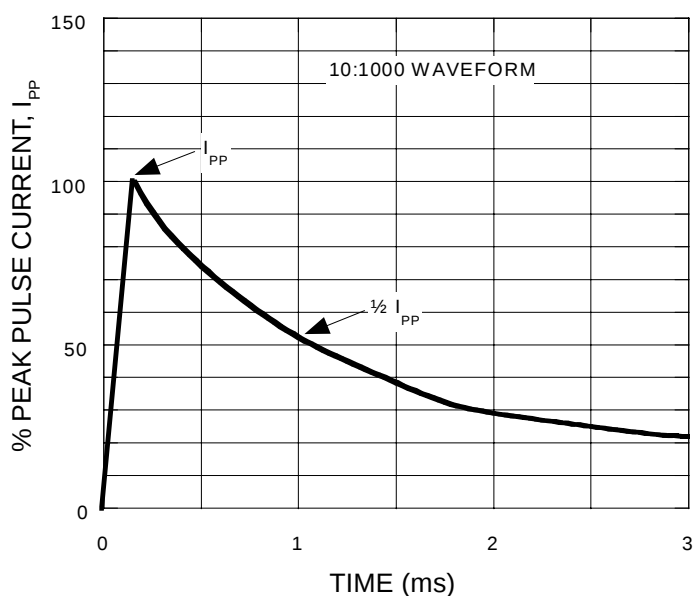
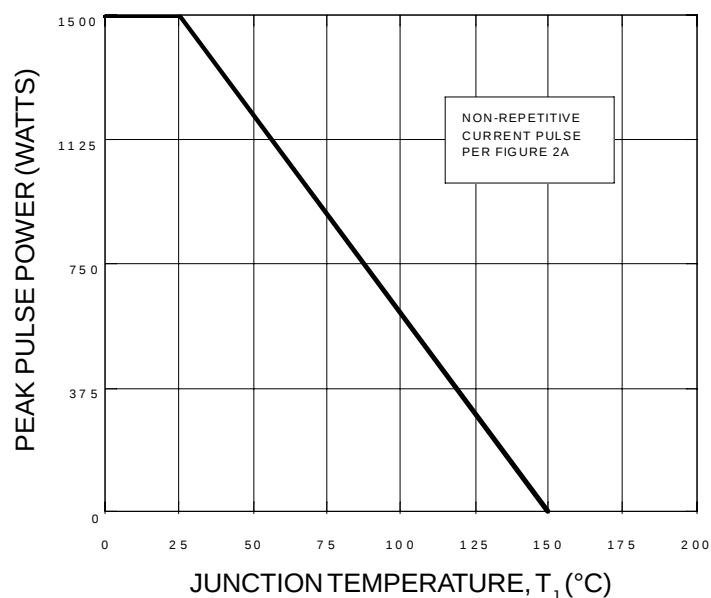
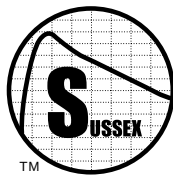


FIGURE 3D - PULSE DERATING CURVE



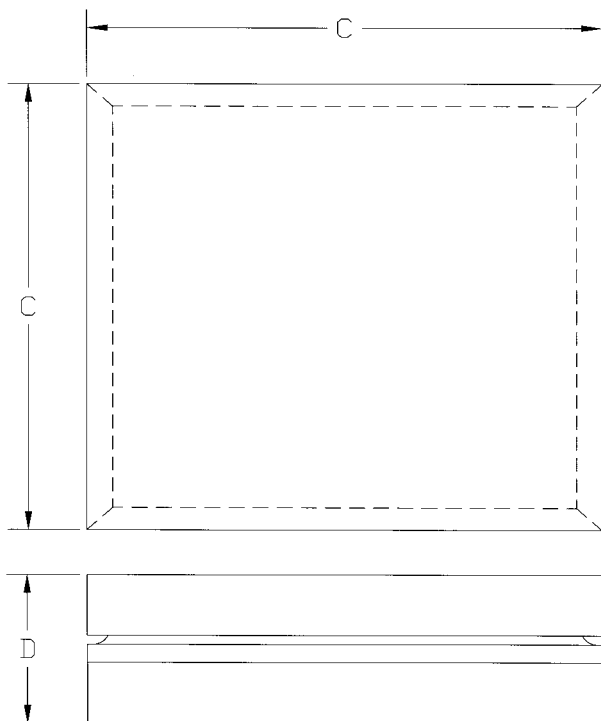


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**5000 WATT UNIPOLAR
TRANSIENT SUPPRESSOR CELL**



