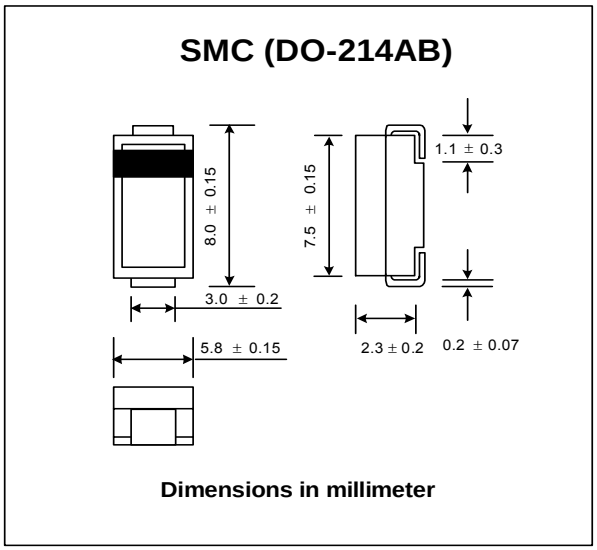
SMCJLCE SERIES

LOW CAPACITANCE TRANSIENT VOLTAGE SUPPRESSOR

V_{WM} : 6.5 - 170 Volts
P_{PP} : 1500 Watts



FEATURES :

* 1500 Watts of Peak Pulse Power Dissipation
* Available in stand-off voltage range of 6.5 to 170 V
* Low Capacitance of 100 pF or less
* Molding compound flammability rating : UL94V-O
* Pb / RoHS Free

MECHANICAL DATA

* Case : SMC Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Lead Formed for Surface Mount
* Polarity : Color band denotes cathode end except Bipolar.
* Mounting position : Any
* Weight : 0.21 gram

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_{PP}	1500	W
Steady State Power Dissipation at T_L = 75 °C Lead Lengths 0.375", (9.5mm) (Note 2)	P_D	5.0	W
Thermal Resistance (Junction to Lead)	$R_{\Theta JL}$	20	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	- 65 to + 175	°C

Notes :

