

# Capacitors for Power Electronics

**FPCL SERIES**

Long life, High voltage, High current

- Metallized polypropylene film capacitor
- For DC-Link, DC filter, Smoothing, etc.

Please consider the film capacitor to alternative electrolytic capacitor.

## Performance

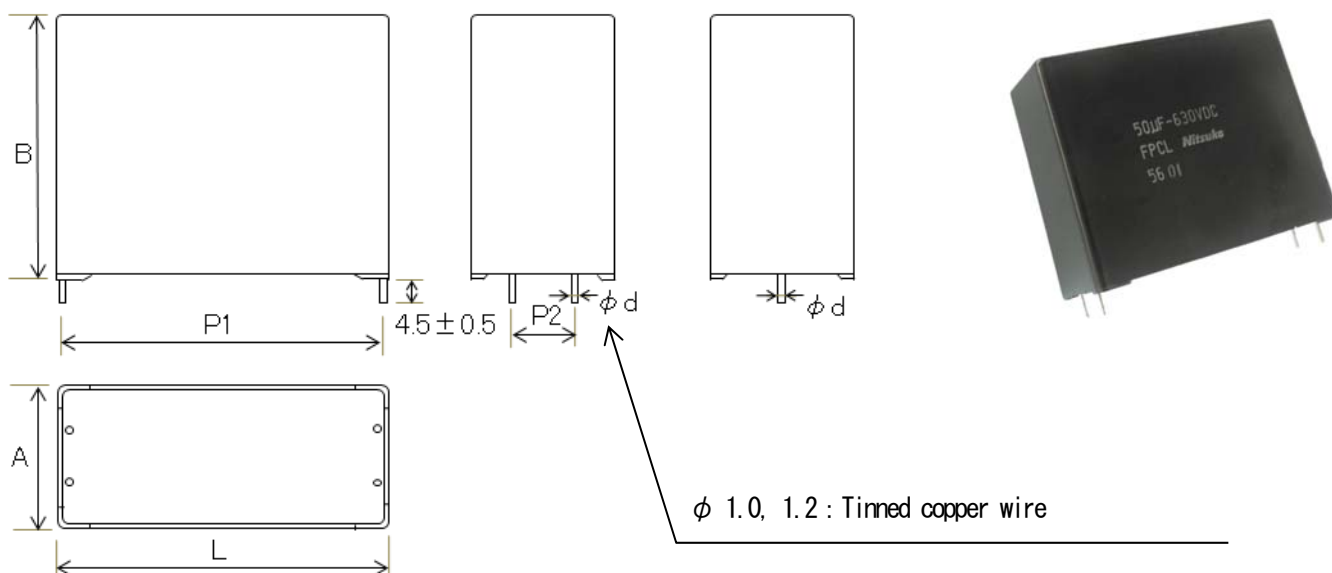
Item	Performance
Temperature range	-40~+70°C (+85°C) +70°C~+85°C Voltage derating
Rated Voltage (U <sub>R</sub> )	630, 800V, 1100V, 1300V <sub>DC</sub>
Capacitance range	1~65 μF
Capacitance tolerance	±5% (J)
Insulation resistance (IR)	≥10000 Ω·F ( 500 VDC for 1min)

## Standard dimensions table (FPCL 630V)

(mm)