PLEASE NOTE: DRAWINGS ARE NOT TO SCALE.
REFER TO TABLE 1D FOR COMPLETE DIMENSIONS

TABLE 7D - CELL DIMENSION SPECIFICATIONS
♦ ALL TOLERANCES ARE $\pm .005"$ ♦ ALL DIMENSIONS ARE IN INCHES

SIZE CODE	C	D	CHIP DIMENSION
35	0.200	0.066	.200 SQUARE

GLASS PASSIVATED UNIPOLAR TRANSIENT SUPPRESSOR CELL

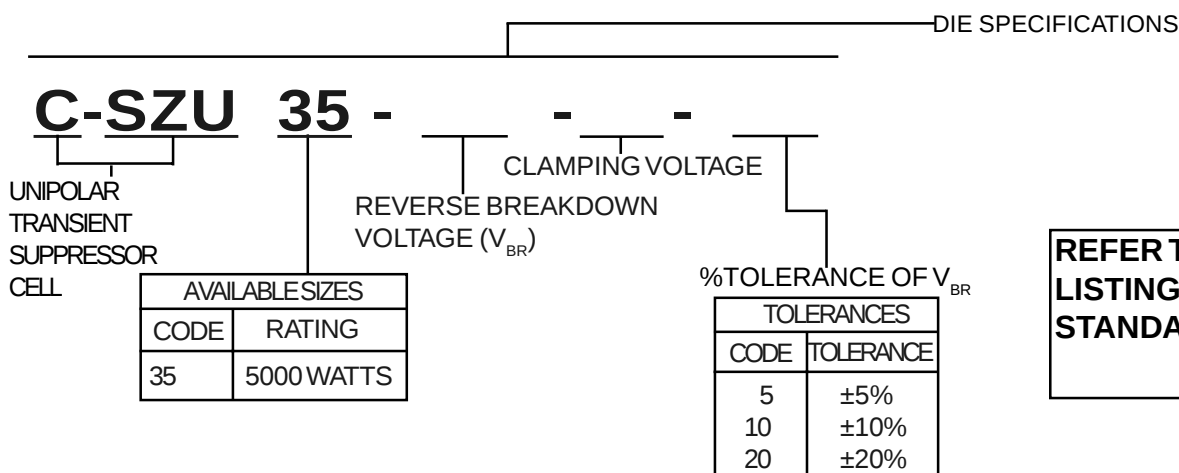
5000 WATT MAXIMUM POWER HANDLING

REVERSE VOLTAGES - 6.8 TO 440 VOLTS

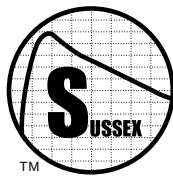
5000 WATT UNIPOLAR CELL SPECIFICATIONS

- ♦ Used in Hybrid Connector and Telecom Applications Where Axial Leaded Devices Are Physically Too Large or Have Too Great an Inductance
- ♦ Each Die Fully Glass Passivated: Needs No Encapsulation
- ♦ Electrical Equivalent to 5KP Axial Leaded Devices
- ♦ Each Device Individually Inspected
- ♦ Unipolar
- ♦ Operating Temperature: -65 to 150°C
- ♦ Storage Temperature: -65 to 175°C
- ♦ Tab Metallization OFHC Copper Solder Plated: 95Pb/5Sn

