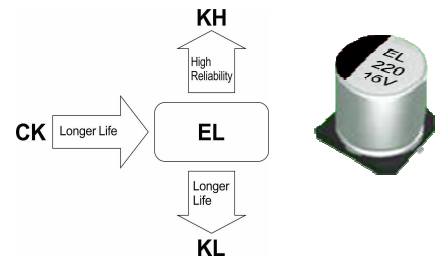


EL

Series

Long Life Assurance

- Wide temperature range -55 ~ +105°C
- Load life of 2000~3000 hours
- RoHS Compliance

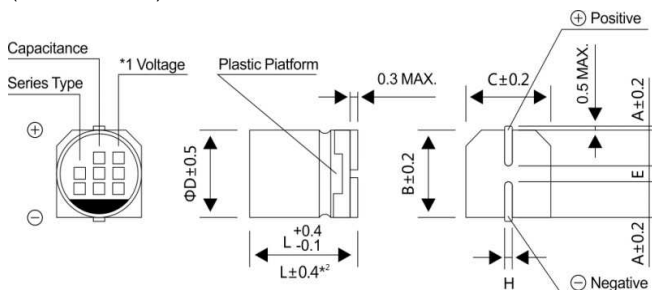


SPECIFICATIONS

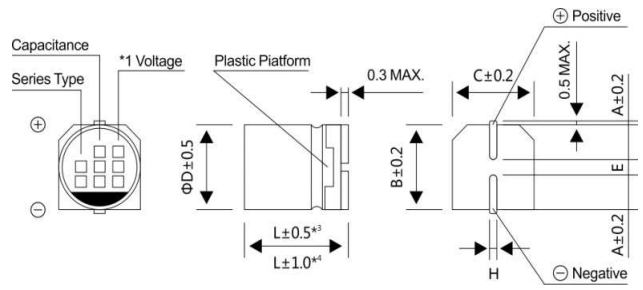
Item	Characteristics							
Operation Temperature Range	-55 ~ +105℃							
Voltage Range	6.3 ~ 50V							
Capacitance Range	0.1 ~ 1500μF							
Capacitance Tolerance	± 20 % (at 120Hz , 20℃)							
Leakage Current	WV(V)	6.3 ~ 50V						
	Size	Φ4 ~ 10				Φ12.5 ~ 16		
	Time	After 2 minutes (application of rated voltage)				After 1 minutes (application of rated voltage)		
	L.C.	I≤0.01CV or 3μA , whichever is greater				I≤0.03CV or 4μA , whichever is greater		
Dissipation Factor (MAX) (tanδ) (at 120Hz ,20℃)	WV(V)		6.3	10	16	25	35	50
	tanδ	Φ4 ~ 10	0.28	0.24	0.20	0.16	0.13	0.12
		Φ12.5 ~ 16	0.38	0.34	0.30	0.26	0.22	0.18
Low Temp.Impedance Stability at 120Hz	WV		6.3	10	16	25	35	50
	Z(-25℃)/ Z(+20℃)	Φ4~10	3	3	2	2	2	2
	Z(-55℃)/ Z(+20℃)		8	5	4	3	3	3
	Z(-25℃)/ Z(+20℃)	Φ12.5~16	5	4	3	2	2	2
	Z(-55℃)/ Z(+20℃)		6	12	10	8	5	4
Load Life	After 3000hrs. (2000hrs. For Φ4~Φ6.3x5.8) application of the rated voltage at 105℃,they meet the characteristics listed below.							
	Capacitance change			Within ±25% of initial value				
	Dissipation Factor			200% or less of initial specified value				
	Leakage Current			initial specified value or less				
Shelf Life	After leaving capacitors under no load at 105℃ for 1000 hours, they meet the specified value for load life characterist listed above.							
Resistance to Soldering Heat	After reflow soldering and restored at room temperature, they meet the characteristics listed below.							
	Capacitance change			Within ±10% of initial value				
	Dissipation Factor			initial specified value or less				
	Leakage Current			initial specified value or less				
Marking	Black print on the case top							

DRAWING (Unit: mm)

(Φ4 ~ Φ6.3x7.7)



