

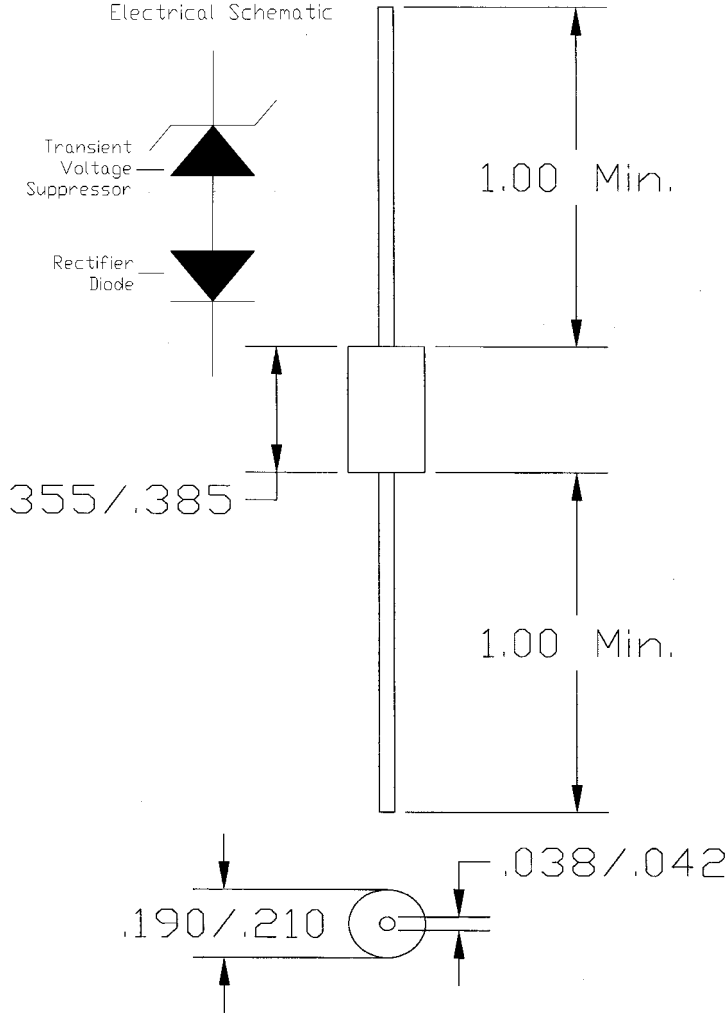
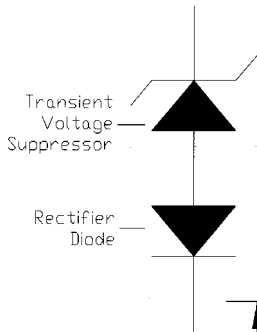
SUSSEX

SEMICONDUCTOR, INC.

**LCE6.5 TO LCE170A 1500 WATT
TRANSIENT SUPPRESSORS**

12251 TOWNE LAKE DRIVE, FORT MYERS, FLORIDA, 33913 • TEL: (239) 768-6800 • FAX: (239) 768-6868

Electrical Schematic



LCE SERIES TRANSIENT SUPPRESSORS

VOLTAGES - 6.5 TO 170 VOLTS

1500 WATT MAXIMUM POWER DISSIPATION

LCE SERIES DEVICE SPECIFICATIONS

- ◆ Built Using Sussex Glass Passivated Dies
- ◆ Each Device Individually Inspected
- ◆ Molded Epoxy Package
- ◆ Operating Temperature: -65 to 175°C
- ◆ Storage Temperature: -65 to 175°C
- ◆ Marked With Sussex Logo, Part Number, and Cathode Band
- ◆ Solvent Resistant Marking
- ◆ Silver Plated Leads, Solderable Per MIL-STD-750
- ◆ Sussex 1500 Watt Transient Suppressor Die In Series With a Rectifier For Low Capacitance Transient Protection

All Dimensions In Inches

CUSTOM ORDERING SPECIFIER

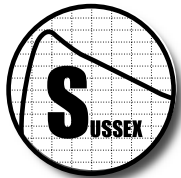
DIE SPECIFICATIONS

LCE

DEVICE PART
NUMBER

STANDOFF
VOLTAGE

- ◆ BLANK INDICATES UNIPOLAR
DEVICE $\pm 10\%$ ON V_{BR}
- ◆ A INDICATES UNIPOLAR
DEVICE $\pm 5\%$ ON V_{BR}



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**LCE6.5 TO LCE170A 1500 WATT
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SPECIFICATIONS CONTINUED**

