

ELECTROLYTIC CAPACITORS LOW IMPEDANCE AND LOW ESR MINIATURIZED CAPACITORS

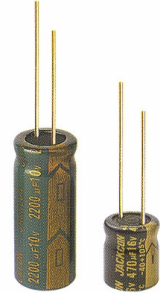
Series Low Impedance Low E.S.R. Miniature Size

FEATURE

GLR series aluminum electrolytic capacitors are high reliable with LOW IMPEDANCE, LOW ESR and guaranteed 2000 hours at 105°C.

APPLICATION

Suitable for switching power and automobile industry.



SPECIFICATIONS

Item	Performance Characteristics								
Operating Temperature Range	-40 to + 105°C								
Rated voltage Range	6.3 to 100 VDC								
Capacitance Range	4.7 to 4700 µF								
Capacitance Tolerance	±20% (120Hz, +20°C)								
Leakage Current (+20°C, max.)	1≤0.001 CV or 3 (µA) After 2 minute whichever is greater measured with rate working voltage applied								
Dissipation Factor (tanδ)	Working voltage (VDC)	6.3	10	16	25	35	50	63	100
	D.F.(%) Max	22	19	16	14	12	10	9	8
	For Capacitance >1000µF, add 2% per another 1000µF in crease (+20°C, at 120Hz)								
Low Temperature Characteristics (120Hz)	Impedance ratio max.								
	Working voltage (VDC)	6.3	10	16	25	35	50	63	100
	Z-25°C/Z+20°C	2	2	2	2	2	2	2	2
	Z-40°C/Z+20°C	3	3	3	3	3	3	3	3
Load Life	Test conditions Duration time: 2000Hrs Ambient temperature: +105°C Applied voltage: Rated C working voltage After test requirements at +20°C Capacitance change: ≤±20% of the initial measured value Dissipation factor: ≤200% of the initial specified value Leakage current: ≤The initial specified value								
Shelf Life	Test conditions Duration time: 500 Hrs Ambient temperature: +105°C Applied voltage: None After test requirements at +20°C: Some limits as Load life Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes								

MULTIPLIER FOR RIPPLE CURRENT VS. FREQUENCY

CAP (µF)/Hz		50(60)	120	400	1K	10K	50K-100K
Multiplier	CAP≤100	0.47	0.59	0.76	0.85	0.97	1.0
	10<CAP≤100	0.52	0.62	0.80	0.89	0.97	1.0
	100<CAP≤1000	0.58	0.72	0.84	0.90	0.98	1.0
	100<CAP	0.63	0.78	0.87	0.91	0.98	1.0

MULTIPLIER FOR RIPPLE CURRENT VS. TEMPERATURE

Temperature °C	45	60	70	85	95	105
Multiplier	1.80	1.50	1.30	1.00	1.20	1.00

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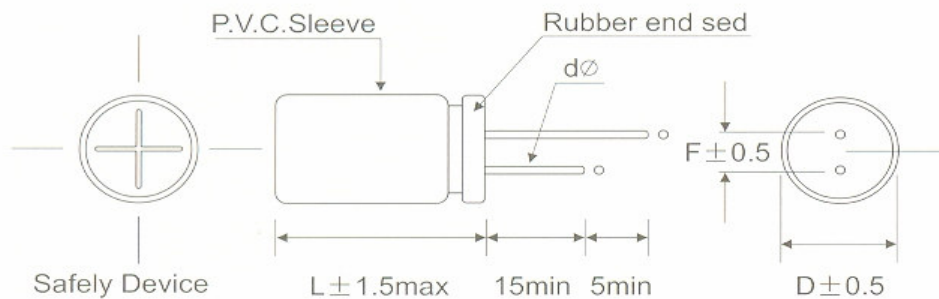
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DIAGRAM OF DIMENSIONS