CUSTOM ORDERING SPECIFIER



**REFER TO PAGE 7-47 FOR A
LISTING OF 5000 WATT
STANDARD PARTS.**

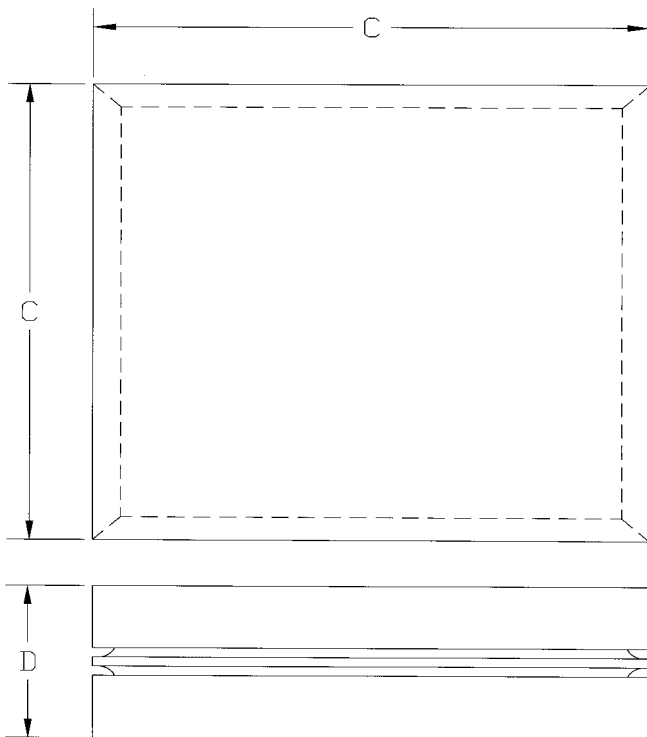


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**5000 WATT BIPOLAR
TRANSIENT SUPPRESSOR CELL**



GLASS PASSIVATED BIPOLAR TRANSIENT SUPPRESSOR CELL

5000 WATT MAXIMUM POWER HANDLING

REVERSE VOLTAGES - 6.8 TO 440 VOLTS

5000 WATT BIPOLAR CELL SPECIFICATIONS

- ◆ Used in Hybrid Connector and Telecom Applications Where Axial Leaded Devices Are Physically Too Large or Have Too Great an Inductance
- ◆ Each Die Fully Glass Passivated: Needs No Encapsulation
- ◆ Electrical Equivalent to 5KP Axial Leaded Devices
- ◆ Each Device Individually Inspected
- ◆ Bipolar
- ◆ Operating Temperature: -65 to 150°C
- ◆ Storage Temperature: -65 to 175°C
- ◆ Tab Metallization OFHC Copper Solder Plated: 95Pb/5Sn

PLEASE NOTE: DRAWINGS ARE NOT TO SCALE.
REFER TO TABLE 1D FOR COMPLETE DIMENSIONS

TABLE 8D - CELL DIMENSION SPECIFICATIONS
♦ ALL TOLERANCES ARE $\pm .005"$ ♦ ALL DIMENSIONS ARE IN INCHES

SIZE CODE	C	D	CHIP DIMENSION
35	0.200	0.066	.200 SQUARE

CUSTOM ORDERING SPECIFIER

DIE SPECIFICATIONS

C-SZZ 35 - - -

BIPOLAR TRANSIENT SUPPRESSOR CELL

CLAMPING VOLTAGE

REVERSE BREAKDOWN VOLTAGE (V_{BR})

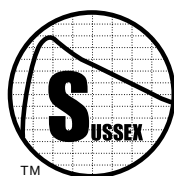
AVAILABLE SIZES

CODE	RATING
35	5000 WATTS

%TOLERANCE OF V_{BR}

TOLERANCES	
CODE	TOLERANCE
5	$\pm 5\%$
10	$\pm 10\%$
20	$\pm 20\%$

**REFER TO PAGE 7-47 FOR A
LISTING OF 5000 WATT
STANDARD PARTS.**



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5000 WATT TRANSIENT SUPPRESSOR CELL SPECIFICATIONS

TABLE 9D - 5000 WATT TRANSIENT SUPPRESSOR CELL ELECTRICAL SPECIFICATIONS (NOTE 1)