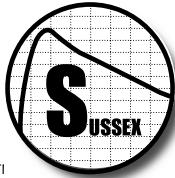
TABLE 5A - LCE SERIES TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)

INDUSTRY STANDARD PART NUMBER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R)@V _{SO} µA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 2)		Rectifier Voltage (V _{dC}) Volts	MAX. TEMP. COEFFICIENT OF V _{BR} (%/°C)	MAX CAPACITANCE @ 0 VOLTS Pf
			MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps			
			LCE6.5	6.5		1000	7.22			
LCE6.5A	6.5	1000	7.22	7.98	10	11.2	100	600	0.057	110
LCE7.0	7	500	7.78	9.51	10	13.3	100	600	0.061	110
LCE7.0A	7	500	7.78	8.6	10	12	100	600	0.061	110
LCE7.5	7.5	250	8.33	10.2	10	14.3	100	600	0.065	110
LCE7.5A	7.5	250	8.33	9.21	10	12.9	100	600	0.065	110
LCE8.0	8	100	8.89	10.9	1	15	100	600	0.068	110
LCE8.0A	8	100	8.89	9.83	1	13.6	100	600	0.068	110
LCE8.5	8.5	50	9.44	11.5	1	15.9	94	600	0.073	110
LCE8.5A	8.5	50	9.44	10.4	1	14.4	100	600	0.073	110
LCE9.0	9	10	10	12.2	1	16.9	89	600	0.075	110
LCE9.0A	9	10	10	11.1	1	15.4	97	600	0.075	110
LCE10	10	5	11.1	13.6	1	18.8	80	600	0.078	110
LCE10A	10	5	11.1	12.3	1	17	88	600	0.078	110
LCE11	11	5	12.2	14.9	1	20.1	74	600	0.061	110
LCE11A	11	5	12.2	13.5	1	18.2	82	600	0.081	110
LCE12	12	5	13.3	16.3	1	22	68	600	0.084	110
LCE12A	12	5	13.3	14.7	1	19.9	75	600	0.084	110
LCE13	13	5	14.4	17.6	1	23.8	63	600	0.086	110
LCE13A	13	5	14.4	15.9	1	21.5	70	600	0.086	110
LCE14	14	5	15.6	19.1	1	25.8	58	600	0.088	110
LCE14A	14	5	15.6	17.2	1	23.2	65	600	0.088	110
LCE15	15	5	16.7	20.4	1	26.9	56	600	0.090	110
LCE15A	15	5	16.7	18.5	1	24.4	61	600	0.090	110
LCE16	16	5	17.8	21.8	1	28.8	52	600	0.092	110
LCE16A	16	5	17.8	19.7	1	26	57	600	0.092	110
LCE17	17	5	18.9	23.1	1	30.5	49	600	0.091	110
LCE17A	17	5	18.9	20.9	1	27.6	54	600	0.094	110
LCE18	18	5	20	24.4	1	32.2	46	600	0.096	110
LCE18A	18	5	20	22.1	1	29.2	51	600	0.096	110
LCE20	20	5	22.2	27.1	1	35.8	42	600	0.097	110
LCE20A	20	5	22.2	24.5	1	32.4	46	600	0.097	110
LCE22	22	5	24.4	29.8	1	39.4	38	600	0.098	110
LCE22A	22	5	24.4	26.9	1	35.5	42	600	0.098	110
LCE24	24	5	26.7	32.6	1	43	35	600	0.099	110
LCE24A	24	5	26.7	29.5	1	38.9	39	600	0.099	110
LCE26	26	5	28.9	35.3	1	46.6	32	600	0.100	110
LCE26A	26	5	28.9	31.9	1	42.1	36	600	0.100	110
LCE28	28	5	31.1	38	1	50.1	30	600	0.101	110
LCE28A	28	5	31.1	34.4	1	45.5	33	600	0.101	110
LCE30	30	5	33.3	40.7	1	53.5	28	600	0.101	110
LCE30A	30	5	33.3	36.8	1	48.4	31	600	0.101	110
LCE33	33	5	36.7	44.9	1	59	25.4	600	0.102	110

THIS TABLE CONTINUES

NOTES

- NOTE 1: ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
- NOTE 2: ♦ SURGE CURRENT WAVEFORM SHOWN IN FIGURE 2A ON PAGE
- ♦ PEAK PULSE POWER DERATING SHOWN IN FIGURE 3A ON PAGE



