

# FPCAP Functional Polymer Aluminum Solid Electrolytic Capacitors

## NU series

### ● Features

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

Any environmental hazardous substances are not used.

- The lead free of terminal plating (Sn 100%)

### ● Specifications

Items	Characteristics	
	NU	
Operating Temp. Range	- 55 to + 105°C	
Rated Voltage Range	2.5 to 63V <sub>DC</sub>	
Capacitance Range	10 to 2700 $\mu$ F	
Capacitance Tolerance	$\pm 20\%$ (M)	
Endurance	Condition	105°C 2000/5000Hrs at rated voltage
	Capacitance	Within $\pm 20\%$ of the value before test
	Leakage Current	Not to exceed the value specified
	tan $\delta$	Not to exceed 150% of the value specified
Failure Rate	0.1% / 1000Hrs. Max (60%CL)	

Ultra Low ESR

Large Capacitance

Endurance 2000/5000hrs

High Voltage

Lead-free

RoHS Compliance

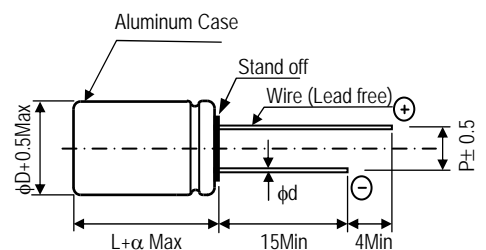
## UPGRADE



### ● Size List

Cap. [ $\mu$ F]	R.V.(S.V.) [V]	[ $\phi$ D $\times$ L]									
		2.5 (2.8)	4.0 (4.6)	6.3 (7.2)	10 (11.5)	16 (18.4)	25 (28.7)	35 (40.2)	50 (57.5)	63 (72.5)	
10					4 $\times$ 5						
33							8 $\times$ 11.5			8 $\times$ 11.5	
39									8 $\times$ 11.5	10 $\times$ 12.5	
47							8 $\times$ 11.5		10 $\times$ 12.5		
56										10 $\times$ 12.5	
68							8 $\times$ 11.5		10 $\times$ 12.5		
100						6.3 $\times$ 10					
150								10 $\times$ 12.5			
180							8 $\times$ 11.5	8 $\times$ 11.5			
220					6.3 $\times$ 10						
270							8 $\times$ 11.5				
330							8 $\times$ 11.5	10 $\times$ 12.5			
470							8 $\times$ 11.5	10 $\times$ 12.5			
680							8 $\times$ 11.5	10 $\times$ 12.5			
820							8 $\times$ 11.5	8 $\times$ 11.5			
1000							8 $\times$ 11.5	8 $\times$ 11.5			
1200							8 $\times$ 11.5	8 $\times$ 11.5	10 $\times$ 12.5		
1500							8 $\times$ 11.5	10 $\times$ 12.5			
1800								10 $\times$ 12.5			
2200								10 $\times$ 12.5			
2700								10 $\times$ 12.5			

### ● Dimensions



$\phi$ D $\times$ L	$\phi$ d	P	$\alpha$
4 $\times$ 5	0.45	1.5	1.0
6.3 $\times$ 10	0.5	2.5	1.0
8 $\times$ 11.5	0.6	3.5	1.5
10 $\times$ 12.5	0.6	5.0	1.5

