



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

WA/WB series



FPCAP *NEW*



Resin-molded Chip (7.3 × 4.3 × 4.3)

- By using Functional Polymer cathode, Frequency & Temp. characteristics are greatly improved.
- Low ESR at a high frequency range. ● High ripple current capability.

〈Applications〉

Switching Power Supply and DC/DC Converter.
Back up Power Supplies of CPU (VRM etc.)
Miniature high Power Supply.

〈Environmental Correspondence〉

Compliant to the RoHS directive (2011/65/EU).
The Lead-free of terminal plating.

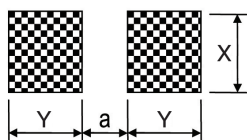
■ Specifications

Item	Performance Characteristics	
Category Temperature Range	-55 to +105°C	
Rated Voltage Range	2.0 to 25V	
Rated Capacitance Range	47 to 470µF	
Capacitance Tolerance	±20% at 120Hz, 20°C	
Tangent of loss angle (tan δ)	Less than or equal to the specified value at 120Hz, 20°C	
ESR (※1)	Less than or equal to the specified value at 100kHz, 20°C	
Leakage Current (※2)	Less than or equal to the specified value. After 2 minutes' application of rated voltage at 20°C	
Endurance	Test condition	105°C, rated voltage 1000Hrs.
	Capacitance change	Within ±20% of initial value before test
	tan δ	150% or less than the initial specified value
	Leakage current (※2)	Less than or equal to the initial specified value
Damp Heat (Steady State)	Test condition	60°C, 90 to 95%RH, No Bias, 500Hrs.
	Capacitance change	Within +50% to -20% of initial value before test
	tan δ	200% or less than the initial specified value
	Leakage current (※2)	300% or less than the initial specified value
Failure Rate	0.5% / 1000Hrs. Max. (60%CL)	

※1 ESR should be measured at both of the terminal ends closest to the capacitor body.

※2 Conditioning : If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

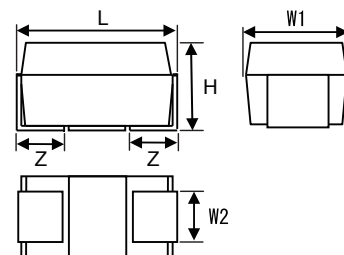
■ Recommended land Size



(mm)				
L × W × H	X	Y	a	
7.3 × 4.3 × 4.3	2.9	2.05	4.1	

■ Size Code(ESR) [Upper value : Size Code, Lower value : ESR(mΩ)]

Cap [µF]	R.V.(V)		S.V.(V)	
	2.0	6.3	16	25
	2.3	7.2	18.4	28.7
	WA	WB	WA	WA
47				E (60)
68				E (55) E (60)
100				E (55)
220			E (15)	
330			E (15)	
470	E (9)	E (6)		



(mm)					
Size Code	L±0.2	W1±0.2	W2±0.1	H±0.2	Z±0.2
E	7.3	4.3	2.4	4.3	1.3

Design, Specifications are subject to change without notice.

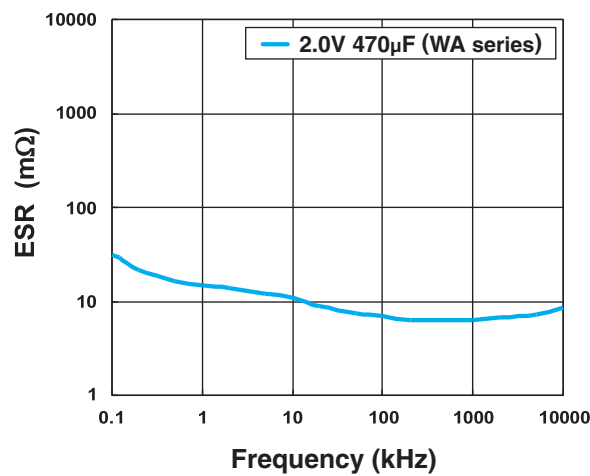
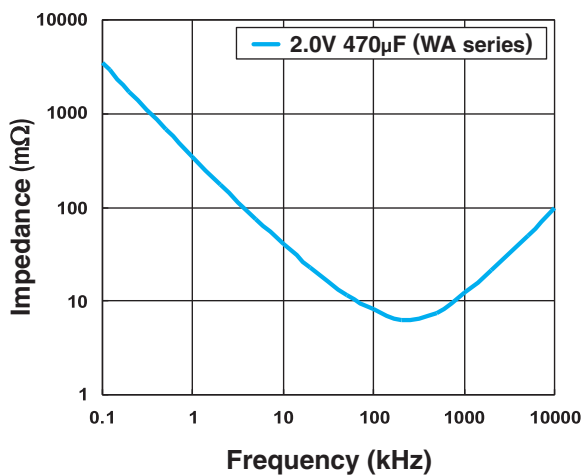
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■ Standard Ratings

Rated Voltage (V) (code)	Surge Voltage (V)	Rated Capacitance (μF)	Case Size L×W×H (mm)	tan δ	Leakage Current (μA, 2min.)	ESR (mΩ, 100kHz)	Rated Ripple Current (mA rms)	NICHICON	FPCAP	MSL (J-STD-020D)
2.0 (0D)	2.3	470	7.3×4.3×4.3	0.12	940	9	3300	RWA0D471MEG	FP-2R0CM471M-WAR	Level 3
		470	7.3×4.3×4.3	0.12	940	6	3500	RWB0D471MEG	FP-2R0CM471M-WBR	Level 3
6.3 (0J)	7.2	220	7.3×4.3×4.3	0.12	1000	15	2800	RWA0J221MEG	FP-6R3CM221M-WAR	Level 3
		330	7.3×4.3×4.3	0.12	1000	15	2800	RWA0J331MEG	FP-6R3CM331M-WAR	Level 3
16 (1C)	18.4	68	7.3×4.3×4.3	0.12	109	55	1100	RWA1C680MEG	FP-016CM680M-WAR	Level 3
		100	7.3×4.3×4.3	0.12	160	55	1100	RWA1C101MEG	FP-016CM101M-WAR	Level 3
25 (1E)	28.7	47	7.3×4.3×4.3	0.12	118	60	1000	RWA1E470MEG	FP-025CM470M-WAR	Level 3
		68	7.3×4.3×4.3	0.12	170	60	1000	RWA1E680MEG	FP-025CM680M-WAR	Level 3

■ Frequency Characteristics (The frequency characteristics are typical and not a guaranteed value.)



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