

CONDUCTIVE POLYMER ALUMINUM SOLID CAPACITORS

ULR series

FEATURES

- Ultra low E.S.R
- Enabled high ripple current
- Guaranteed at 105°C 2000 hours.



SPECIFICATIONS

Items	Characteristics		
Operating Temperature	-55°C ~ +105°C		
Rated Voltage Range	2.5~35 W.V		
Capacitance Range	22~2700uF		
Capacitance Tolerance	±20% (20°C, 120Hz)		
Leakage Current (MAX)	$I \leq 0.2CV$ or 280(uA) whichever is greater. (After 2 minutes) I=Leakage Current(uA) C=Nominal Capacitance(uA) V=Rated		
Dissipation Factor (tan δ)	Rated Voltage (V dc)	2.5~35	MAX
	Tan δ %	0.10	(20°C 120Hz)
Temperature Characteristics Impedance Ratio	Z(-55°C)/Z(+20°C)	≤ 1.25	
	Z(+105°C)/Z(+20°C)	≤ 1.25	
※1. Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2,000 hours at 105°C		
	Capacitance Change	Within ±20% of the initial value.	
	Dissipation Factor	Not more than 150% of the specified value	
	Leakage Current	Not more than of the specified value	
Damp heat	60°C, 90 to 95%, R.H, 1000hrs		
	Capacitance Change	Within ±20% of the initial value.	
	Dissipation Factor	Not more than 150% of the specified value	
	Leakage Current	Not more than the specified value	
	E.S.R	Not more than 150 % the specified value	
Surge Voltage(V)	At normal temperature, charge at surge voltage for 30sec. and discharge via a 1k Ω protective resistor for 330sec.Repeat for 1000 cycles	$\Delta C/C$ tan δ ESR LC	Within ±20% of the initial measured value.
			$\leq 150\%$ of initial specified value
			$\leq 150\%$ of initial specified value
			\leq initial specified value

※1. In case of some problems for measured values, measure after applying rated voltage for 120 minutes at 105°C

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MULTIPLIER FOR RIPPLE CURRENT

