

# FPCAP Functional Polymer Aluminum Solid Electrolytic Capacitors

## R7 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
		R7
Operating Temp. Range		- 55 to + 105°C
Rated Voltage Range		2.5 to 16V-DC
Capacitance Range		68 to 1500μF
Capacitance Tolerance		± 20% (M)
Endurance	Condition	105°C 2000Hrs at rated voltage
	Capacitance	Within ± 20% of the value before test
	Leakage Current	Not to exceed the value specified
	tan δ	Not to exceed 150% of the value specified
Failure Rate		0.1% / 1000Hrs. Max (60%CL)

### ● Size List

R.V (S.V.) Cap. [μF]		[φD×L]				
		2.5 (2.8)	4.0 (4.6)	6.3 (7.2)	10 (11.5)	16 (18.4)
68					8×11.5	
100				8×11.5	8×11.5	
150			8×11.5		10×12.5	
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	8×11.5		10×12.5	10×12.5		
820	8×11.5	10×12.5	10×12.5			
1000			10×12.5			
1200		10×12.5				
1500	10×12.5					

Ultra Low ESR

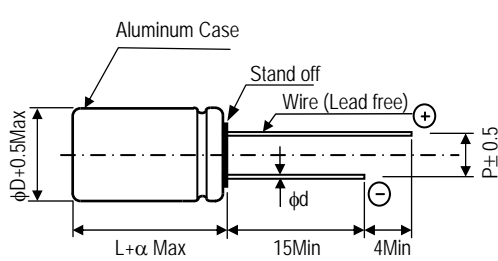
Lead-free

RoHS Compliance

**ESR 7mΩ**



### ● Dimensions



[Unit : mm]

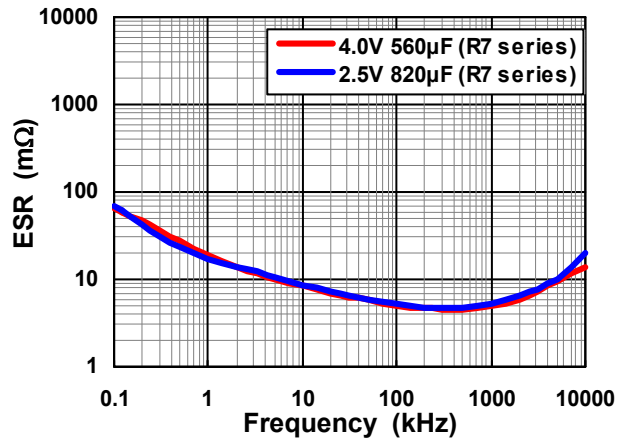
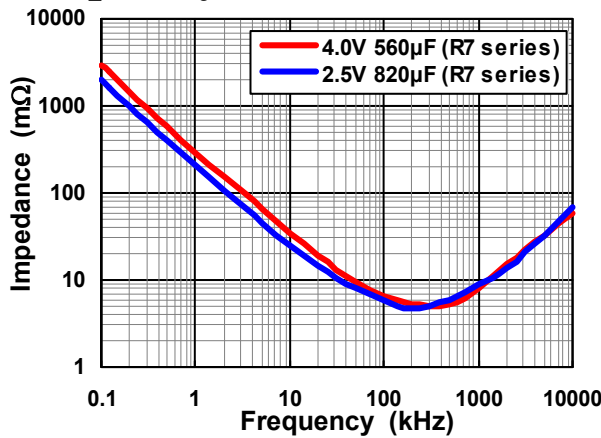
φD×L	φd	P	α
8×11.5	0.6	3.5	1.5
10×12.5	0.6	5.0	1.5

