Microsemi Corp.
The diode experts

SANTA ANA, CA

SCOTTSDALE, AZ
For more information call:
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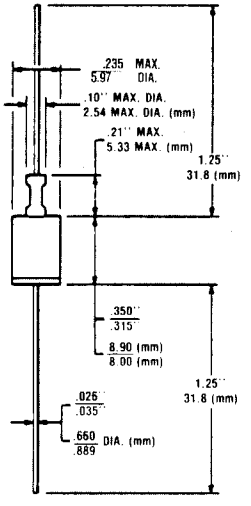
LC6.5 thru LC170A LOW CAPACITANCE

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 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: 1.0 W
Repetition Rate (duty cycle): .01%

ELECTRICAL CHARACTERISTICS

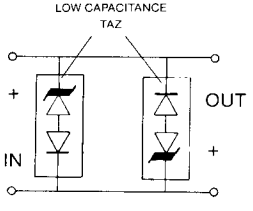
Clamping Factor: 1.4 @ Full Rated power
1.30 @ 50% Rated power

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

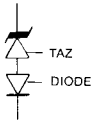
NOTE: When pulse testing, test in Avalanche direction. DO NOT pulse in forward direction.

APPLICATION

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



SCHEMATIC



MECHANICAL CHARACTERISTICS

CASE: DO-13, welded, hermetically sealed metal and glass.

FINISH: All external surfaces are corrosion resistant and leads solderable.

POLARITY: Cathode connected to case and marked.

WEIGHT: 1.4 grams (Appx.)

