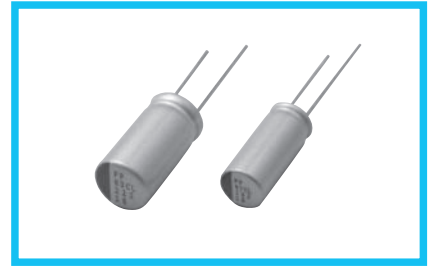


RNL Large Sized, High Capacitance



FPCAP Expanded

- Low ESR, High Capacitance, High ripple current.
- Large Sized.
- Load life of 2000 / 5000 hours at 105°C.
- Radial lead type : Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).



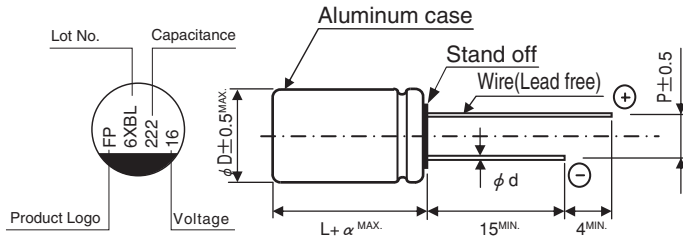
■ Specifications

Item	Performance Characteristics	
Category Temperature Range	-55 to +105°C	
Rated Voltage Range	16 to 25V	
Rated Capacitance Range	270 to 2400μF	
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 2000 / 5000Hrs.
	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

※1 ESR should be measured at both of the terminal ends closest to the capacitor body.

※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.

■ Dimensions



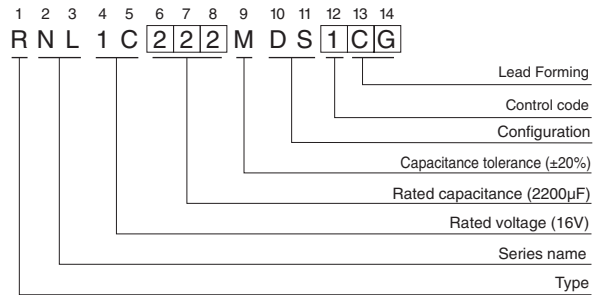
(mm)

φD×L	φd	P	α
φ8×16L	0.6	3.5	1.5
φ8×20L	0.6	3.5	1.5
φ10×16L	0.6	5.0	1.5
φ10×20L	0.6	5.0	1.5

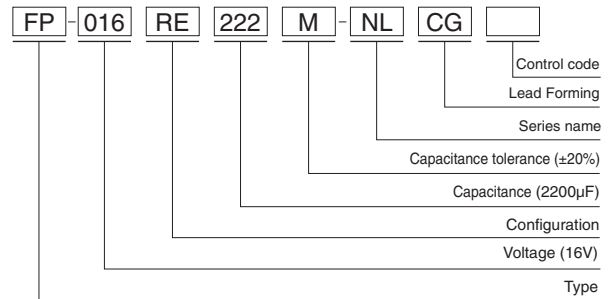
● Frequency coefficient of rated ripple current

Frequency	120 Hz	1 kHz	10 kHz	100 kHz	300 kHz
Coefficient	0.10	0.45	0.50	1.00	1.00

Type numbering system (Example : 16V 2200μF)
Nichicon part number



FPCAP part number



● Dimension table in next page.