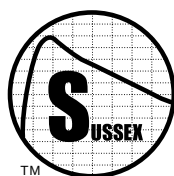
INDUSTRY STANDARD PART NUMBERS (NOTE 2) 5000 WATT 5KP SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-49 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R) @ V _{SO} (NOTE 3) μA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 4)		MAX. TEMP. COEFFICIENT OF V _{BR} (% / °C)
				MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	
5KP5.0	6.8-9.6-6.5	5.0	2000	6.4	7.3	50	9.6	546	0.057
5KP5.0A	6.7-9.2-4.4	5.0	2000	6.4	7.0	50	9.2	570	0.057
5KP6.0	7.4-11.4-9.9	6.0	5000	6.7	8.2	50	11.4	460	0.061
5KP6.0A	7.0-10.3-4.9	6.0	5000	6.7	7.4	50	10.3	509	0.061
5KP6.5	8.0-12.3-9.9	6.5	2000	7.2	8.8	50	12.3	426	0.065
5KP6.5A	7.6-11.2-5	6.5	2000	7.2	8.0	50	11.2	468	0.065
5KP7.0	8.6-13.3-10	7.0	1000	7.8	9.5	50	13.3	394	0.068
5KP7.0A	8.1-12-5	7.0	1000	7.8	8.6	50	12.0	437	0.068
5KP7.5	9.2-14.3-10	7.5	250	8.3	10.2	5.0	14.3	367	0.073
5KP7.5A	8.7-12.9-5	7.5	250	8.3	9.2	5.0	12.9	406	0.073
5KP8.0	9.8-15-10	8.0	150	8.9	10.9	5.0	15.0	350	0.075
5KP8.0A	9.3-13.6-5	8.0	150	8.9	9.8	5.0	13.6	386	0.075
5KP8.5	10.4-15.9-9.8	8.5	50	9.4	11.5	5.0	15.9	330	0.078
5KP8.5A	9.9-14.4-4.8	8.5	50	9.4	10.4	5.0	14.4	364	0.078
5KP9.0	11.1-16.9-9.9	9.0	20	10.0	12.2	5.0	16.9	310	0.081
5KP9.0A	10.5-15.4-5.2	9.0	20	10.0	11.1	5.0	15.4	340	0.081
5KP10	12.3-18.8-10.1	10	15	11.1	13.6	5.0	18.8	279	0.084
5KP10A	11.7-17-5.1	10	15	11.1	12.3	5.0	17.0	308	0.084
5KP11	13.5-20.1-9.9	11	10	12.2	14.9	5.0	20.1	261	0.086
5KP11A	12.8-18.2-5	11	10	12.2	13.5	5.0	18.2	288	0.086
5KP12	14.8-22-10.1	12	10	13.3	16.3	5.0	22.0	238	0.088
5KP12A	14-19.9-5	12	10	13.3	14.7	5.0	19.9	263	0.088
5KP13	16-23.8-10	13	10	14.4	17.6	5.0	23.8	220	0.090
5KP13A	15.1-21.5-4.9	13	10	14.4	15.9	5.0	21.5	244	0.090
5KP14	17.3-25.8-10	14	10	15.6	19.1	5.0	25.8	203	0.092
5KP14A	16.4-23.2-4.8	14	10	15.6	17.2	5.0	23.2	226	0.092
5KP15	18.5-26.9-9.9	15	10	16.7	20.4	5.0	26.9	195	0.094
5KP15A	17.6-24.4-5.1	15	10	16.7	18.5	5.0	24.4	215	0.094
5KP16	19.8-28.8-10.1	16	10	17.8	21.8	5.0	28.8	182	0.096
5KP16A	18.7-26-5	16	10	17.8	19.7	5.0	26.0	201	0.096
5KP17	21-30.5-10	17	10	18.9	23.1	5.0	30.5	172	0.097
5KP17A	19.9-27.6-5	17	10	18.9	20.9	5.0	27.6	190	0.097
5KP18	22.2-32.2-9.9	18	10	20.0	24.4	5.0	32.2	163	0.098
5KP18A	21.0-29.2-4.9	18	10	20.0	22.1	5.0	29.2	179	0.098
5KP20	24.6-35.8-9.9	20	10	22.2	27.1	5.0	35.8	146	0.099
5KP20A	23.3-32.4-4.9	20	10	22.2	24.5	5.0	32.4	162	0.099
5KP22	27.1-39.4-9.9	22	10	24.4	29.8	5.0	39.4	133	0.100
5KP22A	25.6-35.5-4.8	22	10	24.4	26.9	5.0	35.5	147	0.100
5KP24	29.6-43-9.9	24	10	26.7	32.6	5.0	43.0	122	0.101
5KP24A	28.1-38.9-4.9	24	10	26.7	29.5	5.0	38.9	134	0.101
5KP26	32.1-46.6-9.9	26	10	28.9	35.3	5.0	46.6	112	0.101
5KP26A	30.4-42.1-4.9	26	10	28.9	31.9	5.0	42.1	124	0.101
5KP28	34.5-50.1-9.9	28	10	31.1	38.0	5.0	50.1	104	0.102
5KP28A	32.7-45.4-5	28	10	31.1	34.4	5.0	45.4	115	0.102
5KP30	37-53.5-10	30	10	33.3	40.7	5.0	53.5	98	0.103
5KP30A	35-48.4-4.9	30	10	33.3	36.8	5.0	48.4	108	0.103
5KP33	40.8-59-10	33	10	36.7	44.9	5.0	59.0	88	0.104
5KP33A	38.6-53.3-5	33	10	36.7	40.6	5.0	53.3	98	0.104
5KP36	44.4-64.3-10	36	10	40.0	48.9	5.0	64.3	81	0.104
5KP36A	42.1-58.1-4.9	36	10	40.0	44.2	5.0	58.1	90	0.104
5KP40	49.3-71.4-10	40	10	44.4	54.3	5.0	71.4	73	0.105