MOUNTING POSITION: Any

LC6.5 thru LC170A

ELECTRICAL CHARACTERISTICS @ 25°C

MICROSEMI PART NUMBER	REVERSE STAND-OFF VOLTAGE V_{WM} VOLTS	BREAKDOWN VOLTAGE $V_{(BR)}$ VOLTS Min.	BREAKDOWN VOLTAGE $V_{(BR)}$ VOLTS 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	CAPACITANCE @ 0 VOLTS pF	V_{WIB} WORKING INVERSE BLOCKING VOLTAGE VOLTS	I_{IB} INVERSE BLOCKING LEAKAGE CURRENT mA	V_{PIB} PEAK INVERSE BLOCKING VOLTAGE VOLTS
LC6.5	6.5	7.22	8.82	10	1000	12.3	100	100	75	1	100
LC6.5A	6.5	7.22	7.98	10	1000	11.2	100	100	75	1	100
LC7.0	7.0	7.78	9.51	10	500	13.3	100	100	75	1	100
LC7.0A	7.0	7.78	8.60	10	500	12.0	100	100	75	1	100
LC7.5	7.5	8.33	10.2	10	250	14.3	100	100	75	1	100
LC7.5A	7.5	8.33	9.21	10	250	12.9	100	100	75	1	100
LC8.0	8.0	8.89	10.9	1	100	15.0	100	100	75	1	100
LC8.0A	8.0	8.89	9.83	1	100	13.6	100	100	75	1	100
LC8.5	8.5	9.44	11.5	1	50	15.9	94	100	75	1	100
LC8.5A	8.5	9.44	10.4	1	50	14.4	100	100	75	1	100
LC9.0	9.0	10.0	12.2	1	10	16.9	89	100	75	1	100
LC9.0A	9.0	10.0	11.1	1	10	15.4	97	100	75	1	100
LC10	10	11.1	13.6	1	5	18.8	80	100	75	1	100
LC10A	10	11.1	12.3	1	5	17.0	88	100	75	1	100
LC11	11	12.2	14.9	1	5	20.1	74	100	75	1	100
LC11A	11	12.2	13.5	1	5	18.2	82	100	75	1	100
LC12	12	13.3	16.3	1	5	22.0	68	100	75	1	100
LC12A	12	13.3	14.7	1	5	19.9	75	100	75	1	100
LC13	13	14.4	17.6	1	5	23.8	63	100	75	1	100
LC13A	13	14.4	15.9	1	5	21.5	70	100	75	1	100
LC14	14	15.6	19.1	1	5	25.8	58	100	75	1	100
LC14A	14	15.6	17.2	1	5	23.2	65	100	75	1	100
LC15	15	16.7	20.4	1	5	26.9	56	100	75	1	100
LC15A	15	16.7	18.5	1	5	24.4	61	100	75	1	100
LC16	16	17.8	21.8	1	5	28.8	52	100	75	1	100
LC16A	16	17.8	19.7	1	5	26.0	57	100	75	1	100
LC17	17	18.9	23.1	1	5	30.5	49	100	75	1	100
LC17A	17	18.9	20.9	1	5	27.6	54	100	75	1	100
LC18	18	20.0	24.4	1	5	32.2	46	100	75	1	100
LC18A	18	20.0	22.1	1	5	29.2	51	100	75	1	100
LC20	20	22.2	27.1	1	5	35.8	42	100	75	1	100
LC20A	20	22.2	24.5	1	5	32.4	46	100	75	1	100
LC22	22	24.4	29.8	1	5	39.4	38	100	75	1	100
LC22A	22	24.4	26.9	1	5	35.5	42	100	75	1	100
LC24	24	26.7	32.5	1	5	43.0	35	100	75	1	100
LC24A	24	26.7	29.5	1	5	38.9	39	100	75	1	100
LC26	26	28.9	35.3	1	5	46.6	32	100	75	1	100
LC26A	26	28.9	31.9	1	5	42.1	36	100	75	1	100
LC28	28	31.1	38.0	1	5	50.1	30	100	75	1	100
LC28A	28	31.1	34.4	1	5	45.4	33	100	75	1	100
LC30	30	33.3	40.7	1	5	53.5	28	100	75	1	100
LC30A	30	33.3	36.8	1	5	48.4	31	100	75	1	100
LC33	33	36.7	44.9	1	5	58.0	25.4	100	75	1	100
LC33A	33	36.7	40.6	1	5	53.3	28.1	100	75	1	100
LC36	36	40.0	48.9	1	5	64.3	23.3	100	75	1	100
LC36A	36	40.0	44.2	1	5	58.1	25.8	100	75	1	100
LC40	40	44.4	54.3	1	5	71.4	21.0	100	75	1	100
LC40A	40	44.4	49.1	1	5	64.5	23.3	100	75	1	100
LC43	43	47.8	58.4	1	5	76.7	19.5	100	150	1	200
LC43A	43	47.8	52.8	1	5	69.4	21.6	100	150	1	200
LC45	45	50.0	61.1	1	5	80.3	18.7	100	150	1	200
LC45A	45	50.0	55.3	1	5	72.7	20.6	100	150	1	200
LC48	48	53.3	65.1	1	5	85.5	17.5	100	150	1	200
LC48A	48	53.3	58.9	1	5	77.4	19.4	100	150	1	200
LC51	51	56.7	69.3	1	5	91.1	16.5	100	150	1	200
LC51A	51	56.7	62.7	1	5	82.4	18.2	100	150	1	200
LC54	54	60.0	73.3	1	5	96.3	15.6	100	150	1	200
LC54A	54	60.0	66.3	1	5	87.1	17.2	100	150	1	200
LC58	58	64.4	78.7	1	5	103.0	14.6	100	150	1	200
LC58A	58	64.4	71.2	1	5	93.6	16.0	100	150	1	200
LC60	60	66.7	81.5	1	5	107.0	14.0	90	150	1	200
LC60A	60	66.7	73.7	1	5	96.8	15.5	90	150	1	200
LC64	64	71.1	86.9	1	5	114.0	13.2	90	150	1	200
LC64A	64	71.1	78.6	1	5	103.0	14.6	90	150	1	200
LC70	70	77.8	95.1	1	5	125	12.0	90	150	1	200
LC70A	70	77.8	86.0	1	5	113	13.3	90	150	1	200
LC75	75	83.3	102.0	1	5	134	11.2	90	150	1	200
LC75A	75	83.3	92.1	1	5	121	12.4	90	150	1	200
LC80	80	88.7	108	1	5	142	10.6	90	150	1	200
LC80A	80	88.7	98.0	1	5	129	11.6	90	150	1	200
LC90	90	100	122	1	5	160	9.4	90	300	1	200
LC90A	90	100	111	1	5	146	10.3	90	300	1	200
LC100	100	111	136	1	5	179	8.4	90	300	1	200
LC100A	100	111	123	1	5	162	9.3	90	300	1	200
LC110	110	122	149	1	5	196	7.7	90	300	1	400
LC110A	110	122	135	1	5	178	8.4	90	300	1	400
LC120	120	133	163	1	5	214	7.0	90	300	1	400
LC120A	120	133	147	1	5	193	7.8	90	300	1	400
LC130	130	144	176	1	5	231	6.5	90	300	1	400
LC130A	130	144	159	1	5	209	7.2	90	300	1	400
LC150	150	167	204	1	5	266	5.6	90	300	1	400
LC150A	150	167	185	1	5	243	6.2	90	300	1	400
LC160	160	178	218	1	5	287	5.2	90	300	1	400
LC160A	160	178	197	1	5	259	5.8	90	300	1	400
LC170	170	189	231	1	5	304	4.9	90	300	1	400
LC170A	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.