

# FPCAP *Functional Polymer Aluminum Solid Electrolytic Capacitors*

## NS 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

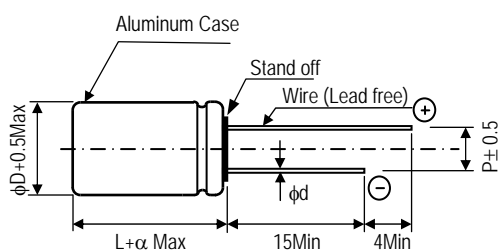
Items		Characteristics
		NS
Operating Temp. Range		-55 to +105°C
Rated Voltage Range		4.0 to 25V <sub>DC</sub>
Capacitance Range		10 to 1200 $\mu$ F
Capacitance Tolerance		$\pm$ 20% (M)
Endurance	Condition	105°C 2000Hrs at rated voltage
	Capacitance	Within $\pm$ 20% of the value before test
	Leakage 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)

### ● Size List

R.V (S.V.) Cap. [ $\mu$ F]	[ $\phi$ D $\times$ L]						
	4.0 (4.6)	6.3 (7.2)	10 (11.5)	16 (18.4)	20 (23)	25 (28.7)	
10						6.3 $\times$ 7	
15					6.3 $\times$ 7	6.3 $\times$ 10	
22				6.3 $\times$ 7	6.3 $\times$ 7	8 $\times$ 11.5	
33			6.3 $\times$ 7	6.3 $\times$ 7	6.3 $\times$ 10	10 $\times$ 12.5	
47		6.3 $\times$ 7		6.3 $\times$ 10	8 $\times$ 11.5	10 $\times$ 12.5	
68			6.3 $\times$ 10	8 $\times$ 11.5	8 $\times$ 11.5		
100			8 $\times$ 11.5	8 $\times$ 11.5	10 $\times$ 12.5		
150		8 $\times$ 11.5		10 $\times$ 12.5			
180				8 $\times$ 11.5			
220		8 $\times$ 11.5	10 $\times$ 12.5				
330		10 $\times$ 12.5		10 $\times$ 12.5			
390		8 $\times$ 11.5					
470			10 $\times$ 12.5				
560	8 $\times$ 11.5						
680		10 $\times$ 12.5					
820	10 $\times$ 12.5	10 $\times$ 12.5					
1000		10 $\times$ 12.5					
1200	10 $\times$ 12.5						



### ● Dimensions



[Unit : mm]

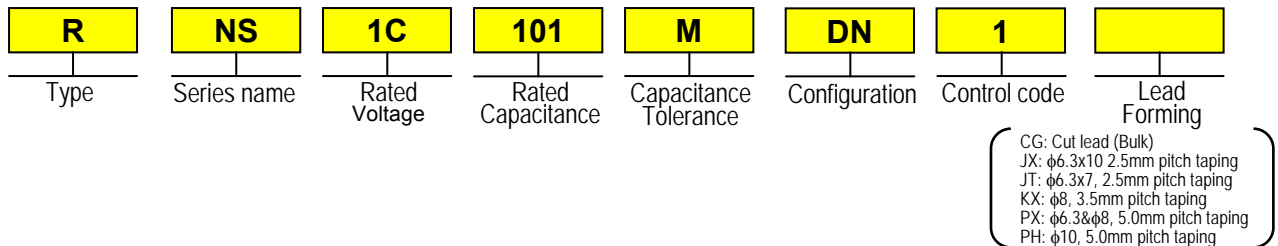
$\phi$ D $\times$ L	$\phi$ d	P	$\alpha$
6.3 $\times$ 7	0.45	2.5	1.0
6.3 $\times$ 10	0.5	2.5	1.0
8 $\times$ 11.5	0.6	3.5	1.5
10 $\times$ 12.5	0.6	5.0	1.5

