

LC SERIES

LC Series (1500 WATT) AXIAL TRANSIENT VOLTAGE SUPPRESSORS (HERMETICALLY SEALED PACKAGE)

Designed for data line interface circuit protection, the LC series offers low shunt capacitance to prevent signal degradation. These devices can be used across transmission lines with signal levels up to 100mhz. For bi-directional applications, two LC suppressors are required, connected anti-parallel with respect to each other, across the circuit to be protected.

FEATURES

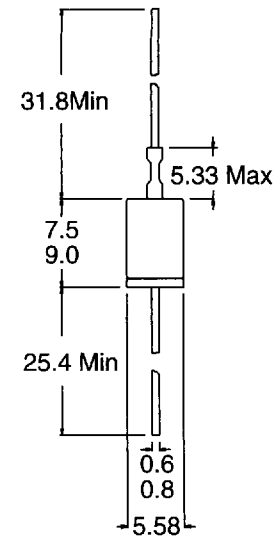
- Low capacitance : 100pf (max)
- Stand-off voltage Range 6.5 to 90 Volts
- Glass Passivated Junction
- Low zener impedance
- Uni-directional
- 100% Surge tested

MAXIMUM RATING

- Peak Pulse Power (Ppk): 1500 Watts (10 X 1000µs) (see diagram on page 6 for wave form).
- Response time: 1 X 10⁻¹² seconds (theoretical)
- Forward surge rating: 70 Amps, 8.3ms half sine wave, (uni-direction devices only)
- Operating & storage temperature: -55°C to +175°C

MECHANICAL CHARACTERISTICS

- CASE: Metal hermetically sealed DO-13 package
- Terminals: Axial leads, solderable per MIL-STD-202 Method 208
- Marking: Cathode band, device code, logo
- Weight: 1.5 grammes (approx)



All dimensions in mm

Figure 1 - Peak Pulse Power Rating Curve

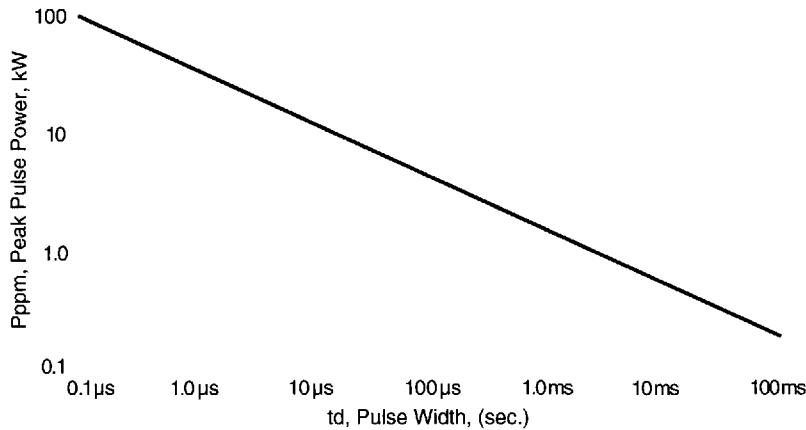
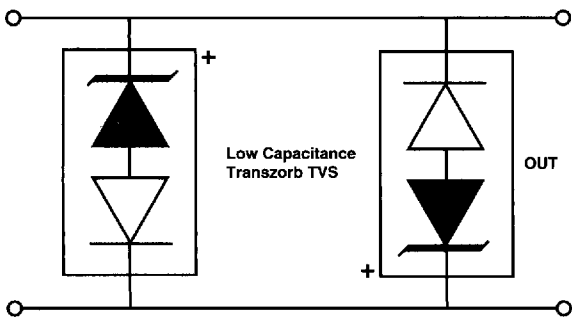
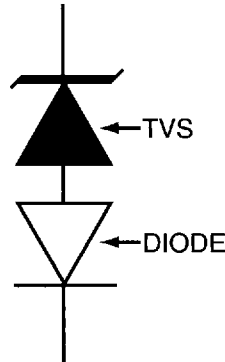


Figure 2 - AC Line Protection Application



Application Note: Devices must be used with two units in parallel, opposite in polarity, as shown in circuit for bi-directional line protection

SCHEMATIC



ORDERING INFORMATION

LC

Voltage _____

5% Voltage Tolerance _____

Packaging Option _____

B = Bulk (500 pcs)

T = Tape & Reeled (1000 pcs)

