

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.

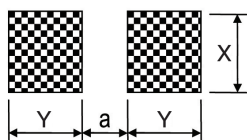
■ Specifications

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.

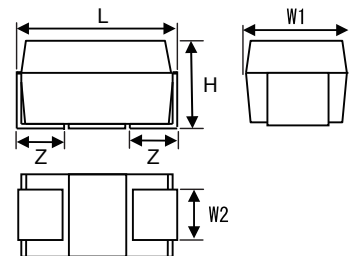
■ Recommended land Size



(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
	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.

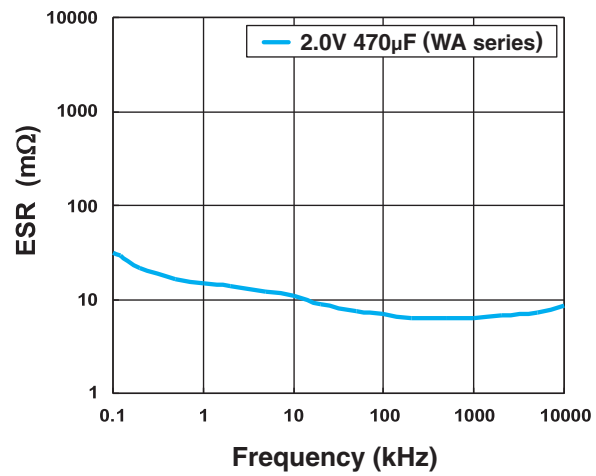
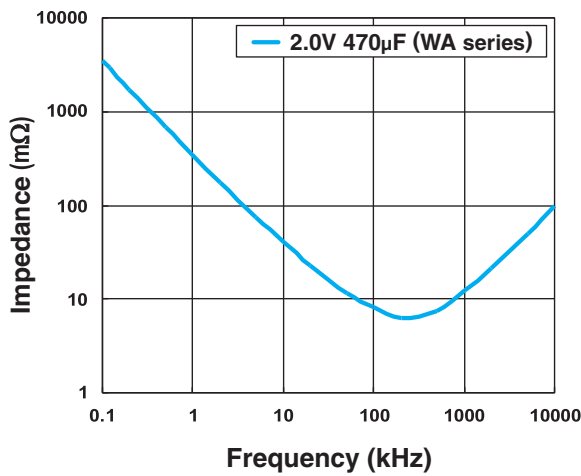
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■ Standard Ratings

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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