

CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

VA/VB/VC/VE series



FPCAP NEW



Resin-molded Chip (7.3 × 4.3 × 2.8)

- 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.

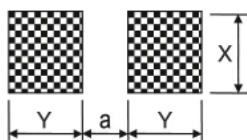
■ Specifications

Item	Performance Characteristics	
Category Temperature Range	-55 to +105°C	
Rated Voltage Range	2.0 to 25V	
Rated Capacitance Range	15 to 330μF	
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

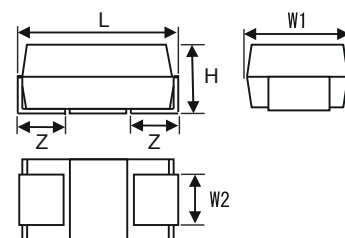


(mm)			
L × W × H	X	Y	a
7.3 × 4.3 × 2.8	2.9	2.05	4.1

■ Size Code (ESR)

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

Cap [μF]	R.V.(V)		2.0		2.5		4.0		6.3		16		25	
	S.V.(V)		2.3		2.8		4.6		7.2		18.4		28.7	
series	VB	VC	VE	VA	VB	VA	VB	VA	VB	VA	VB	VA	VB	
15												N (60)	N (30)	
27										N (55)	N (30)	N (60)	N (30)	
33										N (55)	N (30)			
47										N (55)	N (30)			
100								N (25)	N (15)					
150						N (18)	N (15)		N (15)					
220				N (18)	N (15)		N (15)							
330	N (15)	N (9)	N <sup>o</sup> (6)											



Size Code	L±0.2	W1±0.2	W2±0.1	H±0.2	Z±0.2
N	7.3	4.3	2.4	2.8	1.3

※ Mass Production Plan : Dec. 2013

Design, Specifications are subject to change without notice.

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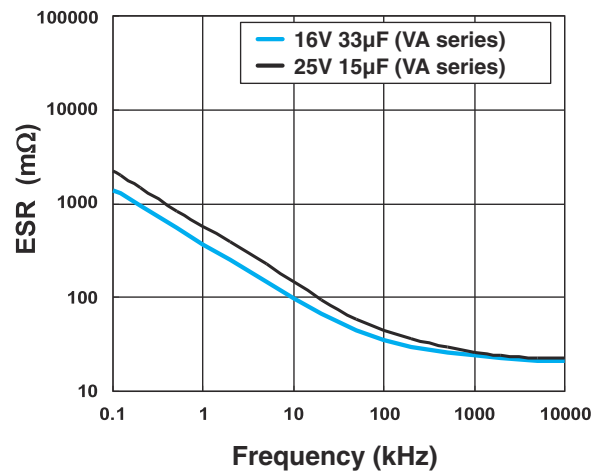
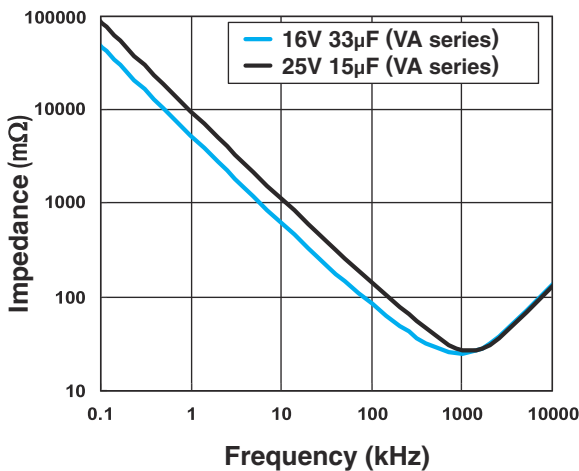
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Standard Ratings

Rated Voltage (V) (code)	Surge Voltage (V)	Rated Capacitance (μF)	Case Size LxWxH (mm)	tan δ	Leakage Current (μA, 2min.)	ESR (mΩ, 100kHz)	Rated Ripple Current (mA rms)	NICHICON	FPCAP	MSL (J-STD-020D)
2.0 (OD)	2.3	330	7.3x4.3x2.8	0.12	700	15	2800	RVB0D331MNG	FP-2R0CM331M-VBR	Level 3
		330	7.3x4.3x2.8	0.12	700	9	3300	RVC0D331MNG	FP-2R0CM331M-VCR	Level 3
		330*	7.3x4.3x2.8	0.12	700	6	3500	RVE0D331MNG	FP-2R0CM331M-VER	Level 3
2.5 (OE)	2.8	220	7.3x4.3x2.8	0.12	700	18	2600	RVA0E221MNG	FP-2R5CM221M-VAR	Level 3
		220	7.3x4.3x2.8	0.12	700	15	2800	RVB0E221MNG	FP-2R5CM221M-VBR	Level 3
4.0 (OG)	4.6	150	7.3x4.3x2.8	0.12	700	18	2600	RVA0G151MNG	FP-4R0CM151M-VAR	Level 3
		150	7.3x4.3x2.8	0.12	700	15	2800	RVB0G151MNG	FP-4R0CM151M-VBR	Level 3
		220	7.3x4.3x2.8	0.12	1000	15	2800	RVB0G221MNG	FP-4R0CM221M-VBR	Level 3
6.3 (OJ)	7.2	100	7.3x4.3x2.8	0.12	700	25	2000	RVA0J101MNG	FP-6R3CM101M-VAR	Level 3
		100	7.3x4.3x2.8	0.12	700	15	2800	RVB0J101MNG	FP-6R3CM101M-VBR	Level 3
		150	7.3x4.3x2.8	0.12	1000	15	2800	RVB0J151MNG	FP-6R3CM151M-VBR	Level 3
16 (1C)	18.4	27	7.3x4.3x2.8	0.12	216	55	1100	RVA1C270MNG	FP-016CM270M-VAR	Level 3
		27	7.3x4.3x2.8	0.12	216	30	1400	RVB1C270MNG	FP-016CM270M-VBR	Level 3
		33	7.3x4.3x2.8	0.12	264	55	1100	RVA1C330MNG	FP-016CM330M-VAR	Level 3
		33	7.3x4.3x2.8	0.12	264	30	1400	RVB1C330MNG	FP-016CM330M-VBR	Level 3
		47	7.3x4.3x2.8	0.12	376	55	1100	RVA1C470MNG	FP-016CM470M-VAR	Level 3
		47	7.3x4.3x2.8	0.12	376	30	1400	RVB1C470MNG	FP-016CM470M-VBR	Level 3
25 (1E)	28.7	15	7.3x4.3x2.8	0.12	188	60	1000	RVA1E150MNG	FP-025CM150M-VAR	Level 3
		15	7.3x4.3x2.8	0.12	188	30	1400	RVB1E150MNG	FP-025CM150M-VBR	Level 3
		27	7.3x4.3x2.8	0.12	337	60	1000	RVA1E270MNG	FP-025CM270M-VAR	Level 3
		27	7.3x4.3x2.8	0.12	337	30	1400	RVB1E270MNG	FP-025CM270M-VBR	Level 3

\* Mass Production Plan : Dec. 2013.

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



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