Φ8x10.5 ~ Φ16



*1 Voltage mark for 6.3V is 【6V】

*2 Applicable to Φ6.3x7.7

*3 Applicable to Φ8x10.5 ~ Φ10

*4 Applicable to Φ12.5 ~ Φ16

■ DIMENSIONS(Unit:mm)

ΦDxL	4x5.4	5x5.4	6.3x5.4	6.3x7.7	8x10.5	10x10.5	10x13.5	12.5x13.5	12.5x16	16x16.5
A	2.0	2.2	2.6	2.6	3.0	3.3	3.3	4.9	4.9	5.8
B	4.3	5.3	6.6	6.6	8.4	10.4	10.4	13.0	13.0	17.0
C	4.3	5.3	6.6	6.6	8.4	10.4	10.4	13.0	13.0	17.0
E±0.2	1.0	1.4	1.9	1.9	3.1	4.7	4.7	4.7	4.7	6.4
L	5.4	5.4	5.4	7.7	10.5	10.5	13.5	13.5	16.0	16.5
H	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.8~1.2	0.8~1.2	0.8~1.2	0.8~1.2	0.8~1.2	0.8~1.2

■ DIMENSIONS&MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV μF	Code	6.3		10		16		25		35		50	
		0J		1A		1C		1E		1V		1H	
0.1	0R1											4x5.8	1
0.22	R22											4x5.8	2
0.33	R33											4x5.8	3
0.47	R47											4x5.8	5
1	010											4x5.8	10
2.2	2R2											4x5.8	16
3.3	3R3											4x5.8	16
4.7	4R7											4x5.8	16
10	100					4x5.8	18	5x5.8	20	5x5.8	21	6.3x5.8	35
22	220	4x5.8	22	5x5.8	25	5x5.8	27	6.3x5.8	36	6.3x5.8	38	6.3x7.7	70
33	330	5x5.8	27	5x5.8	30	6.3x5.8	40	6.3x5.8	60	6.3x7.7	84	8x10.5	90
47	470	5x5.8	33	6.3x5.8	41	6.3x5.8	48	6.3x7.7	90	8x10.5	98	8x10.5	90
100	101	6.3x5.8	50	6.3x5.8	53	6.3x5.8	60	8x10.5	130	8x10.5	130	10x10.5	100
150	151	6.3x5.8	55	6.3x7.7	105	6.3x7.7	95	8x10.5	140	10x10.5	315	10x10.5	100
220	221	6.3x7.7	100	8x10.5	210	8x10.5	210	10x10.5	190	10x10.5	315	10x13.5 (10x10.5)	250 (100)
330	331	8x10.5	210	8x10.5	210	8x10.5	210	10x10.5	315	10x10.5	315	12.5x13.5	400
470	471	8x10.5	210	10x10.5	315	10x10.5	315	10x10.5	315	12.5x13.5 (10x13.5)	500 (360)	16x16.5 (12.5x16)	650 (500)
680	681	8x10.5	210	10x10.5	315	10x10.5	315	10x13.5	380	12.5x13.5	500		
1000	102	10x10.5	315	10x13.5 (10x10.5)	360 (315)	12.5x13.5 (10x13.5) (10x10.5)	450 (350) (315)	12.5x13.5	550	16x16.5 (12.5x16)	700 (550)		
1500	152	10x13.5 (10x10.5)	450 (315)	12.5x13.5	500	12.5x13.5	500	12.5x16	800				
2200	222	12.5x13.5	620	12.5x16 (12.5x13.5)	650 (600)	16x16.5	900	16x16.5	1000			Case size	Ripple current
3300	332	12.5x16	750	16x16.5	950								

·Case size ΦDxL (mm), ripple current (mA rms) at 105℃, 120Hz

■ FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Frequency		50Hz	120Hz	300Hz	1KHz	10KHz~
Coefficient	Φ4~Φ10	0.1~100μF	0.70	1.00	1.17	1.36
		150~1500μF	0.85	1.00	1.08	1.20
	Φ12.5~Φ16	~470μF	0.75	1.00	1.35	1.57
		680~3300μF	0.85	1.00	1.23	1.34