THIS TABLE CONTINUES

NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
- NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A V_{SO} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED
- NOTE 3:** ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE.

- NOTE 4:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2D ON PAGE 7-49
- ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3D ON PAGE 7-49



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5000 WATT TRANSIENT SUPPRESSOR CELL SPECIFICATIONS

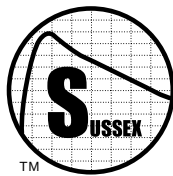
TABLE 9D - 5000 WATT TRANSIENT SUPPRESSOR CELL ELECTRICAL SPECIFICATIONS (NOTE 1)

INDUSTRY STANDARD PART NUMBERS (NOTE 2) 5000 WATT 5KP SERIES	SUSSEX ORDER CODE REFER TO PAGE 7-49 FOR ORDER SPECIFIER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R) @ V _{SO} (NOTE 3) μA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 4)		MAX. TEMP. COEFFICIENT OF V _{BR} (% / °C)
				MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps	
5KP40A	46.7-64.5-5	40	10	44.4	49.1	5.0	64.5	81	0.105
5KP43	53.1-76.7-9.9	43	10	47.8	58.4	5.0	76.7	68	0.105
5KP43A	50.3-69.4-4.9	43	10	47.8	52.8	5.0	69.4	75	0.105
5KP45	55.5-80.3-9.9	45	10	50.0	61.1	5.0	80.3	65	0.106
5KP45A	52.6-72.7-5	45	10	50.0	55.3	5.0	72.7	72	0.106
5KP48	59.2-85.5-10	48	10	53.3	65.2	5.0	85.5	61	0.106
5KP48A	56.1-77.4-4.9	48	10	53.3	58.9	5.0	77.4	67	0.106
5KP51	62.7-91.1-10	51	10	56.1	69.3	5.0	91.1	57	0.107
5KP51A	59.7-82.4-5	51	10	56.7	62.7	5.0	82.4	63	0.107
5KP54	66.6-96.3-9.9	54	10	60.0	73.3	5.0	96.3	54	0.107
5KP54A	63.1-87.1-4.9	54	10	60.0	66.3	5.0	87.1	60	0.107
5KP58	71.5-103-9.9	58	10	64.4	78.7	5.0	103.0	50	0.107
5KP58A	67.8-94-5	58	10	64.4	71.2	5.0	94.0	55	0.107
5KP60	74.1-107-9.9	60	10	66.7	81.5	5.0	107.0	49	0.108
5KP60A	70.2-97-4.9	60	10	66.7	73.7	5.0	97.0	54	0.108
5KP64	84-114-15.3	64	10	71.1	96.9	5.0	114.0	46	0.108
5KP64A	74.8-103-5	64	10	71.1	78.6	5.0	103.0	50	0.108