ELECTRICAL SPECIFICATIONS @ 25°C

PART NUMBER	REVERSE STANDOFF VOLTAGE (V)	BREAKDOWN VOLTAGE B_V VOLTS @ I_T			MAXIMUM REVERSE LEAKAGE @ V_R	MAXIMUM CLAMPING VOLTAGE (μA)	MAXIMUM PEAK PULSE CURRENT @ I_{PP} (V)	CAPACITANCE @ 0 VOLTS pf	WORKING INVERSE BLOCKING VOLTAGE V_{WIB} (V)	INVERSE BLOCKING LEAKAGE CURRENT @ V_{WIB} (10 mA MAX)	PEAK INVERSE BLOCKING VOLTAGE V_{PIB} (V)
		MIN	MAX	mA							
LC6.5	6.5	7.22	8.82	10.0	1000.0	12.3	100.0	100.0	75.0	1.0	100.0
LC6.5A	6.5	7.22	7.98	10.0	1000.0	11.2	100.0	100.0	75.0	1.0	100.0
LC7.0	7.0	7.78	9.51	10.0	500.0	13.3	100.0	100.0	75.0	1.0	100.0
LC7.0A	7.0	7.78	8.6	10.0	500.0	12.0	100.0	100.0	75.0	1.0	100.0
LC7.5	7.5	8.33	10.2	10.0	250.0	14.3	100.0	100.0	75.0	1.0	100.0
LC7.5A	7.5	8.33	9.21	10.0	250.0	12.9	100.0	100.0	75.0	1.0	100.0
LC8.0	8.0	8.89	10.9	1.0	100.0	15.0	100.0	100.0	75.0	1.0	100.0
LC8.0A	8.0	8.89	9.83	1.0	100.0	13.6	100.0	100.0	75.0	1.0	100.0
LC8.5	8.5	9.44	11.5	1.0	50.0	15.9	94.0	100.0	75.0	1.0	100.0
LC8.5A	8.5	9.44	10.4	1.0	50.0	14.4	100.0	100.0	75.0	1.0	100.0
LC9.0	9.0	10.0	12.2	1.0	10.0	16.9	89.0	100.0	75.0	1.0	100.0
LC9.0A	9.0	10.0	11.1	1.0	10.0	15.4	97.0	100.0	75.0	1.0	100.0
LC10	10.0	11.1	13.6	1.0	5.0	18.8	80.0	100.0	75.0	1.0	100.0
LC10A	10.0	11.1	12.3	1.0	5.0	17.0	88.0	100.0	75.0	1.0	100.0
LC11	11.0	12.2	14.9	1.0	5.0	20.1	74.0	100.0	75.0	1.0	100.0
LC11A	11.0	12.2	13.5	1.0	5.0	18.2	82.0	100.0	75.0	1.0	100.0
LC12	12.0	13.3	16.3	1.0	5.0	22.0	68.0	100.0	75.0	1.0	100.0
LC12A	12.0	13.3	14.7	1.0	5.0	19.9	75.0	100.0	75.0	1.0	100.0
LC13	13.0	14.4	17.6	1.0	5.0	23.8	63.0	100.0	75.0	1.0	100.0
LC13A	13.0	14.4	15.9	1.0	5.0	21.5	70.0	100.0	75.0	1.0	100.0
LC14	14.0	15.6	19.1	1.0	5.0	25.8	58.0	100.0	75.0	1.0	100.0
LC14A	14.0	15.6	17.2	1.0	5.0	23.2	65.0	100.0	75.0	1.0	100.0
LC15	15.0	16.7	20.4	1.0	5.0	26.9	56.0	100.0	75.0	1.0	100.0
LC15A	15.0	16.7	18.5	1.0	5.0	24.4	61.0	100.0	75.0	1.0	100.0
LC16	16.0	17.8	21.8	1.0	5.0	28.8	52.0	100.0	75.0	1.0	100.0
LC16A	16.0	17.8	19.7	1.0	5.0	26.0	57.0	100.0	75.0	1.0	100.0
LC17	17.0	18.6	23.1	1.0	5.0	30.5	49.0	100.0	75.0	1.0	100.0
LC17A	17.0	18.6	20.9	1.0	5.0	27.6	54.0	100.0	75.0	1.0	100.0
LC18	18.0	20.0	24.4	1.0	5.0	32.2	46.0	100.0	75.0	1.0	100.0
LC18A	18.0	20.0	22.1	1.0	5.0	29.2	51.0	100.0	75.0	1.0	100.0
LC20	20.0	22.2	27.1	1.0	5.0	35.8	42.0	100.0	75.0	1.0	100.0
LC20A	20.0	22.2	24.5	1.0	5.0	32.4	46.0	100.0	75.0	1.0	100.0
LC22	22.0	24.4	29.8	1.0	5.0	39.4	38.0	100.0	75.0	1.0	100.0
LC22A	22.0	24.4	26.9	1.0	5.0	35.5	42.0	100.0	75.0	1.0	100.0
LC24	24.0	26.7	32.6	1.0	5.0	43.0	35.0	100.0	75.0	1.0	100.0
LC24A	24.0	26.7	29.5	1.0	5.0	38.9	39.0	100.0	75.0	1.0	100.0
LC26	26.0	28.9	35.3	1.0	5.0	46.6	32.0	100.0	75.0	1.0	100.0
LC26A	26.0	28.9	31.9	1.0	5.0	42.1	36.0	100.0	75.0	1.0	100.0
LC28	28.0	31.1	38.0	1.0	5.0	50.1	30.0	100.0	75.0	1.0	100.0
LC28A	28.0	31.1	34.4	1.0	5.0	45.5	33.0	100.0	75.0	1.0	100.0
LC30	30.0	33.3	40.7	1.0	5.0	53.5	28.0	100.0	75.0	1.0	100.0
LC30A	30.0	33.3	36.8	1.0	5.0	48.4	31.0	100.0	75.0	1.0	100.0
LC33	33.0	36.7	44.9	1.0	5.0	59.0	25.4	100.0	75.0	1.0	100.0
LC33A	33.0	36.7	40.6	1.0	5.0	53.3	28.1	100.0	75.0	1.0	100.0

