ALSO AVAILABLE IN SURFACE MOUNT

Microsemi Corp.
The diode experts

SCOTTSDALE, AZ
For more information call:
(602) 941-6300

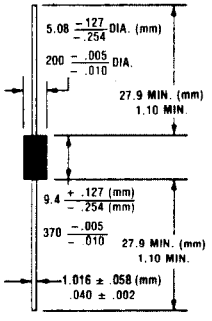
LCE6.5 thru LCE170A LOW CAPACITANCE

TRANSIENT ABSORPTION ZENER

FEATURES

This series employs a standard TAZ in series with a rectifier with the same transient capabilities as the TAZ. The rectifier is also used to reduce the effective capacitance up thru 100 MHz with a minimum amount of signal loss or deformation. The low-capacitance TAZ may be applied directly across the signal line to prevent induced transients from lightning, power interruptions, or static discharge. If bipolar transient capability is required, two low-capacitance TAZ must be used in parallel, opposite in polarity for complete AC protection.

- 1500 WATTS OF PEAK PULSE POWER DISSIPATION AT 25°C AND 10 x 1000 μs
- AVAILABLE IN RANGES FROM 6.5—200V
- LOW CAPACITANCE AC SIGNAL PROTECTION



MAXIMUM RATINGS

1500 Watts of Peak Pulse Power dissipation at 25°C
$t_{clamping}$ (0 volts to $V_{(BR)}$ min): Less than 5 x 10^{-9} seconds
Operating and Storage temperatures: -65° to +175°C
Steady State power dissipation: 5.0W @ T_L = 75°C
Lead Length = 3/8″
Repetition Rate (duty cycle): .05%

ELECTRICAL CHARACTERISTICS

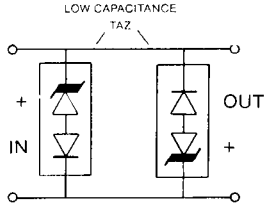
Clamping Factor: 1.4 @ Full Rated power
1.30 @ 50% Rated power

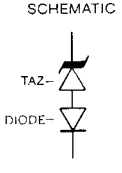
Clamping Factor: The ratio of the actual V_C (Clamping Voltage) to the actual $V_{(BR)}$ (Breakdown Voltage) as measured on a specific device.

NOTE: When pulse testing, test in TAZ Avalanche direction. DO NOT pulse in forward direction.

APPLICATION

Devices must be used with two units in parallel, opposite in polarity, as shown in circuit for AC Signal Line protection:





MECHANICAL CHARACTERISTICS

CASE: Void free transfer molded thermosetting plastic.

FINISH: Silver plated copper readily solderable.

POLARITY: Cathode marked with band.

WEIGHT: 1.5 grams (Appx.).

MOUNTING POSITION: Any.