5KP70	86.3-125-10.1	70	10	77.6	95.1	5.0	125.0	42	0.108
5KP70A	81.9-113-5	70	10	77.8	86.0	5.0	113.0	46	0.108
5KP75	92.6-134-10	75	10	83.3	102.0	5.0	134.0	39	0.108
5KP75A	87.7-121-5	75	10	83.3	92.1	5.0	121.0	43	0.108
5KP78	96.3-139-10	78	10	86.7	106.0	5.0	139.0	37	0.108
5KP78A	91.2-126-4.9	78	10	86.7	95.8	5.0	126.0	41	0.108
5KP85	104.7-151-9.8	85	10	94.4	115.0	5.0	151.0	34	0.108
5KP85A	99.2-137-4.8	85	10	94.4	104.0	5.0	137.0	38	0.110
5KP90	111-160-9.9	90	10	100	122.0	5.0	160.0	32	0.110
5KP90A	105.5-146-5.2	90	10	100	111.0	5.0	146.0	35	0.110
5KP100	123.5-179-10.1	100	10	111	136.0	5.0	179.0	29	0.110
5KP100A	117-162-5.1	100	10	111	123.0	5.0	162.0	32	0.110
5KP110	135.5-196-9.9	110	10	122	149.0	5.0	196.0	26	0.112
5KP110A	128.5-177-5	110	10	122	135.0	5.0	177.0	29	0.112
5KP120	148-214-10.1	120.0	10	133	163.0	5.0	214.0	23	0.121
5KP120A	140.5-194-5	120.0	10	133	148.0	5.0	194.0	26	0.121
5KP160	197-285-10.1	160.0	10	177	217.0	5.0	285.0	18	0.135
5KP160A	187-259-5	160.0	10	177	197.0	5.0	259.0	19	0.135
5KP180	221.5-321-10.1	180.0	10	199	244.0	5.0	321.0	16	0.150
5KP180A	210.5-291-5	180.0	10	199	222.0	5.0	291.0	17	0.150
5KP200	247-356-10.1	200.0	10	222	272.0	5.0	356.0	14	0.200
5KP200A	234.5-323-5	200.0	10	222	247.0	5.0	323.0	15	0.200
5KP220	271.5-392-10.1	220.0	10	244	299.0	5.0	392.0	13	0.200
5KP220A	257.5-356-5	220.0	10	244	271.0	5.0	356.0	14	0.200
5KP250	308.5-445-10.1	250.0	10	277	340.0	5.0	445.0	11	0.222
5KP250A	292.5-404-5	250.0	10	277	308.0	5.0	404.0	12	0.222
5KP320	395-570-10.1	320.0	10	355	435.0	5.0	570.0	9	0.235
5KP320A	375-517-5	320.0	10	355	395.0	5.0	517.0	10	0.235
5KP360	444-641-10.1	360.0	10	399	489.0	5.0	641.0	8	0.240
5KP360A	421.5-582-5	360.0	10	399	444.0	5.0	582.0	9	0.240
5KP400	493-715-10.1	400.0	10	443	543.0	5.0	715.0	7	0.250
5KP400A	468-647-5	400.0	10	443	493.0	5.0	647.0	8	0.250
5KP440	543-784-10.1	440.0	10	488	598.0	5.0	784.0	6	0.260
5KP440A	515.5-711-5	440.0	10	488	543.0	5.0	711.0	7	0.260