Suffix 'A' denotes a 5% tolerance device, no suffix denotes a 10% tolerance device.

ELECTRICAL SPECIFICATIONS @ 25°C

PART NUMBER	REVERSE STANDOFF VOLTAGE (V)	BREAKDOWN VOLTAGE Bv VOLTS @Ir			MAXIMUM REVERSE LEAKAGE @ Vr	MAXIMUM CLAMPING VOLTAGE (µA)	MAXIMUM PEAK PULSE CURRENT @ IPP (V)	CAPACITANCE @ 0 VOLTS pf	WORKING INVERSE BLOCKING VOLTAGE VWIB (V)	INVERSE BLOCKING LEAKAGE CURRENT @ VWIB (µA MAX)	PEAK INVERSE BLOCKING VOLTAGE VPIB (V)
		MI	MAX	mA							
LC36	36.0	40.0	48.9	1.0	5.0	64.3	23.3	100.0	.75	1	100.0
LC36A	36.0	40.0	44.2	1.0	5.0	58.1	25.8	100	75	1	100.0
LC40	40.0	44.4	54.3	1.0	5.0	71.4	21.0	100	75	1	100.0
LC40A	40.0	44.4	49.1	1.0	5.0	64.5	23.3	100	75	1	100.0
LC43	43.0	47.8	58.4	1.0	5.0	76.7	19.5	100	150	1	200.0
LC43A	43.0	47.8	52.8	1.0	5.0	69.4	21.6	100	150	1	200.0
LC45	45.0	50.0	61.1	1.0	5.0	80.3	18.7	100	150	1	200.0
LC45A	45.0	50.0	55.3	1.0	5.0	72.7	20.6	100	150	1	200.0
LC48	48.0	53.3	65.1	1.0	5.0	85.5	17.5	100	150	1	200.0
LC48A	48.0	53.3	58.9	1.0	5.0	77.4	19.4	100	150	1	200.0
LC51	51.0	56.7	69.3	1.0	5.0	91.1	16.5	100	150	1	200.0
LC51A	51.0	56.7	62.7	1.0	5.0	82.4	18.2	100	150	1	200.0
LC54	54.0	60.0	73.3	1.0	5.0	96.3	15.6	100	150	1	200.0
LC54A	54.0	60.0	66.3	1.0	5.0	87.1	17.2	100	150	1	200.0
LC58	58.0	64.4	78.7	1.0	5.0	103.0	14.6	100	150	1	200.0
LC58A	58.0	64.4	71.2	1.0	5.0	93.6	16.0	100	150	1	200.0
LC60	60.0	66.7	81.5	1.0	5.0	107.0	14.0	90	150	1	200.0
LC60A	60.0	66.7	73.7	1.0	5.0	96.8	15.5	90	150	1	200.0
LC64	64.0	71.1	86.9	1.0	5.0	114.0	13.2	90	150	1	200.0
LC64A	64.0	71.1	78.6	1.0	5.0	103.0	14.6	90	150	1	200.0
LC70	70.0	77.8	95.1	1.0	5.0	125.0	12.0	90	150	1	200.0
LC70A	70.0	77.8	86.0	1.0	5.0	113.0	13.3	90	150	1	200.0
LC75	75.0	83.3	102.0	1.0	5.0	134.0	11.2	90	150	1	200.0
LC75A	75.0	83.3	91.1	1.0	5.0	121.0	12.4	90	150	1	200.0
LC80	80.0	88.7	108.0	1.0	5.0	142.0	10.6	90	150	1	200.0
LC80A	80.0	88.7	98.0	1.0	5.0	129.0	11.6	90	150	1	200.0
LC90	90.0	100.0	122.0	1.0	5.0	160.0	9.4	90	300	1	200.0
LC90A	90.0	100.0	111.0	1.0	5.0	146.0	10.3	90	300	1	200.0

Suffix 'A' denotes a 5% tolerance device, no suffix denotes a 10% tolerance device.