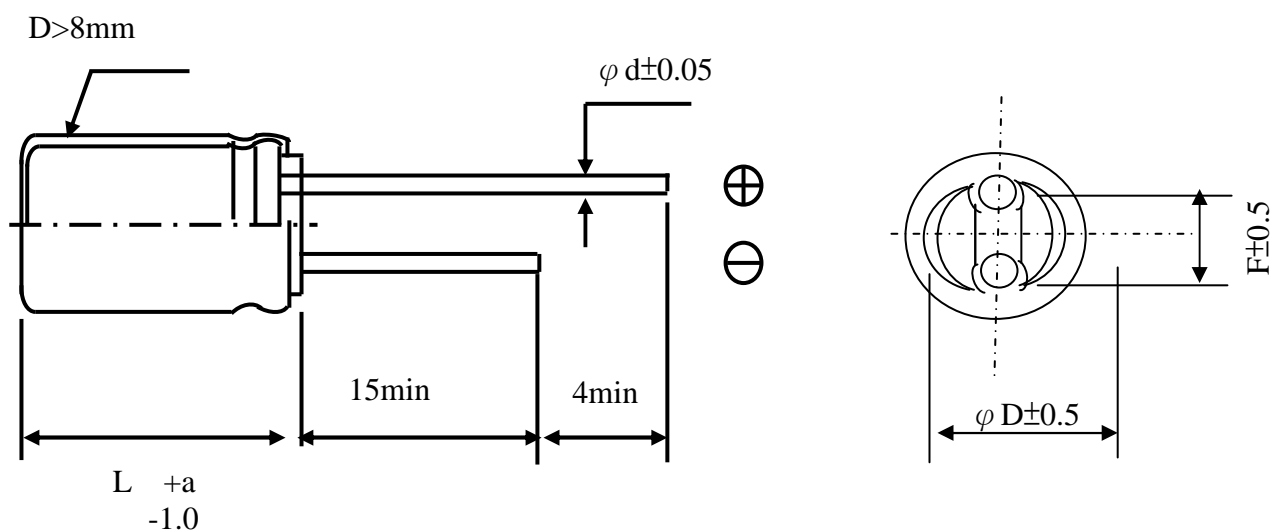
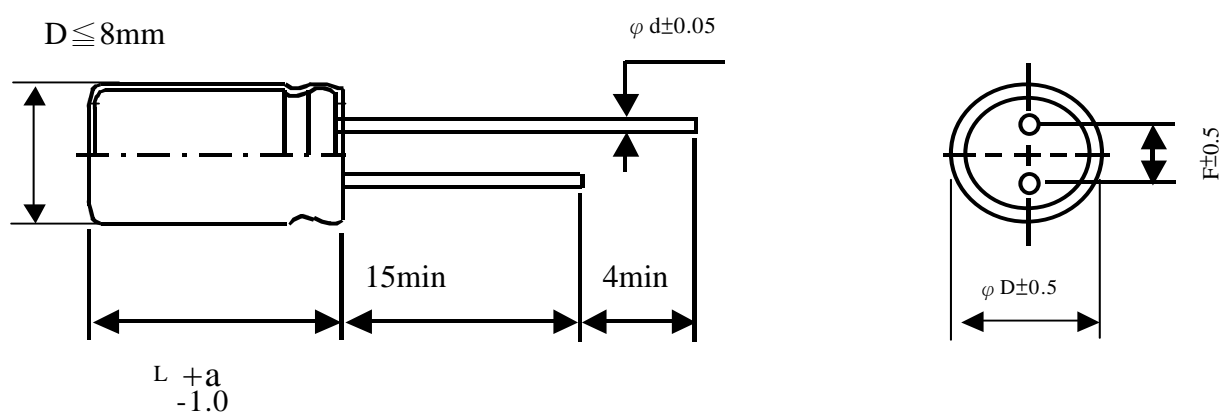
Frequency coefficient for ripple current

Frequency coefficient for ripple current

Frequency (HZ)	$120 \leq f < 1K$	$1K \leq f < 10K$	$10K \leq f < 100K$	$100K \leq f \leq 500K$
Coefficient	0.05	0.3	0.7	1

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DIMENSIONS (mm)



$\pm \Phi \times L$	5x7	5x8	5x9	6.3x6	6.3x8	6.3x11	8x8	8x11.5	10x12.5
$F \pm 0.5$	2.0	2.0	2.0	2.5	2.5	2.5	3.5	3.5	5.0
Φd	0.5	0.6	0.6	0.45	0.6	0.6	0.6	0.6	0.6
a	$L < 11; a = 1.0; L \geq 11; a = 1.5$								



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STANDARD SIZE

Case Size Φ Dx L(mm)