(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	Reverse Stand-off Voltage	Breakdown Voltage @ $I_{(BR)}$			Maximum Reverse Leakage @ V_{WM}	Maximum Clamping Voltage @ I_{PP}	Maximum Peak Pulse Current @ 10/1000	Maximum Junction Capacitance @ 0 Volt	Working Inverse Blocking Voltage	Inverse Blocking Leakage Current	Peak Inverse Blocking Voltage
	V_{WM}	V_{BR} (V)		$I_{(BR)}$	I_D	V_C	I_{PP}		V_{WIB}	I_{IB}	V_{PIB}
	(V)	Min.	Max.	(mA)	(µA)	(V)	(A)	pF	(V)	mA	(V)
SMCJLCE6.5	6.5	7.22	8.82	10	1000	12.3	100	75	75	1.0	100
SMCJLCE6.5A	6.5	7.22	7.98	10	1000	11.2	100	75	75	1.0	100
SMCJLCE7.0	7.0	7.78	9.51	10	500	13.3	100	75	75	1.0	100
SMCJLCE7.0A	7.0	7.78	8.60	10	500	12.0	100	75	75	1.0	100
SMCJLCE7.5	7.5	8.33	10.2	10	250	14.3	100	100	75	1.0	100
SMCJLCE7.5A	7.5	8.33	9.21	10	250	12.9	100	100	75	1.0	100
SMCJLCE8.0	8.0	8.89	10.9	10	100	15.0	100	100	75	1.0	100
SMCJLCE8.0A	8.0	8.89	9.83	1	100	13.6	100	100	75	1.0	100
SMCJLCE8.5	8.5	9.44	11.5	1	50	15.9	94	100	75	1.0	100
SMCJLCE8.5A	8.5	9.44	10.4	1	50	14.4	100	100	75	1.0	100
SMCJLCE9.0	9.0	10.0	12.2	1	10	16.9	89	100	75	1.0	100
SMCJLCE9.0A	9.0	10.0	11.1	1	10	15.4	97	100	75	1.0	100
SMCJLCE10	10	11.1	13.6	1	5	18.8	80	100	75	1.0	100
SMCJLCE10A	10	11.1	12.3	1	5	17.0	88	100	75	1.0	100
SMCJLCE11	11	12.2	14.9	1	5	20.1	74	100	75	1.0	100
SMCJLCE11A	11	12.2	13.5	1	5	18.2	82	100	75	1.0	100
SMCJLCE12	12	13.3	16.3	1	5	22.0	68	100	75	1.0	100
SMCJLCE12A	12	13.3	14.7	1	5	19.9	75	100	75	1.0	100
SMCJLCE13	13	14.4	17.6	1	5	23.8	63	100	75	1.0	100
SMCJLCE13A	13	14.4	15.9	1	5	21.5	70	100	75	1.0	100
SMCJLCE14	14	15.6	19.1	1	5	25.8	58	100	75	1.0	100
SMCJLCE14A	14	15.6	17.2	1	5	23.2	65	100	75	1.0	100
SMCJLCE15	15	16.7	20.4	1	5	26.9	56	100	75	1.0	100
SMCJLCE15A	15	16.7	18.5	1	5	24.4	61	100	75	1.0	100
SMCJLCE16	16	17.8	21.8	1	5	28.8	52	100	75	1.0	100
SMCJLCE16A	16	17.8	19.7	1	5	26.0	57	100	75	1.0	100
SMCJLCE17	17	18.9	23.1	1	5	30.5	49	100	75	1.0	100
SMCJLCE17A	17	18.9	20.9	1	5	27.6	54	100	75	1.0	100
SMCJLCE18	18	20.0	24.4	1	5	32.2	46	100	75	1.0	100
SMCJLCE18A	18	20.0	22.1	1	5	29.2	51	100	75	1.0	100
SMCJLCE20	20	22.2	27.1	1	5	35.8	42	100	75	1.0	100
SMCJLCE20A	20	22.2	24.5	1	5	32.4	46	100	75	1.0	100
SMCJLCE22	22	24.4	29.8	1	5	39.4	38	100	75	1.0	100
SMCJLCE22A	22	24.4	26.9	1	5	35.5	42	100	75	1.0	100
SMCJLCE24	24	26.7	32.6	1	5	43.0	35	100	75	1.0	100
SMCJLCE24A	24	26.7	29.5	1	5	38.9	39	100	75	1.0	100
SMCJLCE26	26	28.9	35.3	1	5	46.6	32	100	75	1.0	100
SMCJLCE26A	26	28.9	31.9	1	5	42.1	36	100	75	1.0	100
SMCJLCE28	28	31.1	38.0	1	5	50.1	30	100	75	1.0	100
SMCJLCE28A	28	31.1	34.4	1	5	45.5	33	100	75	1.0	100
SMCJLCE30	30	33.3	40.7	1	5	53.5	28	100	75	1.0	100
SMCJLCE30A	30	33.3	36.8	1	5	48.4	31	100	75	1.0	100
SMCJLCE33	33	36.7	44.9	1	5	59.0	25.4	100	75	1.0	100
SMCJLCE33A	33	36.7	40.6	1	5	53.3	28.1	100	75	1.0	100

ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type Number	Reverse Stand-off Voltage	Breakdown Voltage @ $I_{(BR)}$			Maximum Reverse Leakage @ V_{WM}	Maximum Clamping Voltage @ I_{PP}	Maximum Peak Pulse Current @ 10/1000	Maximum Junction Capacitance @ 0 Volt	Working Inverse Blocking Voltage	Inverse Blocking Leakage Current	Peak Inverse Blocking Voltage
	V_{WM}	V_{BR} (V)		$I_{(BR)}$	I_D	V_C	I_{PP}		V_{WIB}	I_{IB}	V_{PIB}
	(V)	Min.	Max.	(mA)	(µA)	(V)	(A)	pF	(V)	mA	(V)
SMCJLCE36	36	40.0	48.9	1	5	64.3	23.3	100	75	1.0	100
SMCJLCE36A	36	40.0	44.2	1	5	58.1	25.8	100	75	1.0	100
SMCJLCE40	40	44.4	54.3	1	5	71.4	21	100	75	1.0	100
SMCJLCE40A	40	44.4	49.1	1	5	64.5	23.3	100	75	1.0	100
SMCJLCE43	43	47.8	58.4	1	5	76.7	19.5	100	150	1.0	200
SMCJLCE43A	43	47.8	52.8	1	5	69.4	21.6	100	150	1.0	200
SMCJLCE45	45	50.0	61.1	1	5	80.3	18.7	100	150	1.0	200
SMCJLCE45A	45	50.0	55.3	1	5	72.7	20.6	100	150	1.0	200
SMCJLCE48	48	53.3	65.1	1	5	85.5	17.5	100	150	1.0	200
SMCJLCE48A	48	53.3	58.9	1	5	77.4	19.4	100	150	1.0	200
SMCJLCE51	51	56.7	69.3	1	5	91.1	16.5	100	150	1.0	200
SMCJLCE51A	51	56.7	62.7	1	5	82.4	18.2	100	150	1.0	200
SMCJLCE54	54	60.0	73.3	1	5	96.3	15.6	100	150	1.0	200
SMCJLCE54A	54	60.0	66.3	1	5	87.1	17.2	100	150	1.0	200
SMCJLCE58	58	64.4	78.7	1	5	103	14.6	100	150	1.0	200
SMCJLCE58A	58	64.4	71.2	1	5	93.6	16	100	150	1.0	200
SMCJLCE60	60	66.7	81.5	1	5	107	14	90	150	1.0	200
SMCJLCE60A	60	66.7	73.7	1	5	96.8	15.5	90	150	1.0	200
SMCJLCE64	64	71.1	86.9	1	5	114	13.2	90	150	1.0	200
SMCJLCE64A	64	71.1	78.6	1	5	103	14.6	90	150	1.0	200
SMCJLCE70	70	77.8	95.1	1	5	125	12.0	90	150	1.0	200
SMCJLCE70A	70	77.8	86.0	1	5	113	13.3	90	150	1.0	200
SMCJLCE75	75	83.3	102	1	5	134	11.2	90	150	1.0	200
SMCJLCE75A	75	83.3	92.1	1	5	121	12.4	90	150	1.0	200
SMCJLCE80	80	88.7	108	1	5	142	10.6	90	150	1.0	200
SMCJLCE80A	80	88.7	98.0	1	5	129	11.6	90	150	1.0	200
SMCJLCE90	90	100	122	1	5	160	9.4	90	300	1.0	200
SMCJLCE90A	90	100	111	1	5	146	10.3	90	300	1.0	200
SMCJLCE100	100	111	136	1	5	179	8.4	90	300	1.0	200
SMCJLCE100A	100	111	123	1	5	162	9.3	90	300	1.0	200
SMCJLCE110	110	122	149	1	5	196	7.7	90	300	1.0	400
SMCJLCE110A	110	122	135	1	5	178	8.4	90	300	1.0	400
SMCJLCE120	120	133	163	1	5	214	7.0	90	300	1.0	400
SMCJLCE120A	120	133	147	1	5	193	7.8	90	300	1.0	400
SMCJLCE130	130	144	176	1	5	231	6.5	90	300	1.0	400
SMCJLCE130A	130	144	159	1	5	209	7.2	90	300	1.0	400
SMCJLCE150	150	167	204	1	5	268	5.6	90	300	1.0	400
SMCJLCE150A	150	167	185	1	5	243	6.2	90	300	1.0	400
SMCJLCE160	160	178	218	1	5	287	5.2	90	300	1.0	400
SMCJLCE160A	160	178	197	1	5	259	5.8	90	300	1.0	400
SMCJLCE170	170	189	231	1	5	304	4.9	90	300	1.0	400
SMCJLCE170A	170	189	209	1	5	275	5.4	90	300	1.0	400

RATING AND CHARACTERISTIC CURVES (SMCJLCE Series)

FIG.1 - PEAK PULSE POWER VS. PULSE TIME

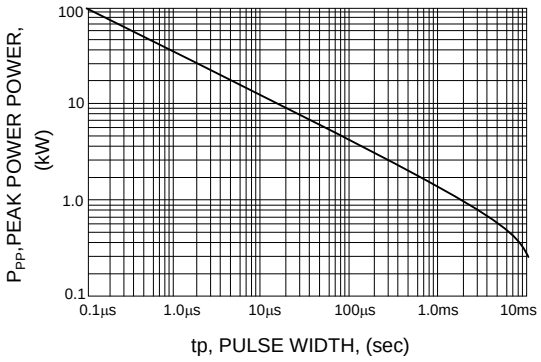


FIG.2 - DERATING CURVE

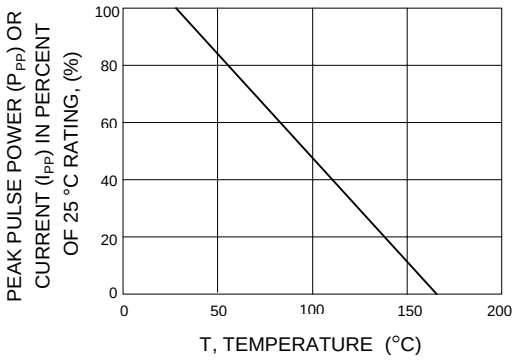


FIG.3 - PULSE WAVEFORM