## ● Part number & Specifications

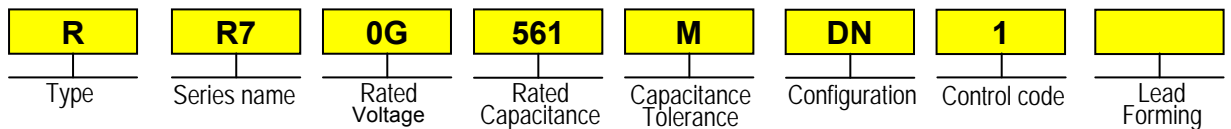
Rated Voltage (V)	Rated Capacitance (μF, 120Hz)	Part Number		Leakage Current * (μA, 2 min)	tanδ (120Hz)	ESR (mΩ, 100kHz)	Rated Ripple Current (mA, r.m.s.)	Case Size φD×L(mm)
		NICHICON	FPCAP					
2.5	680	RR70E681MDN1□□	FP-2R5RE681M-R7□□	425	0.08	7	5600	8 × 11.5
	820	RR70E821MDN1□□	FP-2R5RE821M-R7□□	513	0.08	7	5600	8 × 11.5
	1500	RR70E152MDN1□□	FP-2R5RE152M-R7□□	938	0.08	7	6100	10 × 12.5
4.0	560	RR70G561MDN1□□	FP-4R0RE561M-R7□□	224	0.08	7	5600	8 × 11.5
	820	RR70G821MDN1□□	FP-4R0RE821M-R7□□	328	0.08	7	6100	10 × 12.5
	1200	RR70G122MDN1□□	FP-4R0RE122M-R7□□	960	0.15	7	6100	10 × 12.5
6.3	150	RR70J151MDN1□□	FP-6R3RE151M-R7□□	47	0.07	7	5600	8 × 11.5
	220	RR70J221MDN1□□	FP-6R3RE221M-R7□□	69	0.07	7	5600	8 × 11.5
	330	RR70J331MDN1□□	FP-6R3RE331M-R7□□	104	0.07	7	6100	10 × 12.5
	390	RR70J391MDN1□□	FP-6R3RE391M-R7□□	246	0.08	7	5600	8 × 11.5
	680	RR70J681MDN1□□	FP-6R3RE681M-R7□□	428	0.08	7	6100	10 × 12.5
	820	RR70J821MDN1□□	FP-6R3RE821M-R7□□	517	0.12	7	6100	10 × 12.5
	1000	RR70J102MDN1□□	FP-6R3RE102M-R7□□	630	0.12	7	6100	10 × 12.5
10	100	RR71A101MDN1□□	FP-010RE101M-R7□□	50	0.07	7	5600	8 × 11.5
	220	RR71A221MDN1□□	FP-010RE221M-R7□□	110	0.07	7	6100	10 × 12.5
	470	RR71A471MDN1□□	FP-010RE471M-R7□□	470	0.08	7	6100	10 × 12.5
	680	RR71A681MDN1□□	FP-010RE681M-R7□□	1360	0.10	7	6100	10 × 12.5
16	68	RR71C680MDN1□□	FP-016RE680M-R7□□	54	0.06	7	5600	8 × 11.5
	100	RR71C101MDN1□□	FP-016RE101M-R7□□	80	0.06	7	5600	8 × 11.5
	150	RR71C151MDN1□□	FP-016RE151M-R7□□	120	0.06	7	6100	10 × 12.5
	330	RR71C331MDN1□□	FP-016RE331M-R7□□	792	0.08	7	6100	10 × 12.5

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

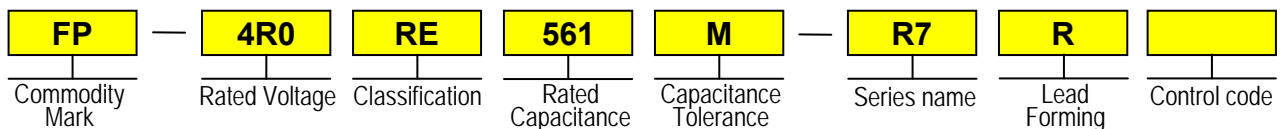
## ● Frequency Characteristics



## ● Part Number (EX) 4V, 560μF Nichicon P/N



### FPCAP P/N



CG: Cut lead (Bulk)  
 KX: φ8, 3.5mm pitch taping  
 PX: φ8, 5.0mm pitch taping  
 PH: φ10, 5.0mm pitch taping

R: Long lead (Bulk)  
 CG: Cut lead (Bulk)  
 K : φ8, 3.5mm pitch taping  
 P : φ8, 5.0mm pitch taping  
 PH: φ10, 5.0mm pitch taping