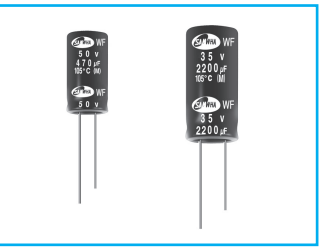
MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

WF High ripple current, Extremely Low Impedance Series

Low Impedance | Long Life | Solvent Proof



- Operating temperature range of −40 ~ +105˚C
- Extremely low impedance at high frequency
- High reliability withstanding 10000 hours load life at 105˚C (5000 / 7000 hours for smaller case size as specified below)
- Complied to the RoHS directive

WL ⇨ WF
Long life

Item	Characteristics
Operating temperature range	-40 ~ +105˚C
Leakage current max.	I = 0.03CV or 3μA whichever is greater (after 2 minutes)
Capacitance tolerance	±20% at 120Hz, 20˚C
Dissipation factor max. (at 120Hz, 20˚C)	Capacitance > 1000μF : tanδ increases by 0.02 for each 1000μF from below value.

WV	6.3	10	16	25	35	50	63	100
tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08

Low temperature characteristics (Impedance ratio at 120Hz)				
WV	6.3	10	16	25 ~ 100
Z-40˚C/Z+20˚C	8	6	4	3

Load life

After an application of DC bias voltage plus the rated AC ripple current for 10000 hours at 105˚C. The measurement shall meet the following limits. The DC voltage plus the peak AC voltage combined must not exceed the rated voltage.

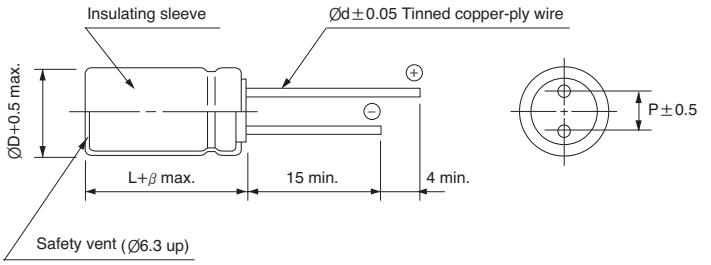
Leakage current	Less than specified value
Capacitance change	Within ±25% of initial value
tanδ	Less than 200% of specified value

ØD	ØD = 5, 6.3	ØD = 8, 10	ØD ≧ 12.5
Life time	5000 hours	7000 hours	10000 hours

Shelf life (at 105˚C)	After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value. The measurement shall be performed at 20˚C by the KS C 6035 clause 5.4.

DRAWING

Unit : mm



ØD	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Ød	0.5	0.5	0.6	0.6	0.6	0.8	0.8
β	1.5			2.0			

FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

μF \ Frequency	120Hz	1kHz	10kHz	50kHz	100kHz≦
~ 33	0.40	0.65	0.82	0.91	1.00
39 ~ 270	0.50	0.70	0.84	0.92	1.00
330 ~ 680	0.55	0.75	0.86	0.93	1.00
820 ~ 1800	0.60	0.80	0.88	0.94	1.00
2200 ~	0.70	0.85	0.90	0.95	1.00

WF series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV / Item / μF	6.3			10			16			25		
	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
33										5×11	0.90	150
47							5×11	0.90	150	5×11	0.90	150
100	5×11	0.90	150	5×11	0.90	150	6.3×11	0.40	250	6.3×11	0.40	250
220	6.3×11	0.40	250	6.3×11	0.40	250	8×11.5	0.25	400	8×11.5	0.25	400
330	6.3×11	0.40	250	8×11.5	0.25	400	8×11.5	0.25	400	10×12.5	0.16	580
470	8×11.5	0.25	400	8×11.5	0.25	400	10×12.5	0.16	580	10×16	0.120	770
1000	10×12.5	0.16	580	10×16	0.120	770	10×20	0.078	1050	12.5×20	0.062	1300
2200	12.5×20	0.062	1300	12.5×20	0.062	1300	12.5×25	0.048	1650	16×25	0.034	1850
3300	12.5×20	0.062	1300	12.5×25	0.048	1650	16×25	0.034	1850	16×31.5	0.029	2000
4700	16×25	0.034	1850	16×25	0.034	1850	16×31.5	0.029	2000	18×35.5	0.025	2200
6800	16×25	0.034	1850	16×31.5	0.029	2000	18×35.5	0.025	2200			
10000	16×31.5	0.029	2000	18×35.5	0.025	2200						
15000	18×35.5	0.025	2200									

WV / Item / μF	35			50			63			100		
	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
0.47				5×11	5.5	30				5×11	6.0	15
1.0				5×11	4.0	50				5×11	4.5	20
2.2				5×11	2.5	55				5×11	3.0	30
3.3				5×11	2.2	65				5×11	2.7	40
4.7				5×11	1.9	88				5×11	2.5	65
10				5×11	1.5	100	5×11	2.3	87	6.3×11	1.2	140
22				5×11	0.9	150	6.3×11	1.30	140	8×11.5	0.63	160
33	5×11	0.90	150	6.3×11	0.40	250	6.3×11	1.20	140	10×12.5	0.43	230
47	6.3×11	0.4	250	6.3×11	0.4	400	8×11.5	0.63	210	10×12.5	0.43	230
										10×16	0.31	290
100	8×11.5	0.25	400	8×11.5	0.25	500	10×12.5	0.43	300	12.5×16	0.23	750
										12.5×20	0.16	
220	10×12.5	0.16	580	10×16	0.12	770	10×25	0.210	520	16×25	0.073	900
330	10×16	0.120	770	10×20	0.08	1050	12.5×20	0.160	660	16×25	0.073	900
390	10×20	0.095	900	10×20	0.075	1170	12.5×25	0.140	700	12.5×34.5	0.073	1650
470	10×20	0.078	1050	12.5×20	0.062	1300	12.5×25	0.120	750			
1000	12.5×25	0.048	1650	16×25	0.034	1850	16×31.5	0.054	1390			
2200	16×31.5	0.029	2000	18×35.5	0.025	2200						
3300	18×35.5	0.025	2200									