

# 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.
- Buck 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%)

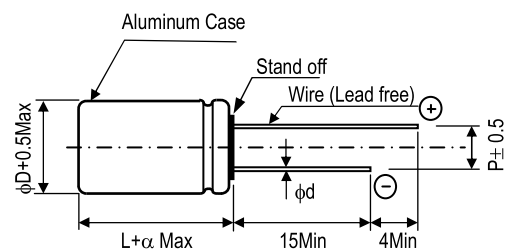
### Specifications

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

Cap. [μF]	R.V (S.V.) [V]	[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					

### 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

Ultra Low ESR

Lead-free

RoHS Compliance

ESR 7mΩ

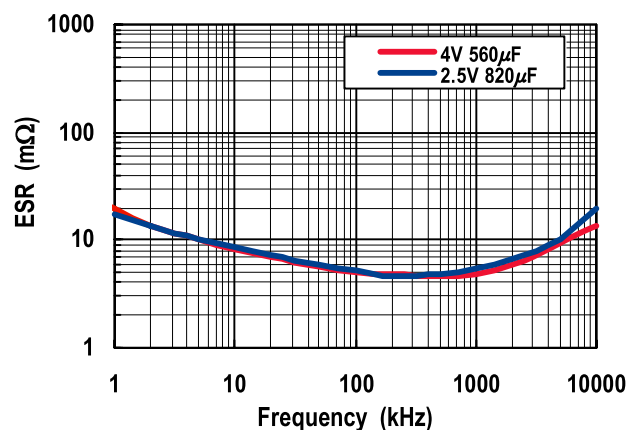
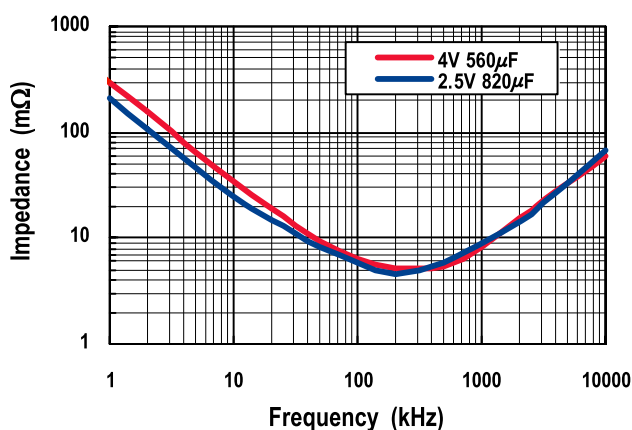


## ● Part number & Specifications

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

<b>R</b>	<b>R7</b>	<b>0G</b>	<b>561</b>	<b>M</b>	<b>DN</b>	<b>1</b>	
Type	Series name	Rated Voltage	Rated Capacitance	Capacitance Tolerance	Configuration	Control code	Lead Forming

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

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[RR70J102MDN1](#) [RR70J151MDN1](#) [RR70J221MDN1](#) [RR70J331MDN1](#) [RR70J391MDN1](#) [RR70J681MDN1](#)  
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