NOTES

- NOTE 1:** ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
- NOTE 2:** ♦ FOR BIPOLAR DEVICES WITH A V_{SO} OF 10 VOLTS OR LESS, THE I_R LIMIT IS DOUBLED
- NOTE 3:** ♦ INDUSTRY STANDARD PART NUMBERS REFER TO PACKAGED DEVICES. THE DIES INDICATED BY THESE NUMBERS, IF PROPERLY PACKAGED, WILL OPERATE WITH THE SAME PERFORMANCE.

- NOTE 4:** ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2D ON PAGE 7-49
- ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3D ON PAGE 7-49



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**5000 WATT CELL
SPECIFICATIONS CONTINUED**

ORDERING SPECIFIER

6.8 - 10.8 - 10

ORDER CODE FROM
PREVIOUS PAGES

TABLE 10D - AVAILABLE CELL SIZES

CODE	DIE TYPE	CELL SPECIFICATIONS REFER TO:
C-SZU35	5000 WATT UNIPOLAR CELL	PAGE 7-45
C-SZZ35	5000 WATT BIPOLAR CELL	PAGE 7-46

**FIGURE 1D - TYPICAL JUNCTION
CAPACITANCE**

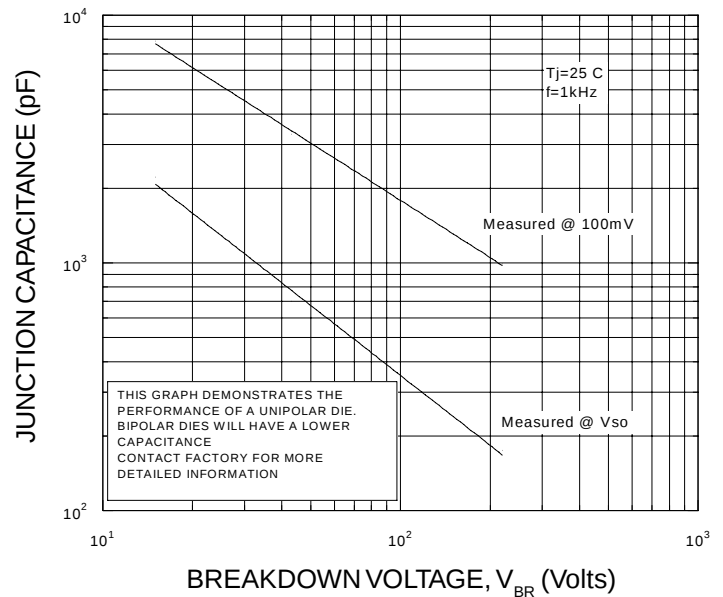


FIGURE 2D - PULSE WAVEFORM

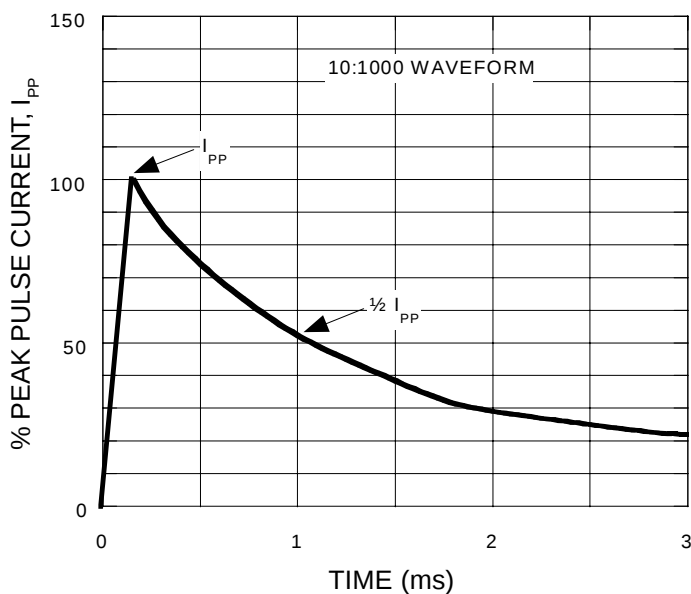
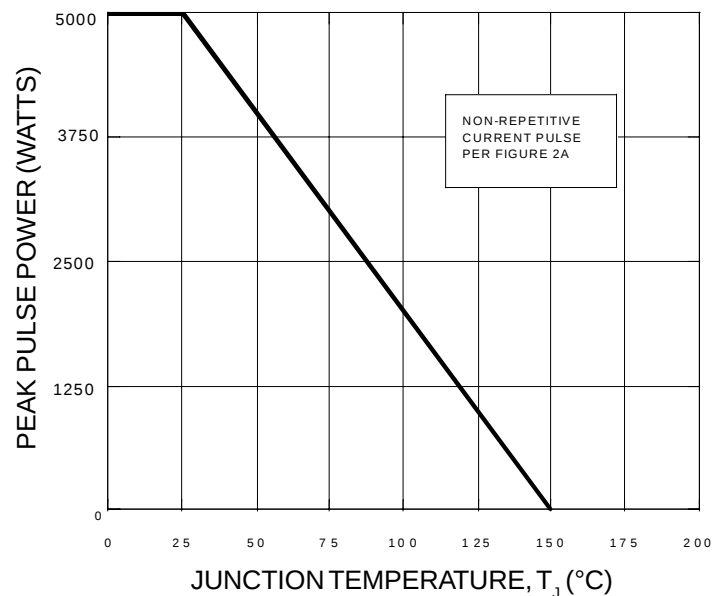
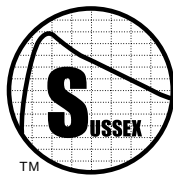


FIGURE 3D - PULSE DERATING CURVE





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CUSTOM CELL SPECIFICATIONS GUIDE

CUSTOM CELL SPECIFICATIONS GUIDE