## ● 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					
4.0	560	RNS0G561MDN1□□	FP-4R0RE561M-NS□□	336	0.08	10	5230	8 × 11.5
	820	RNS0G821MDN1□□	FP-4R0RE821M-NS□□	492	0.08	10	5500	10 × 12.5
	1200	RNS0G122MDN1□□	FP-4R0RE122M-NS□□	720	0.15	10	5500	10 × 12.5
6.3	47	RNS0J470MDS1□□	FP-6R3RE470M-NS□□	50	0.07	42	2050	6.3 × 7
	150	RNS0J151MDN1□□	FP-6R3RE151M-NS□□	142	0.07	21	3900	8 × 11.5
	220	RNS0J221MDN1□□	FP-6R3RE221M-NS□□	208	0.07	21	3900	8 × 11.5
	330	RNS0J331MDN1□□	FP-6R3RE331M-NS□□	312	0.07	10	5500	10 × 12.5
	390	RNS0J391MDN1□□	FP-6R3RE391M-NS□□	369	0.08	10	5230	8 × 11.5
	680	RNS0J681MDN1□□	FP-6R3RE681M-NS□□	643	0.08	10	5500	10 × 12.5
	820	RNS0J821MDN1□□	FP-6R3RE821M-NS□□	775	0.12	10	5500	10 × 12.5
	1000	RNS0J102MDN1□□	FP-6R3RE102M-NS□□	945	0.12	10	5500	10 × 12.5
10	33	RNS1A330MDS1□□	FP-010RE330M-NS□□	50	0.07	49	1900	6.3 × 7
	68	RNS1A680MDS1□□	FP-010RE680M-NS□□	102	0.07	35	2650	6.3 × 10
	100	RNS1A101MDN1□□	FP-010RE101M-NS□□	150	0.07	21	3900	8 × 11.5
	220	RNS1A221MDN1□□	FP-010RE221M-NS□□	330	0.07	10	5500	10 × 12.5
	470	RNS1A471MDN1□□	FP-010RE471M-NS□□	705	0.08	10	5500	10 × 12.5
16	22	RNS1C220MDS1□□	FP-016RE220M-NS□□	53	0.06	49	1900	6.3 × 7
	33	RNS1C330MDS1□□	FP-016RE330M-NS□□	79	0.06	49	1900	6.3 × 7
	47	RNS1C470MDS1□□	FP-016RE470M-NS□□	113	0.06	42	2400	6.3 × 10
	68	RNS1C680MDN1□□	FP-016RE680M-NS□□	163	0.06	25	3600	8 × 11.5
	100	RNS1C101MDN1□□	FP-016RE101M-NS□□	240	0.06	21	3900	8 × 11.5
	150	RNS1C151MDN1□□	FP-016RE151M-NS□□	360	0.06	10	5500	10 × 12.5
	180	RNS1C181MDN1□□	FP-016RE181M-NS□□	432	0.08	16	4700	8 × 11.5
20	330	RNS1C331MDN1□□	FP-016RE331M-NS□□	792	0.08	10	5500	10 × 12.5
	15	RNS1D150MDS1□□	FP-020RE150M-NS□□	50	0.06	63	1700	6.3 × 7
	22	RNS1D220MDS1□□	FP-020RE220M-NS□□	66	0.06	49	1900	6.3 × 7
	33	RNS1D330MDS1□□	FP-020RE330M-NS□□	99	0.06	49	2200	6.3 × 10
	47	RNS1D470MDN1□□	FP-020RE470M-NS□□	141	0.06	28	3400	8 × 11.5
	68	RNS1D680MDN1□□	FP-020RE680M-NS□□	204	0.06	25	3600	8 × 11.5
25	100	RNS1D101MDN1□□	FP-020RE101M-NS□□	300	0.06	15	4500	10 × 12.5
	10	RNS1E100MDS1□□	FP-025RE100M-NS□□	50	0.06	63	1700	6.3 × 7
	15	RNS1E150MDS1□□	FP-025RE150M-NS□□	75	0.06	49	2200	6.3 × 10
	22	RNS1E220MDN1□□	FP-025RE220M-NS□□	110	0.06	28	3400	8 × 11.5
	33	RNS1E330MDN1□□	FP-025RE330M-NS□□	165	0.06	20	3800	10 × 12.5
47	RNS1E470MDN1□□	FP-025RE470M-NS□□	235	0.06	20	3800	10 × 12.5	

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

## ● Part Number (EX) 16V, 100μF Nichicon P/N



### FPCAP P/N