RNL

■ Dimensions

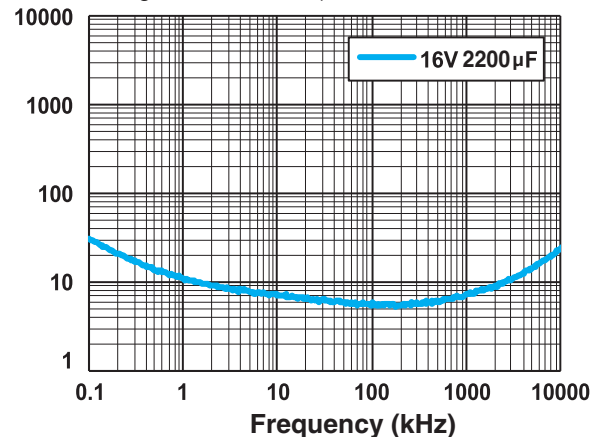
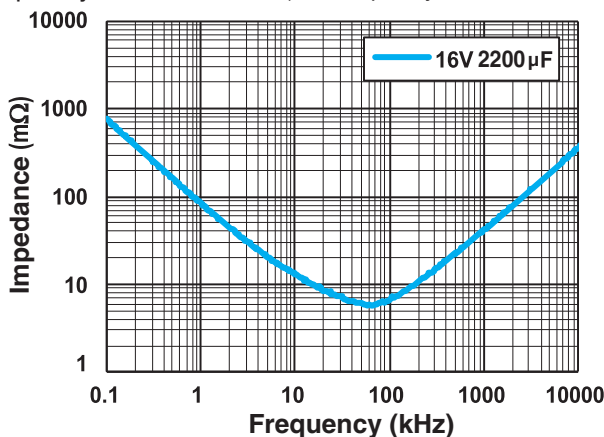
Rated Voltage (V) (code)	Surge Voltage (V)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 2 minutes)	ESR (mΩ) (20°C/100kHz)	Rated Ripple Current (mA) (105°C/100kHz)	NICHICON	FFPCAP
16 (1C)	18.4	680	8×16	0.12	1088	8	7000	RNL1C681MDS1□□	FP-016RE681M-NL□□
		820	▲ 8×16	0.12	1312	8	7000	RNL1C821MDS6□□	FP-016RE821M-NL□□-DS
		820	8×20	0.12	1312	8	7500	RNL1C821MDS1□□	FP-016RE821M-NL□□
		* 820	8×20	0.12	1312	8	7500	RNL1C821MDSASQ□□	FP-016RE821M-NL□□-5K
		1000	8×20	0.12	1600	8	7500	RNL1C102MDS1□□	FP-016RE102M-NL□□
		* 1000	8×20	0.12	1600	8	7500	RNL1C102MDSASQ□□	FP-016RE102M-NL□□-5K
		1000	10×16	0.12	1600	8	7700	RNL1C102MDS4□□	FP-016RE102M-NL□□-MS
		* 1000	10×16	0.12	1600	8	7700	RNL1C102MDSBSQ□□	FP-016RE102M-NL□□-5K-MS
		1200	8×20	0.12	1920	8	7500	RNL1C122MDS1□□	FP-016RE122M-NL□□
		* 1200	8×20	0.12	1920	8	7500	RNL1C122MDSASQ□□	FP-016RE122M-NL□□-5K
		1200	10×16	0.12	1920	8	7700	RNL1C122MDS4□□	FP-016RE122M-NL□□-MS
		* 1200	10×16	0.12	1920	8	7700	RNL1C122MDSBSQ□□	FP-016RE122M-NL□□-5K-MS
		1500	▲ 8×20	0.12	2400	8	7500	RNL1C152MDS6□□	FP-016RE152M-NL□□-DS
		1500	10×16	0.12	2400	8	7700	RNL1C152MDS4□□	FP-016RE152M-NL□□-MS
		* 1500	10×16	0.12	2400	8	7700	RNL1C152MDSBSQ□□	FP-016RE152M-NL□□-5K-MS
		1500	10×20	0.12	2400	8	8100	RNL1C152MDS1□□	FP-016RE152M-NL□□
		* 1500	10×20	0.12	2400	8	8100	RNL1C152MDSASQ□□	FP-016RE152M-NL□□-5K
		1800	10×16	0.12	2880	8	7700	RNL1C182MDS4□□	FP-016RE182M-NL□□-MS
		* 1800	10×16	0.12	2880	8	7700	RNL1C182MDSBSQ□□	FP-016RE182M-NL□□-5K-MS
		1800	10×20	0.12	2880	8	8100	RNL1C182MDS1□□	FP-016RE182M-NL□□
		* 1800	10×20	0.12	2880	8	8100	RNL1C182MDSASQ□□	FP-016RE182M-NL□□-5K
		2200	10×20	0.12	3520	8	8100	RNL1C222MDS1□□	FP-016RE222M-NL□□
		* 2200	10×20	0.12	3520	8	8100	RNL1C222MDSASQ□□	FP-016RE222M-NL□□-5K
		2400	10×20	0.12	3840	8	8100	RNL1C242MDS1□□	FP-016RE242M-NL□□
* 2400	10×20	0.12	3840	8	8100	RNL1C242MDSASQ□□	FP-016RE242M-NL□□-5K		
25 (1E)	28.7	270	8×16	0.12	675	10	5800	RNL1E271MDS1□□	FP-025RE271M-NL□□
		330	8×16	0.12	825	10	5800	RNL1E331MDS1□□	FP-025RE331M-NL□□
		390	8×16	0.12	975	10	5800	RNL1E391MDS1□□	FP-025RE391M-NL□□
		470	8×16	0.12	1175	10	5800	RNL1E471MDS1□□	FP-025RE471M-NL□□
		560	8×16	0.12	1400	10	5800	RNL1E561MDS1□□	FP-025RE561M-NL□□
		560	10×16	0.12	1400	10	5800	RNL1E561MDS4□□	FP-025RE561M-NL□□-MS
		* 560	10×16	0.12	1400	10	5800	RNL1E561MDSBSQ□□	FP-025RE561M-NL□□-5K-MS
		680	10×16	0.12	1700	10	5800	RNL1E681MDS4□□	FP-025RE681M-NL□□-MS
		* 680	10×16	0.12	1700	10	5800	RNL1E681MDSBSQ□□	FP-025RE681M-NL□□-5K-MS
		680	10×20	0.12	1700	10	8100	RNL1E681MDS9□□	FP-025RE681M-NL□□-US
		* 680	10×20	0.12	1700	10	8100	RNL1E681MDSCSQ□□	FP-025RE681M-NL□□-5K-US
		820	10×16	0.12	2050	10	5800	RNL1E821MDS4□□	FP-025RE821M-NL□□-MS
		* 820	10×16	0.12	2050	10	5800	RNL1E821MDSBSQ□□	FP-025RE821M-NL□□-5K-MS
		820	10×20	0.12	2050	10	8100	RNL1E821MDS1□□	FP-025RE821M-NL□□
		* 820	10×20	0.12	2050	10	8100	RNL1E821MDSASQ□□	FP-025RE821M-NL□□-5K
		1000	10×16	0.12	2500	10	5800	RNL1E102MDS4□□	FP-025RE102M-NL□□-MS
		* 1000	10×16	0.12	2500	10	5800	RNL1E102MDSBSQ□□	FP-025RE102M-NL□□-5K-MS
		1000	10×20	0.12	2500	10	8100	RNL1E102MDS1□□	FP-025RE102M-NL□□
		* 1000	10×20	0.12	2500	10	8100	RNL1E102MDSASQ□□	FP-025RE102M-NL□□-5K
		1200	10×20	0.12	3000	10	8100	RNL1E122MDS1□□	FP-025RE122M-NL□□
* 1200	10×20	0.12	3000	10	8100	RNL1E122MDSASQ□□	FP-025RE122M-NL□□-5K		

* : Load life 5000hours.

▲ " In this case, [6] will be put at 12th digit of type numbering system

■ Frequency Characteristics (The frequency characteristics are typical and not a guaranteed value.)

Blue : New product



• For formed lead or taped product specifications and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.