Use this Specifications Guide to design a custom diode cell to fit your application. Below is a list of previously tooled tabs that are readily available without added tooling charges. Sussex has it's own in house stamping capabilities; if we are unable to locate an existing tool for your geometry we have an extensive network of tool and die makers which will allow us to manufacture your geometry with tooling costs lower than most outside sources.

DESIGN FEATURES:

- ◆ Stacked dies will produce higher Breakdown Voltages (V_{BR})
- ◆ Cells are available in any geometry to accommodate all of your mechanical needs
- ◆ Tab metallization can be selected to meet a number of different requirements
- ◆ Two and three chip stacks will provide lower capacitance and increased power handling

AVAILABLE TABS IN HOUSE:

DIAMETER:	Metallization:
.130 DIA Disc	Base Metal: Copper
.160 DIA Disc	Solder-Plated
.230 DIA Disc	Solder Composition:
.285 DIA Square	95Pb/5Sn
THICKNESS:	
.015in	
.009in	

CUSTOMER INFO:

NAME

COMPLETE ADDRESS

COMPANY NAME

TITLE/POSITION

PHONE

FAX

EMAIL

PLEASE CONTACT ME VIA:

☐ FAX

☐ PHONE

☐ EMAIL

TAB GEOMETRY:

SQUARE ☐ DISC ☐ OTHER ☐ (INCLUDE DRAWING)

WIDTH

DIAMETER

THICKNESS

CHIP SPECIFICATION

PLEASE REFER TO CATALOG FOR CHIP SPECIFICATIONS

TAB Metallization: (OUR STANDARD)

BASE METAL: COPPER SOLDER-PLATED

SOLDER COMPOSITION: 95Pb/5Sn

YOUR Metallization:

DIAGRAM:

SUBMIT YOUR DRAWING WITH THIS PAGE

CONTACT FACTORY FOR ELECTRICAL SPECIFICATIONS ON YOUR CUSTOM CELL DESIGNS. FOR ANY QUESTIONS CONTACT OUR SALES AND ENGINEERING STAFF.