## ● Part number & Specifications

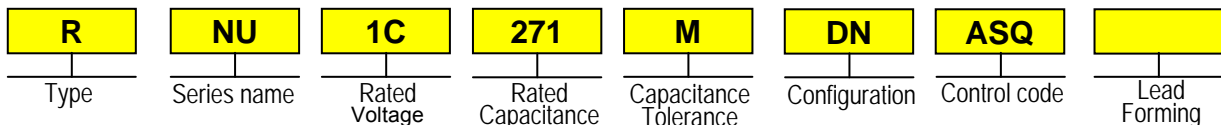
Rated Voltage (V)	Rated Capacitance (μF, 120Hz)	Part Number		Leakage Current * (μA, 2 min)	tanδ (120Hz)	ESR (mΩ, 100kHz)	Rated Ripple Current (mA, r.m.s.)	Case Size φD×L(mm)
		NICHICON	FPCAP					
2.5	1500	RNU0E152MDN1□□	FP-2R5RE152M-NU□□	938	0.08	7	5700	8 x 11.5
	2700	RNU0E272MDN1□□	FP-2R5RE272M-NU□□	1350	0.08	7	6100	10 x 12.5
4.0	820	RNU0G821MDN1□□	FP-4R0RE821M-NU□□	656	0.08	7	5700	8 x 11.5
	1000	RNU0G102MDN1□□	FP-4R0RE102M-NU□□	800	0.08	7	5700	8 x 11.5
	1200	RNU0G122MDN1□□	FP-4R0RE122M-NU□□	960	0.08	7	5700	8 x 11.5
	1800	RNU0G182MDN1□□	FP-4R0RE182M-NU□□	1440	0.08	7	6100	10 x 12.5
	2200	RNU0G222MDN1□□	FP-4R0RE222M-NU□□	1760	0.08	7	6100	10 x 12.5
6.3	220	RNU0J221MDS1□□	FP-6R3RE221M-NU□□	277	0.08	20	3200	6.3 x 10
	470	RNU0J471MDN1□□	FP-6R3RE471M-NU□□	592	0.08	7	5700	8 x 11.5
	680	RNU0J681MDN1□□	FP-6R3RE681M-NU□□	857	0.08	7	5700	8 x 11.5
	820	RNU0J821MDN1□□	FP-6R3RE821M-NU□□	1033	0.08	7	5700	8 x 11.5
	1000	RNU0J102MDN1□□	FP-6R3RE102M-NU□□	1260	0.08	7	5700	8 x 11.5
	1200	RNU0J122MDN1□□	FP-6R3RE122M-NU□□	1512	0.08	9	6100	8 x 11.5
	1500	RNU0J152MDN1□□	FP-6R3RE152M-NU□□	1890	0.08	7	6100	10 x 12.5
10	10	RNU1A100MDS1□□	FP-010RE100M-NU□□	300	0.12	220	700	4 x 5
	** 10	RNU1A100MDSASQ□□	FP-010RE100M-NU□□-5K	300	0.12	220	700	4 x 5
	1200	RNU1A122MDN1□□	FP-010RE122M-NU□□	2400	0.08	9	6200	10 x 12.5
16	100	RNU1C101MDS1□□	FP-016RE101M-NU□□	320	0.08	25	2820	6.3 x 10
	** 100	RNU1C101MDSASQ□□	FP-016RE101M-NU□□-5K	320	0.08	25	2820	6.3 x 10
	180	RNU1C181MDN1□□	FP-016RE181M-NU□□	576	0.08	8	5700	8 x 11.5
	270	RNU1C271MDN1□□	FP-016RE271M-NU□□	864	0.08	8	5000	8 x 11.5
	** 270	RNU1C271MDNASQ□□	FP-016RE271M-NU□□-5K	864	0.08	8	5000	8 x 11.5
	330	RNU1C331MDN1□□	FP-016RE331M-NU□□	1056	0.08	8	6100	8 x 11.5
	470	RNU1C471MDN1□□	FP-016RE471M-NU□□	1504	0.08	10	6100	10 x 12.5
	680	RNU1C681MDN1□□	FP-016RE681M-NU□□	2176	0.08	10	6100	10 x 12.5
25	33	RNU1E330MDN1□□	FP-025RE330M-NU□□	413	0.12	24	3600	8 x 11.5
	47	RNU1E470MDN1□□	FP-025RE470M-NU□□	588	0.12	24	3600	8 x 11.5
	68	RNU1E680MDN1□□	FP-025RE680M-NU□□	850	0.12	24	3600	8 x 11.5
	180	RNU1E181MDN1□□	FP-025RE181M-NU□□	900	0.12	16	4650	8 x 11.5
	330	RNU1E331MDN1□□	FP-025RE331M-NU□□	1650	0.12	14	5000	10 x 12.5
35	150	RNU1V151MDN1□□	FP-035RE151M-NU□□	1050	0.12	20	3800	10 x 12.5
50	39	RNU1H390MDN1□□	FP-050RE390M-NU□□	390	0.12	25	2400	8 x 11.5
	47	RNU1H470MDN1□□	FP-050RE470M-NU□□	470	0.12	24	2700	10 x 12.5
	68	RNU1H680MDN1□□	FP-050RE680M-NU□□	680	0.12	24	2700	10 x 12.5
63	33	RNU1J330MDN1□□	FP-063RE330M-NU□□	416	0.12	26	2300	8 x 11.5
	39	RNU1J390MDN1□□	FP-063RE390M-NU□□	492	0.12	25	2600	10 x 12.5
	56	RNU1J560MDN1□□	FP-063RE560M-NU□□	706	0.12	25	2600	10 x 12.5

\* In case of some doubt about measured values, measure after applying rated voltage for 120 minutes at 105°C.

\*\* Endurance 5000hrs product.

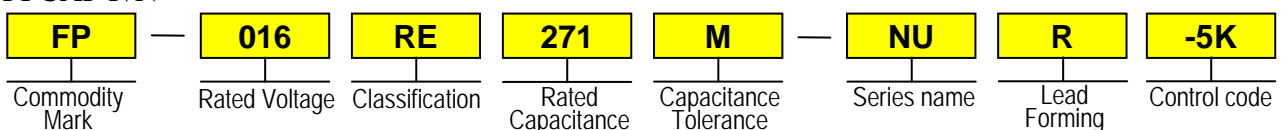
## ● Part Number (EX) 16V, 270μF, 5000hrs (Endurance)

Nichicon P/N



(ASQ : 5000hrs) (1 : 2000hrs) (CG: Cut lead (Bulk) , JX: φ6.3x10 2.5mm pitch tapping  
KX: φ8, 3.5mm pitch tapping, PX: φ6.3&φ8, 5.0mm pitch tapping)  
PH: φ10, 5.0mm pitch tapping)

FPCAP P/N



(R: Long lead (Bulk) , CG: Cut lead (Bulk)  
J : φ6.3x10, 2.5mm pitch tapping , K : φ8, 3.5mm pitch tapping  
P : φ6.3&φ8, 5.0mm pitch tapping , PH: φ10, 5.0mm pitch tapping) (-5K : 5000hrs  
Without -5K: 2000hrs)