Rated Voltage(V)	Cap(uF)	Case size	ESR(m Ω)(max) 100KHZ to 300KHZ at 20 $^{\circ}$ C	Rated Ripple Current 100KHZ (mArms at 105 $^{\circ}$ C)	Tangent of Loss Angle (% max)	Leakage Current (Ua)(max) after 2 minutes
2.5	220	6.3x6	15	3400	10	280
2.5	390	6.3x6	15	3400	10	280
2.5	470	5x9	7	4180	10	280
2.5	560	5x8	7	4180	10	280
2.5	560	5x9	7	4180	10	280
2.5	560	6.3x6	15	3400	10	280
2.5	560	6.3x8	7	4000	10	280
2.5	560	8x8	7	6100	10	280
2.5	820	6.3x8	7	5600	10	410
2.5	820	8x8	7	6100	10	410
2.5	820	8x11.5	7	6100	10	410
2.5	1000	8x11.5	7	6100	10	500
2.5	1500	8x11.5	7	6100	10	750
2.5	1500	10x12.5	7	6100	10	750
2.5	2700	10x12.5	8	5560	10	1350
4	270	6.3x8	12	3200	10	280
4	560	6.3x8	7	5600	10	448
4	560	8x8	7	6100	10	448
4	560	8x11.5	7	6100	10	448
4	680	8x8	7	6100	10	544
4	680	8x11.5	7	6100	10	544
4	820	8x8	7	6100	10	656
4	820	8x11.5	7	6100	10	656
4	1000	8x8	7	6100	10	800
4	1000	10x12.5	7	6640	10	800
4	1200	8x8	7	6100	10	960
4	1200	10x12.5	8	5600	10	960
4	2700	10x12.5	8	6900	10	2160
6.3	270	5x7	11	3700	10	340
6.3	330	6.3x6	20	3160	10	416
6.3	330	6.3x8	10	4500	10	416
6.3	330	8x8	8	5700	10	416
6.3	390	8x8	8	5700	10	492
6.3	470	6.3x8	8	4700	10	592
6.3	470	8x8	8	5700	10	593
6.3	470	8x11.5	7	6100	10	592
6.3	560	6.3x8	8	4700	10	706
6.3	560	8x8	8	5700	10	706
6.3	680	6.3x8	8	4700	10	857
6.3	680	8x8	8	5700	10	857
6.3	680	8x11.5	7	6100	10	857
6.3	680	10x12.5	7	6640	10	857
6.3	820	8x8	7	6100	10	1033
6.3	820	8x11.5	7	6100	10	1033
6.3	820	10x12.5	7	6640	10	1033



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6.3	1000	8x11.5	7	6100	10	1260
6.3	1200	8x11.5	7	6100	10	1512
6.3	1500	10x12.5	10	5560	10	1890
10	22	6.3x8	45	1870	10	280
10	33	6.3x8	35	2000	10	280
10	47	6.3x8	32	2100	10	280
10	220	6.3x6	15	2700	10	440
10	220	6.3x8	12	3200	10	440
10	270	8x8	14	4420	10	540
10	270	8x11.5	11	5100	10	540
10	330	8x11.5	17	3950	10	660
10	390	8x8	11	5000	10	780
10	390	8x11.5	9	6100	10	780
10	470	8x8	11	5000	10	940
10	470	8x11.5	9	5650	10	940
10	470	10x12.5	8	6100	10	940
10	560	8x8	9	5600	10	1120
10	560	8x11.5	9	5650	10	1120
10	680	8x11.5	10	5800	10	1360
10	680	10x12.5	8	6100	10	1360
10	820	8x11.5	8	6100	10	1640
10	1000	10x12.5	9	6100	10	2000
10	1200	10x12.5	8	6200	10	2400
16	47	6.3x8	60	458	10	280
16	100	6.3x6	25	2700	10	320
16	100	6.3x8	24	2820	10	320
16	100	6.3x11	24	2820	10	320
16	180	8x11.5	13	5000	10	576
16	220	6.3x11	20	3100	10	704
16	220	8x8	13	4300	10	704
16	220	8x11.5	13	5000	10	704
16	270	8x8	13	4300	10	864
16	270	8x11.5	13	5000	10	864
16	330	8x8	13	4300	10	1056
16	330	10x12.5	10	6100	10	1056
16	470	8x11.5	11	5100	10	1504
16	470	10x12.5	10	6100	10	1504
16	680	10x12.5	10	6100	10	2176
16	820	10x12.5	10	6100	10	2624
16	1000	10x12.5	10	6100	10	3200
20	33	6.3x8	35	2000	10	280
20	47	8x8	33	2100	10	280
20	100	8x11.5	32	2750	10	400
20	150	10x12.5	28	2900	10	600
25	22	6.3x8	45	1870	10	280
25	33	8x8	40	2050	10	280
25	47	8x8	36	2100	10	280
25	100	8x11.5	32	2750	10	500
25	330	10x12.5	45	2700	10	1650
35	100	10x12.5	60	2000	10	700
35	220	10x12.5	50	2500	10	1540