Unit:mm

D Ø	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d Ø	0.5		0.6		0.8		

CASE SIZE TABLE

W.V.(SV) µF	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)
4.7						→	5 × 11	5 × 11
10						→	5 × 11	6.3 × 11
22					→	5 × 11	6.3 × 11	8 × 11.5
33				→	5 × 11	6.3 × 11	6.3 × 11	8 × 16
47			→	5 × 11	6.3 × 11	8 × 11.5	8 × 11.5	10 × 12.5
100	5 × 11	5 × 11	6.3 × 11	6.3 × 11	8 × 11.5	8 × 11.5	10 × 12.5	10 × 25
220	6.3 × 11	6.3 × 11	8 × 11.5	8 × 11.5	8 × 16 10 × 12.5	10 × 16	10 × 25	13 × 30 16 × 20
330	6.3 × 11	8 × 11.5	8 × 11.5	8 × 16 10 × 12.5	10 × 16	10 × 25	13 × 25	13 × 40
470	8 × 11.5	8 × 11.5	8 × 16 10 × 12.5	8 × 20 10 × 16	10 × 20	13 × 20	13 × 30 16 × 20	16 × 35.5 18 × 31.5
1000	10 × 12.5	8 × 20 10 × 16	10 × 20	13 × 20	13 × 25	16 × 25	16 × 35.5 18 × 31.5	-
2200	10 × 25	13 × 20	13 × 25	13 × 25	-	-	-	-
3300	13 × 20	13 × 25	13 × 25	-	-	-	-	-
4700	13 × 30	13 × 35	-	-	-	-	-	-

ELECTROLYTIC CAPACITORS

LOW IMPEDANCE AND LOW ESR MINIATURIZED CAPACITORS

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MAXIMUM RIPPLE CURRENT

(mA, 120Hz at 105°C)

uF \ W.V.	6.3	10	16	25	35	50	63	100
	(8)	(13)	(20)	(32)	(44)	(63)	(79)	(125)
4.7	-	-	-	-	-	-	-	105
10	-	-	-	-	-	-	135	170
22	-	-	-	-	-	-	200	320
33	-	-	-	-	230	-	270	400
47	-	-	200	240	340	-	400	450
100	200	242	360	410	560	200	720	890
220	360	390	575	750	1000 1060	360	1315	1420 1270
330	395	540	740	990	1400	395	1870	1650
470	600	750	990 1000	1260 1415	1850	600	2225 1970	1900 1700
1000	1000	1220 1400	1840	2340	2780	1000	2780 3230	-
2200	2160	2370	2750	3420	-	2160	-	-
3300	2290	2720	3490	-	-	2290	-	-
4700	3200	3450	-	-	-	3200	-	-

MAXIMUM IMPEDANCE

(Ω 100K Hz at 105°C)

uF \ WV(SV)	6.3		10		16		25		35		50		63		100	
	(8)		(8)		(8)		(8)		(8)		(8)		(8)		(8)	
	+20°C	+10°C	+20°C	+10°C	+20°C	+10°C	+20°C	+10°C	+20°C	+10°C	+20°C	+10°C	+20°C	+10°C	+20°C	+10°C
4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.60	5.90
10	-	-	-	-	-	-	-	-	-	-	-	-	0.95	3.80	0.70	2.50
22	-	-	-	-	-	-	-	-	-	-	0.35	1.20	0.75	2.90	0.48	2.10
33	-	-	-	-	-	-	-	-	0.32	1.1	0.20	1.10	0.38	1.45	0.31	1.35
47	-	-	-	-	0.40	1.20	0.35	1.20	0.20	0.50	0.09	1.00	0.22	0.85	0.25	1.00
100	0.40	1.30	0.28	1.10	0.25	0.55	0.15	0.45	0.09	0.26	0.056	0.22	0.14	0.50	0.12	0.50
220	0.25	0.90	0.15	0.45	0.14	0.40	0.075	0.25	0.056 0.052	0.17 0.16	0.052	0.12	0.075	0.30	0.065 0.075	0.25 0.25
330	0.15	0.45	0.11	0.38	0.080	0.25	0.056 0.052	0.17 0.16	0.038	0.12	0.038	0.09	0.045	0.15	0.045	0.014
470	0.095	0.25	0.075	0.25	0.062 0.058	0.17 0.16	0.04 0.038	0.13 0.12	0.022	0.07	0.022	0.07	0.041 0.043	0.14 0.14	0.032 0.038	0.010 0.012
1000	0.055	0.15	0.050 0.042	0.15 0.13	0.035	0.07	0.02	0.055	0.019	0.044	0.019	0.058	0.026 0.028	0.065 0.068	-	-
2200	0.025	0.065	0.25	0.05	0.022	0.045	0.015	0.038	-	-	-	-	0.026 0.028	-	-	-
3300	0.026	0.055	0.021	0.045	0.018	0.04	-	-	-	-	-	-	-	-	-	-
4700	0.02	0.04	0.019	0.04	-	-	-	-	-	-	-	-	-	-	-	-

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