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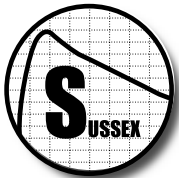
TABLE 5A - LCE SERIES TRANSIENT SUPPRESSOR ELECTRICAL SPECIFICATIONS (NOTE 1)

INDUSTRY STANDARD PART NUMBER	STANDOFF VOLTAGE (V _{SO}) Volts	MAX. REVERSE LEAKAGE (I _R)@V _{SO} μA	REVERSE BREAKDOWN VOLTAGE (V _{BR}) @ I _T		TEST CURRENT (I _T) mA	MAX. CLAMPING VOLTAGE (V _{CL}) @ PEAK PULSE CURRENT (I _{PP}) (NOTE 2)		Rectifier Voltage (V _{dc}) Volts	MAX. TEMP. COEFFICIENT OF V _{BR} (%/°C)	MAX CAPACITANCE @ 0 VOLTS Pf
			MIN. Volts	MAX. Volts		V _{CL} Volts	I _{PP} Amps			
			LCE33A	33		5	36.7			
LCE36	36	5	40	48.9	1	64.3	23.3	600	0.103	110
LCE36A	36	5	40	44.2	1	58.1	25.8	600	0.103	110
LCE40	40	5	44.4	54.3	1	71.4	21	600	0.104	110
LCE40A	40	5	44.4	49.1	1	64.5	23.3	600	0.104	110
LCE43	43	5	47.8	58.4	1	76.7	19.5	600	0.104	110
LCE43A	43	5	48.8	52.8	1	69.4	21.6	600	0.104	110
LCE45	45	5	50	61.1	1	80.3	18.7	600	0.105	110
LCE45A	45	5	50	55.3	1	72.7	20.6	600	0.105	110
LCE48	48	5	53	65.1	1	85.5	17.5	600	0.105	110
LCE48A	48	5	53	58.9	1	77.4	19.4	600	0.105	110
LCE51	51	5	56.7	69.3	1	91.1	16.5	600	0.106	110
LCE51A	51	5	56.7	62.7	1	82.4	18.2	600	0.106	110
LCE54	54	5	60	73.3	1	96.3	15.6	600	0.106	110
LCE54A	54	5	60	66.3	1	87.1	17.2	600	0.106	110
LCE58	58	5	64.4	78.7	1	103	14.6	600	0.107	110
LCE58A	58	5	64.4	71.2	1	93.6	16	600	0.107	110
LCE60	60	5	66.7	81.5	1	107	14	600	0.107	110
LCE60A	60	5	66.7	73.7	1	96.8	15.5	600	0.107	110
LCE64	64	5	71.1	86.9	1	114	13.2	600	0.107	110
LCE64A	64	5	71.1	78.6	1	103	14.6	600	0.107	110
LCE70	70	5	77.8	95.1	1	125	12	600	0.108	110
LCE70A	70	5	77.8	86	1	113	13.3	600	0.108	110
LCE75	75	5	83.3	102	1	134	11.2	600	0.108	110
LCE75A	75	5	83.3	92.1	1	121	12.4	600	0.108	110
LCE80	80	5	88.7	108	1	142	10.6	600	0.108	110
LCE80A	80	5	88.7	98	1	129	11.6	600	0.108	110
LCE90	90	5	100	122	1	160	9.4	600	0.108	110
LCE90A	90	5	100	111	1	146	10.3	600	0.108	110
LCE100	100	5	111	136	1	179	8.4	600	0.108	110
LCE100A	100	5	111	123	1	162	9.3	600	0.108	110
LCE110	110	5	122	149	1	196	7.7	600	0.108	110
LCE110A	110	5	122	135	1	178	8.4	600	0.108	110
LCE120	120	5	133	163	1	214	7	600	0.110	110
LCE120A	120	5	133	147	1	193	7.8	600	0.110	110
LCE130	130	5	144	176	1	231	6.5	600	0.110	110
LCE130A	130	5	144	159	1	209	7.2	600	0.110	110
LCE150	150	5	167	204	1	268	5.6	600	0.110	110
LCE150A	150	5	167	185	1	243	6.2	600	0.110	110
LCE160	160	5	178	218	1	287	5.2	600	0.110	110
LCE160A	160	5	178	197	1	259	5.8	600	0.110	110
LCE170	170	5	189	231	1	304	4.9	600	0.110	110
LCE170A	170	5	189	209	1	275	5.4	600	0.110	110

HIGHER VOLTAGES AVAILABLE. CONTACT FACTORY

NOTES

- NOTE 1: ♦ ELECTRICAL CHARACTERISTICS ARE AT A JUNCTION TEMPERATURE (T_J) OF 25°C
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SPECIFICATIONS CONTINUED**

