TAYCHIPST LOW CAPACITANCE TRANSIENT VOLTAGE SUPPRESSOR

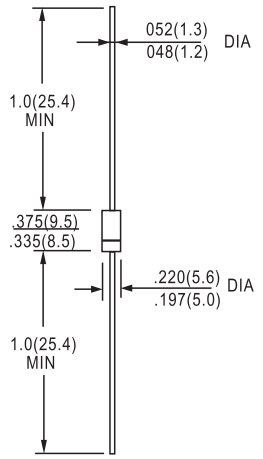
LCE6.5A THRU LCE90A

6.5V-90V 1500W

FEATURES

* 1500W Peak Pulse Surge reverse capability on 10/1000μs waveform
* Excellent clamping capability
* Low incremental surge resistance
* Fast response time : typically less than 5.0 ns from 0 volts to BV

DO-27



Dimensions in inches and (millimeters)

MECHANICAL DATA

* Case : DO-201AD Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
* Polarity : Color band denotes positive end on the Transorb (cathode)
* Mounting position : Any
* Weight : 0.93 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified.

Rating	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000μs waveform (Note 1, Figure 1)	P_{PPM}	Minimum 1500	Watts
Steady State Power Dissipation at T_L = 75 °C Lead Lengths 0.375", (9.5mm) (Note 2)	P_D	5.0	Watts
Peak Forward Surge Current on 10/1000 μs Waveform (Fig. 3, Note 1)	I_{FSM}	See Table 1.	Amps.
Operating and Storage Temperature Range	T_J, T_{STG}	- 65 to + 175	°C

Note :

(1) Non-repetitive Current pulse, per Fig. 3 and derated above Ta = 25 °C per Fig. 2

(2) 8.3 ms single half sine-wave, duty cycle = 4 pulses per minutes maximum.

ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

TYPE NUMBER	Breakdown Voltage @ It			Reverse Stand-off Voltage	Maximum Reverse Leakage @ V_{RWM}	Maximum Clamping Voltage @ I_{RSM}	Maximum Reverse Current	Maximum Junction Capacitance @ 0 Volt	Working Inverse Blocking Voltage	Max. Inverse Blocking Current @ V_{WIB}	Peak Inverse Blocking Voltage
	V_{BR} (V)		It	V_{RWM}	I_R	V_{RSM}	I_{RSM}		V_{WIB}	I_{IB}	V_{PIB}
	Min.	Max.	(mA)	(V)	(μA)	(V)	(A)	pF	(V)	mA	(V)
LCE6.5	7.22	8.82	10	6.5	1000	12.3	100	100	75	1.0	100
LCE6.5A	7.22	7.98	10	6.5	1000	11.2	100	100	75	1.0	100
LCE7.0	7.78	9.51	10	7.0	500	13.3	100	100	75	1.0	100
LCE7.0A	7.78	8.60	10	7.0	500	12.0	100	100	75	1.0	100
LCE7.5	8.33	10.2	10	7.5	250	14.3	100	100	75	1.0	100
LCE7.5A	8.33	9.21	10	7.5	250	12.9	100	100	75	1.0	100
LCE8.0	8.89	10.9	10	8.0	100	15.0	100	100	75	1.0	100
LCE8.0A	8.89	9.83	10	8.0	100	13.6	100	100	75	1.0	100
LCE8.5	9.44	11.5	1.0	8.5	50	15.9	94	100	75	1.0	100
LCE8.5A	9.44	10.4	1.0	8.5	50	14.4	100	100	75	1.0	100
LCE9.0	10.0	12.2	1.0	9.0	10.0	16.9	89	100	75	1.0	100
LCE9.0A	10.0	11.1	1.0	9.0	10.0	15.4	97	100	75	1.0	100
LCE10	11.1	13.6	1.0	10	5.0	18.8	80	100	75	1.0	100
LCE10A	11.1	12.3	1.0	10	5.0	17.0	88	100	75	1.0	100
LCE11	12.2	14.9	1.0	11	5.0	20.1	74	100	75	1.0	100
LCE11A	12.2	13.5	1.0	11	5.0	18.2	82	100	75	1.0	100
LCE12	13.3	16.3	1.0	12	5.0	22.0	68	100	75	1.0	100
LCE12A	13.3	14.7	1.0	12	5.0	19.9	75	100	75	1.0	100
LCE13	14.4	17.6	1.0	13	5.0	23.8	63	100	75	1.0	100
LCE13A	14.4	15.9	1.0	13	5.0	21.5	70	100	75	1.0	100
LCE14	15.6	19.1	1.0	14	5.0	25.8	58	100	75	1.0	100
LCE14A	15.6	17.2	1.0	14	5.0	23.2	65	100	75	1.0	100
LCE15	16.7	20.4	1.0	15	5.0	26.9	56	100	75	1.0	100
LCE15A	16.7	18.5	1.0	15	5.0	24.4	61	100	75	1.0	100
LCE16	17.8	21.8	1.0	16	5.0	28.8	52	100	75	1.0	100
LCE16A	17.8	19.7	1.0	16	5.0	26.0	57	100	75	1.0	100
LCE17	18.9	23.1	1.0	17	5.0	30.5	49	100	75	1.0	100
LCE17A	18.9	20.9	1.0	17	5.0	27.6	54	100	75	1.0	100
LCE18	20	24.4	1.0	18	5.0	32.2	46	100	75	1.0	100
LCE18A	20	22.1	1.0	18	5.0	29.2	51	100	75	1.0	100
LCE20	22.2	27.1	1.0	20	5.0	35.8	42	100	75	1.0	100
LCE20A	22.2	24.5	1.0	20	5.0	32.4	46	100	75	1.0	100
LCE22	24.4	29.8	1.0	22	5.0	39.4	38	100	75	1.0	100
LCE22A	24.4	26.9	1.0	22	5.0	35.5	42	100	75	1.0	100
LCE24	26.7	32.6	1.0	24	5.0	43.0	35	100	75	1.0	100
LCE24A	26.7	29.5	1.0	24	5.0	38.9	39	100	75	1.0	100
LCE26	28.9	35.3	1.0	26	5.0	46.6	32	100	75	1.0	100
LCE26A	28.9	31.9	1.0	26	5.0	42.1	36	100	75	1.0	100
LCE28	31.1	38.0	1.0	28	5.0	50.1	30	100	75	1.0	100
LCE28A	31.1	34.4	1.0	28	5.0	45.5	33	100	75	1.0	100
LCE30	33.3	40.7	1.0	30	5.0	53.5	28	100	75	1.0	100
LCE30A	33.3	36.8	1.0	30	5.0	48.4	31	100	75	1.0	100
LCE33	36.7	44.9	1.0	33	5.0	59.0	25.4	100	75	1.0	100
LCE33A	36.7	40.6	1.0	33	5.0	53.3	28.1	100	75	1.0	100
LCE36	40.0	48.9	1.0	36	5.0	64.3	23.3	100	75	1.0	100
LCE36A	40.0	44.2	1.0	36	5.0	58.1	25.8	100	75	1.0	100
LCE40	44.4	54.3	1.0	40	5.0	71.4	21	100	75	1.0	100
LCE40A	44.4	49.1	1.0	40	5.0	64.5	23.3	100	75	1.0	100
LCE43	47.8	58.4	1.0	43	5.0	76.7	19.5	100	150	1.0	200
LCE43A	47.8	52.8	1.0	43	5.0	69.4	21.6	100	150	1.0	200

ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

TYPE NUMBER	Breakdown Voltage @ It			Reverse Stand-off Voltage	Maximum Reverse Leakage @ V_{RWM}	Maximum Clamping Voltage @ I_{RSM}	Maximum Reverse Current	Maximum Junction Capacitance @ 0 Volt	Working Inverse Blocking Voltage	Max. Inverse Blocking Current @ V_{WIB}	Peak Inverse Blocking Voltage
	V_{BR} (V)		It	V_{RWM}	I_R	V_{RSM}	I_{RSM}		V_{WIB}	I_{IB}	V_{PIB}
	Min.	Max.	(mA)	(V)	(μA)	(V)	(A)	pF	(V)	mA	(V)
LCE45	50.0	61.1	1.0	45	5.0	80.3	18.7	100	150	1.0	200
LCE45A	50.0	55.3	1.0	45	5.0	72.7	20.6	100	150	1.0	200
LCE48	53.3	65.1	1.0	48	5.0	85.5	17.5	100	150	1.0	200
LCE48A	53.3	58.9	1.0	48	5.0	77.4	19.4	100	150	1.0	200
LCE51	56.7	69.3	1.0	51	5.0	91.1	16.5	100	150	1.0	200
LCE51A	56.7	62.7	1.0	51	5.0	82.4	18.2	100	150	1.0	200
LCE54	60.0	73.3	1.0	54	5.0	96.3	15.6	100	150	1.0	200
LCE54A	60.0	66.3	1.0	54	5.0	87.1	17.2	100	150	1.0	200
LCE58	64.4	78.7	1.0	58	5.0	103	14.6	100	150	1.0	200
LCE58A	64.4	71.2	1.0	58	5.0	93.6	16	100	150	1.0	200
LCE60	66.7	81.5	1.0	60	5.0	107	14	90	150	1.0	200
LCE60A	66.7	73.7	1.0	60	5.0	96.8	15.5	90	150	1.0	200
LCE64	71.1	86.9	1.0	64	5.0	114	13.2	90	150	1.0	200
LCE64A	71.1	78.6	1.0	64	5.0	103	14.6	90	150	1.0	200
LCE70	77.8	95.1	1.0	70	5.0	125	12	90	150	1.0	200
LCE70A	77.8	86.0	1.0	70	5.0	113	13.3	90	150	1.0	200
LCE75	83.3	102	1.0	75	5.0	134	11.2	90	150	1.0	200
LCE75A	83.3	92.1	1.0	75	5.0	121	12.4	90	150	1.0	200
LCE80	88.7	108	1.0	80	5.0	142	10.6	90	150	1.0	200
LCE80A	88.7	98.0	1.0	80	5.0	129	11.6	90	150	1.0	200
LCE90	100	122	1.0	90	5.0	160	9.4	90	300	1.0	200
LCE90A	100	111	1.0	90	5.0	146	10.3	90	300	1.0	200

FIG.1 - PEAK PULSE POWER RATING CURVE

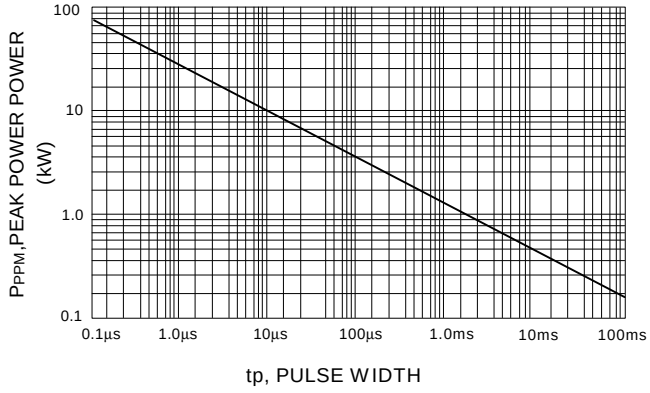


FIG.2 - PULSE DERATING CURVE

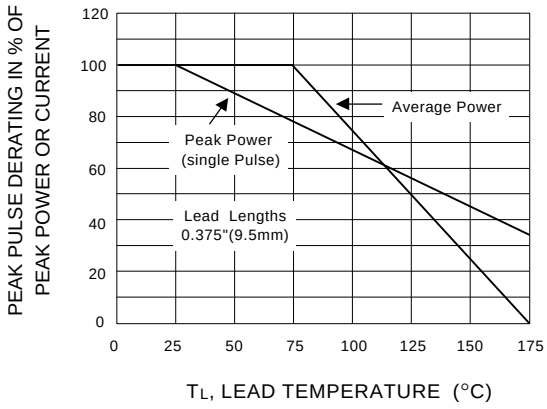


FIG.3 - PULSE WAVEFORM