LCE6.5 thru LCE170A

ELECTRICAL CHARACTERISTICS @ 25°C

MICRO-SEMI PART NUMBER	REVERSE STAND-OFF VOLTAGE V_{WM} VOLTS	BREAKDOWN VOLTAGE $V_{(BR)}$ VOLTS Min.	Max.	@ I_T mA	MAXIMUM REVERSE LEAKAGE @ V_{WM} I_D μA	MAXIMUM CLAMPING VOLTAGE I_{PP} V_C VOLTS	MAXIMUM PEAK PULSE CURRENT 10 x 1000 AMPS	CAPACI-TANCE @ 0 VOLTS pF	V_{WIB} WORKING INVERSE BLOCKING VOLTAGE VOLTS	I_{IB} INVERSE BLOCKING LEAKAGE CURRENT mA	V_{PIB} PEAK INVERSE BLOCKING VOLTAGE VOLTS
LCE6.5	6.5	7.22	8.82	10	1000	12.3	100	100	75	1	100
LCE6.5A	6.5	7.22	7.98	10	1000	11.2	100	100	75	1	100
LCE7.0	7.0	7.78	9.51	10	500	13.3	100	100	75	1	100
LCE7.0A	7.0	7.78	8.60	10	500	12.0	100	100	75	1	100
LCE7.5	7.5	8.33	10.2	10	250	14.3	100	100	75	1	100
LCE7.5A	7.5	8.33	9.21	10	250	12.9	100	100	75	1	100
LCE8.0	8.0	8.89	10.9	1	100	15.0	100	100	75	1	100
LCE8.0A	8.0	8.89	9.83	1	100	13.6	100	100	75	1	100
LCE8.5	8.5	9.44	11.5	1	50	15.9	94	100	75	1	100
LCE8.5A	8.5	9.44	10.4	1	50	14.4	100	100	75	1	100
LCE9.0	9.0	10.0	12.2	1	10	16.9	89	100	75	1	100
LCE9.0A	9.0	10.0	11.1	1	10	15.4	97	100	75	1	100
LCE10	10	11.1	13.6	1	5	18.8	80	100	75	1	100
LCE10A	10	11.1	12.3	1	5	17.0	88	100	75	1	100
LCE11	11	12.2	14.9	1	5	20.1	74	100	75	1	100
LCE11A	11	12.2	13.5	1	5	18.2	82	100	75	1	100
LCE12	12	13.3	16.3	1	5	22.0	68	100	75	1	100
LCE12A	12	13.3	14.7	1	5	19.9	75	100	75	1	100
LCE13	13	14.4	17.6	1	5	23.8	63	100	75	1	100
LCE13A	13	14.4	15.9	1	5	21.5	70	100	75	1	100
LCE14	14	15.6	19.1	1	5	25.8	58	100	75	1	100
LCE14A	14	15.6	17.2	1	5	23.2	65	100	75	1	100
LCE15	15	16.7	20.4	1	5	26.9	56	100	75	1	100
LCE15A	15	16.7	18.5	1	5	24.4	61	100	75	1	100
LCE16	16	17.8	21.8	1	5	28.8	52	100	75	1	100
LCE16A	16	17.8	19.7	1	5	26.0	57	100	75	1	100
LCE17	17	18.9	23.1	1	5	30.5	49	100	75	1	100
LCE17A	17	18.9	20.9	1	5	27.6	54	100	75	1	100
LCE18	18	20.0	24.4	1	5	32.2	46	100	75	1	100
LCE18A	18	20.0	22.1	1	5	29.2	51	100	75	1	100
LCE20	20	22.2	27.1	1	5	35.8	42	100	75	1	100
LCE20A	20	22.2	24.5	1	5	32.4	46	100	75	1	100
LCE22	22	24.4	29.8	1	5	39.4	38	100	75	1	100
LCE22A	22	24.4	26.9	1	5	35.5	42	100	75	1	100
LCE24	24	26.7	32.6	1	5	43.0	35	100	75	1	100
LCE24A	24	26.7	29.5	1	5	38.9	39	100	75	1	100
LCE26	26	28.9	35.3	1	5	46.6	32	100	75	1	100
LCE26A	26	28.9	31.9	1	5	42.1	36	100	75	1	100
LCE28	28	31.1	38.0	1	5	50.1	30	100	75	1	100
LCE28A	28	31.1	34.4	1	5	45.5	33	100	75	1	100
LCE30	30	33.3	40.7	1	5	53.5	28	100	75	1	100
LCE30A	30	33.3	36.8	1	5	48.4	31	100	75	1	100
LCE33	33	36.7	44.9	1	5	59.0	25.4	100	75	1	100
LCE33A	33	36.7	40.6	1	5	53.3	28.1	100	75	1	100
LCE36	36	40.0	48.9	1	5	64.3	23.3	100	75	1	100
LCE36A	36	40.0	44.2	1	5	58.1	25.8	100	75	1	100
LCE40	40	44.4	54.3	1	5	71.4	21.0	100	75	1	100
LCE40A	40	44.4	49.1	1	5	64.5	23.3	100	75	1	100
LCE43	43	47.8	58.4	1	5	76.7	19.5	100	150	1	200
LCE43A	43	47.8	52.8	1	5	69.4	21.6	100	150	1	200
LCE45	45	50.0	61.1	1	5	80.3	18.7	100	150	1	200
LCE45A	45	50.0	55.3	1	5	72.7	20.6	100	150	1	200
LCE48	48	53.3	65.1	1	5	85.5	17.5	100	150	1	200
LCE48A	48	53.3	58.9	1	5	77.4	19.4	100	150	1	200
LCE51	51	56.7	69.3	1	5	91.1	16.5	100	150	1	200
LCE51A	51	56.7	62.7	1	5	82.4	18.2	100	150	1	200
LCE54	54	60.0	73.3	1	5	96.3	15.6	100	150	1	200
LCE54A	54	60.0	66.3	1	5	87.1	17.2	100	150	1	200
LCE58	58	64.4	78.7	1	5	103.0	14.6	100	150	1	200
LCE58A	58	64.4	71.2	1	5	93.6	16.0	100	150	1	200
LCE60	60	66.7	81.5	1	5	107.0	14.0	90	150	1	200
LCE60A	60	66.7	73.7	1	5	96.8	15.5	90	150	1	200
LCE64	64	71.1	86.9	1	5	114.0	13.2	90	150	1	200
LCE64A	64	71.1	78.6	1	5	103.0	14.6	90	150	1	200
LCE70	70	77.8	95.1	1	5	125	12.0	90	150	1	200
LCE70A	70	77.8	86.0	1	5	113	13.3	90	150	1	200
LCE75	75	83.3	102.0	1	5	134	11.2	90	150	1	200
LCE75A	75	83.3	92.1	1	5	121	12.4	90	150	1	200
LCE80	80	88.7	108	1	5	142	10.6	90	150	1	200
LCE80A	80	88.7	98.0	1	5	129	11.6	90	150	1	200
LCE90	90	100	122	1	5	160	9.4	90	300	1	200
LCE90A	90	100	111	1	5	146	10.3	90	300	1	200
LCE100	100	111	136	1	5	179	8.4	90	300	1	200
LCE100A	100	111	123	1	5	162	9.3	90	300	1	200
LCE110	110	122	149	1	5	196	7.7	90	300	1	400
LCE110A	110	122	135	1	5	178	8.4	90	300	1	400
LCE120	120	133	163	1	5	214	7.0	90	300	1	400
LCE120A	120	133	147	1	5	193	7.8	90	300	1	400
LCE130	130	144	176	1	5	231	6.5	90	300	1	400
LCE130A	130	144	159	1	5	209	7.2	90	300	1	400
LCE150	150	167	204	1	5	268	5.6	90	300	1	400
LCE150A	150	167	185	1	5	243	6.2	90	300	1	400
LCE160	160	178	218	1	5	287	5.2	90	300	1	400
LCE160A	160	178	197	1	5	259	5.8	90	300	1	400
LCE170	170	189	231	1	5	304	4.9	90	300	1	400
LCE170A	170	189	209	1	5	275	5.4	90	300	1	400

NOTE 1: TAZ are normally selected according to the reverse "Stand Off Voltage (V_{WM}) which should be equal to or greater than the DC or continuous peak operating voltage level.