FIGURE 1A - TYPICAL JUNCTION CAPACITANCE

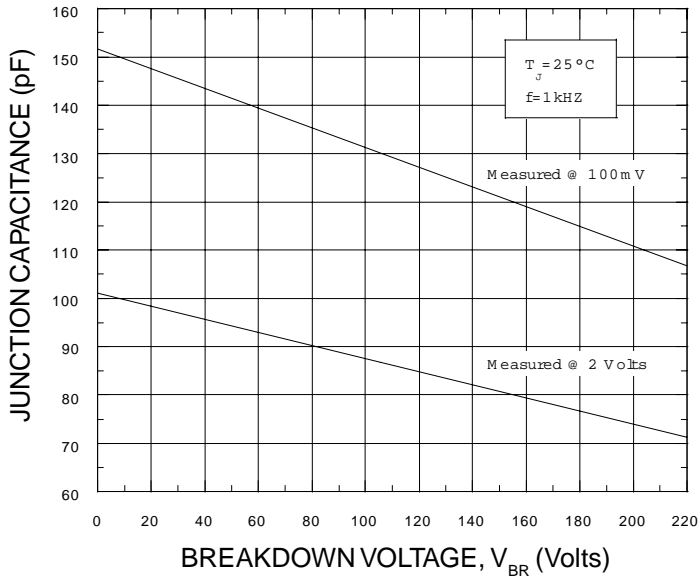


FIGURE 2A - PULSE WAVEFORM

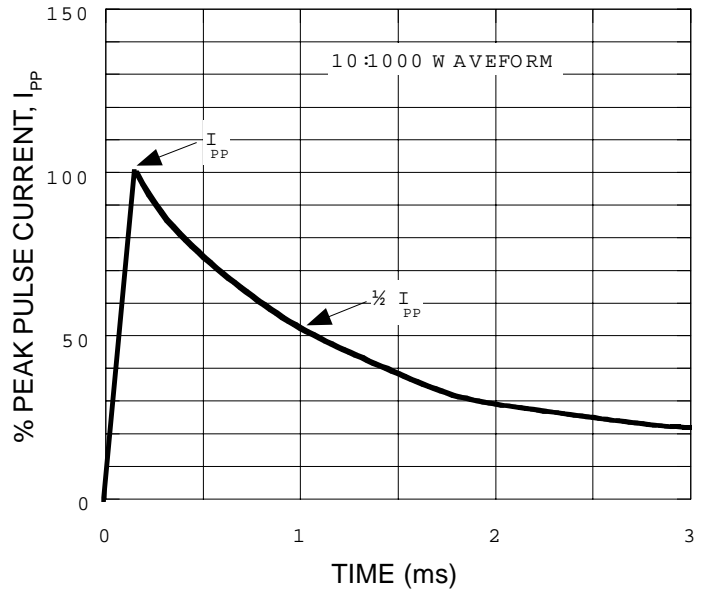
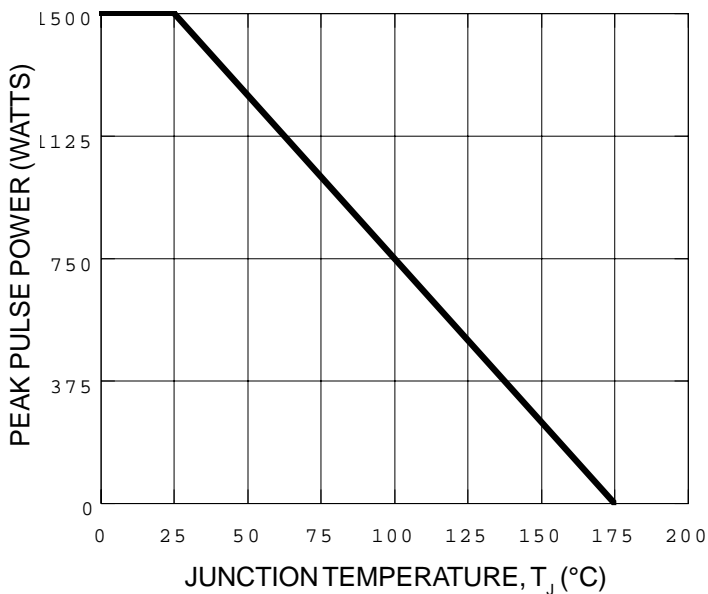


FIGURE 3A - PULSE DERATING CURVE



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