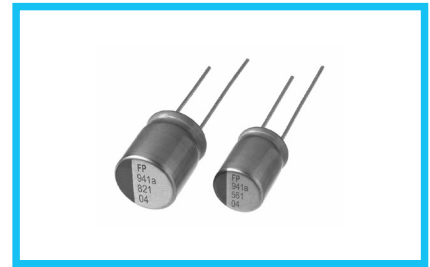




**FPCAP**



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

〈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(Sn).

■ Specifications

Item	Performance Characteristics	
Category Temperature Range	-55 to +105°C	
Rated Voltage Range	4.0 to 25V	
Rated Capacitance Range	10 to 1200μF	
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 2000Hrs.
	Capacitance change	Within ±20% of initial value before test
	tan δ	150% or less than the initial specified value
	ESR(*1)	150% or less than the initial specified value
	Leakage current (*2)	Less than or equal to the initial specified value
Failure Rate	0.1% / 1000Hrs. Max (60%CL)	

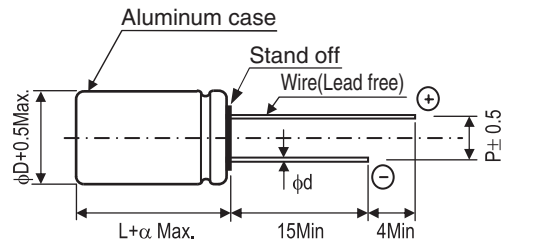
※1 ESR should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.

※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.

■ Size List (ESR)

[φD×L(mm)]

Cap [μF]	R.V.(V)	4.0	6.3	10	16	20	25
	S.V.(V)	4.6	7.2	11.5	18.4	23.0	28.7
10							6.3×7
15						6.3×7	6.3×10
22					6.3×7	6.3×7	8×11.5
33				6.3×7	6.3×7	6.3×10	10×12.5
47			6.3×7		6.3×10	8×11.5	10×12.5
68				6.3×10	8×11.5	8×11.5	
100				8×11.5	8×11.5	10×12.5	10×12.5
150			8×11.5		10×12.5		
180					8×11.5		
220			8×11.5	10×12.5			
330			10×12.5		10×12.5		
390			8×11.5				
470				10×12.5			
560	8×11.5						
680		10×12.5					
820	10×12.5	10×12.5					
1000		10×12.5					
1200	10×12.5						



φD×L	φd	P	α
6.3×7	0.45	2.5	1.0
6.3×10	0.5	2.5	1.0
8×11.5	0.6	3.5	1.5
10×12.5	0.6	5.0	1.5



■ Standard Ratings

Rated Voltage (V) (code)	Surge Voltage (V)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA, 2min.)	ESR (mΩ, 100kHz)	Rated Ripple Current (mA <sub>rms</sub> )	NICHICON	FPCAP
4.0 (0G)	4.6	560	8×11.5	0.08	336	10	5230	RNS0G561MDN1□□	FP-4R0RE561M-NS□□
		820	10×12.5	0.08	492	10	5500	RNS0G821MDN1□□	FP-4R0RE821M-NS□□
		1200	10×12.5	0.15	720	10	5500	RNS0G122MDN1□□	FP-4R0RE122M-NS□□
6.3 (0J)	7.2	47	6.3×7	0.07	50	42	2050	RNS0J470MDS1□□	FP-6R3RE470M-NS□□
		150	8×11.5	0.07	142	21	3900	RNS0J151MDN1□□	FP-6R3RE151M-NS□□
		220	8×11.5	0.07	208	21	3900	RNS0J221MDN1□□	FP-6R3RE221M-NS□□
		330	10×12.5	0.07	312	10	5500	RNS0J331MDN1□□	FP-6R3RE331M-NS□□
		390	8×11.5	0.08	369	10	5230	RNS0J391MDN1□□	FP-6R3RE391M-NS□□
		680	10×12.5	0.08	643	10	5500	RNS0J681MDN1□□	FP-6R3RE681M-NS□□
		820	10×12.5	0.12	775	10	5500	RNS0J821MDN1□□	FP-6R3RE821M-NS□□
10 (1A)	11.5	1000	10×12.5	0.12	945	10	5500	RNS0J102MDN1□□	FP-6R3RE102M-NS□□
		33	6.3×7	0.07	50	49	1900	RNS1A330MDS1□□	FP-010RE330M-NS□□
		68	6.3×10	0.07	102	35	2650	RNS1A680MDS1□□	FP-010RE680M-NS□□
		100	8×11.5	0.07	150	21	3900	RNS1A101MDN1□□	FP-010RE101M-NS□□
		220	10×12.5	0.07	330	10	5500	RNS1A221MDN1□□	FP-010RE221M-NS□□
16 (1C)	18.4	470	10×12.5	0.08	705	10	5500	RNS1A471MDN1□□	FP-010RE471M-NS□□
		22	6.3×7	0.06	53	49	1900	RNS1C220MDS1□□	FP-016RE220M-NS□□
		33	6.3×7	0.06	79	49	1900	RNS1C330MDS1□□	FP-016RE330M-NS□□
		47	6.3×10	0.06	113	42	2400	RNS1C470MDS1□□	FP-016RE470M-NS□□
		68	8×11.5	0.06	163	25	3600	RNS1C680MDN1□□	FP-016RE680M-NS□□
		100	8×11.5	0.06	240	21	3900	RNS1C101MDN1□□	FP-016RE101M-NS□□
		150	10×12.5	0.06	360	10	5500	RNS1C151MDN1□□	FP-016RE151M-NS□□
20 (1D)	23.0	180	8×11.5	0.08	432	16	4700	RNS1C181MDN1□□	FP-016RE181M-NS□□
		330	10×12.5	0.08	792	10	5500	RNS1C331MDN1□□	FP-016RE331M-NS□□
		15	6.3×7	0.06	50	63	1700	RNS1D150MDS1□□	FP-020RE150M-NS□□
		22	6.3×7	0.06	66	49	1900	RNS1D220MDS1□□	FP-020RE220M-NS□□
		33	6.3×10	0.06	99	49	2200	RNS1D330MDS1□□	FP-020RE330M-NS□□
		47	8×11.5	0.06	141	28	3400	RNS1D470MDN1□□	FP-020RE470M-NS□□
25 (1E)	28.7	68	8×11.5	0.06	204	25	3600	RNS1D680MDN1□□	FP-020RE680M-NS□□
		100	10×12.5	0.06	300	15	4500	RNS1D101MDN1□□	FP-020RE101M-NS□□
		10	6.3×7	0.06	50	63	1700	RNS1E100MDS1□□	FP-025RE100M-NS□□
		15	6.3×10	0.06	75	49	2200	RNS1E150MDS1□□	FP-025RE150M-NS□□
		22	8×11.5	0.06	110	28	3400	RNS1E220MDN1□□	FP-025RE220M-NS□□
		33	10×12.5	0.06	165	20	3800	RNS1E330MDN1□□	FP-025RE330M-NS□□
		47	10×12.5	0.06	235	20	3800	RNS1E470MDN1□□	FP-025RE470M-NS□□
		100	10×12.5	0.08	500	15	4500	RNS1E101MDN1□□	FP-025RE101M-NS□□

\* 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.

- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.