Parts cord	Rated voltage (V <sub>DC</sub> )	Capacitance (μF)	Cap. tolerance (%)	A ±1.0	B ±1.0	L ±1.0	P1 ±0.5	P2 ±0.5	φd	Permissible Current (Peak) I <sub>op</sub> (A)
FPCL630V505J-C	630	5	±5	15.0	25.0	31.5	27.5	-	1.0	200
FPCL630V705J-C		7		15.0	25.0	31.5	27.5	-	1.0	280
FPCL630V106J-C		10		18.0	28.0	31.5	27.5	-	1.0	400
FPCL630V156J-C		15		21.0	32.0	31.5	27.5	-	1.0	600
FPCL630V206J-C		20		18.5	35.5	41.5	37.5	10.2	1.2	400
FPCL630V256J-C		25		21.5	38.5	41.5	37.5	10.2	1.2	500
FPCL630V306J-C		30		24.0	44.0	41.5	37.5	10.2	1.2	600
FPCL630V356J-C		35		24.0	44.0	41.5	37.5	10.2	1.2	700
FPCL630V406J-C		40		30.0	45.0	41.5	37.5	10.2	1.2	800
FPCL630V456J-C		45		30.0	45.0	41.5	37.5	10.2	1.2	900
FPCL630V506J-C		50		25.0	45.0	57.5	52.5	10.2	1.2	500
FPCL630V556J-C		55		25.0	45.0	57.5	52.5	10.2	1.2	550
FPCL630V606J-C		60		30.0	45.0	57.5	52.5	10.2	1.2	600
FPCL630V656J-C		65		30.0	45.0	57.5	52.5	20.3	1.2	650

## Component outline



# Capacitors for Power Electronics

## FPCL SERIES [Low height type]

•If there is a height restriction, it is the best

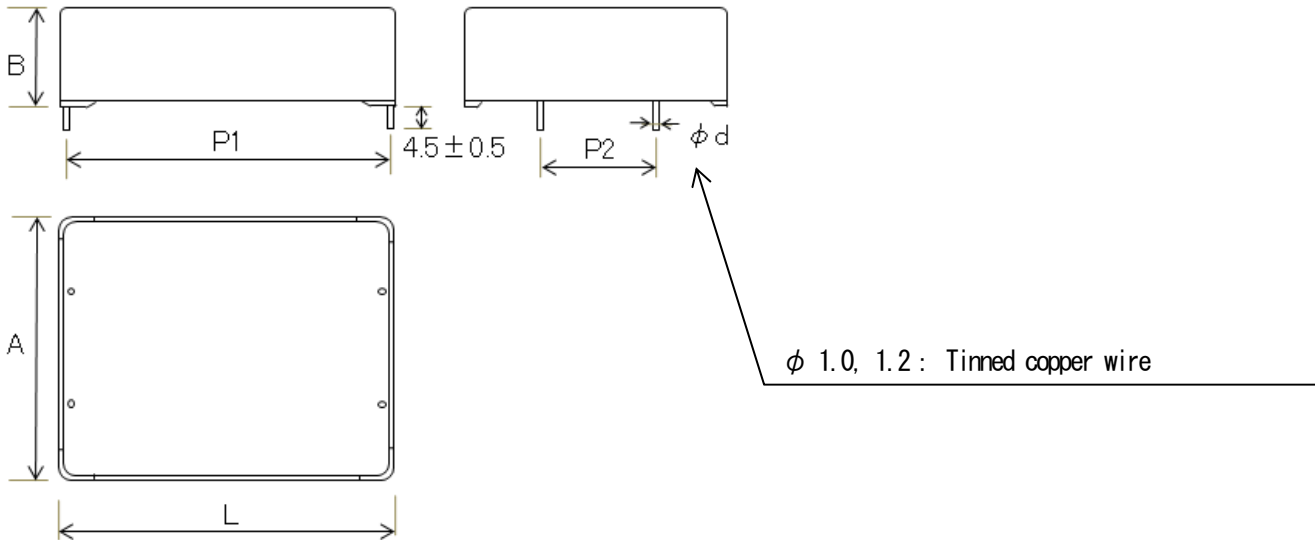


### Standard dimensions (FPCL 800V)

(mm)

Parts cord	Rated voltage (V <sub>DC</sub> )	Capacitance (μF)	Cap. tolerance (%)	A ±1.0	B ±1.0	L ±1.0	P1 ±0.5	P2 ±0.5	φd	Permissible Current (Peak) I <sub>op</sub> (A)
FPCL800V106JB-C	800	10	±5	33.0	16.5	41.5	37.5	10.2	1.0	250
FPCL800V156JB-C		15		33.0	16.5	57.5	52.5	20.3	1.2	180
FPCL800V206JB-C		20		45.0	16.5	57.5	52.5	20.3	1.2	240

### Component outline



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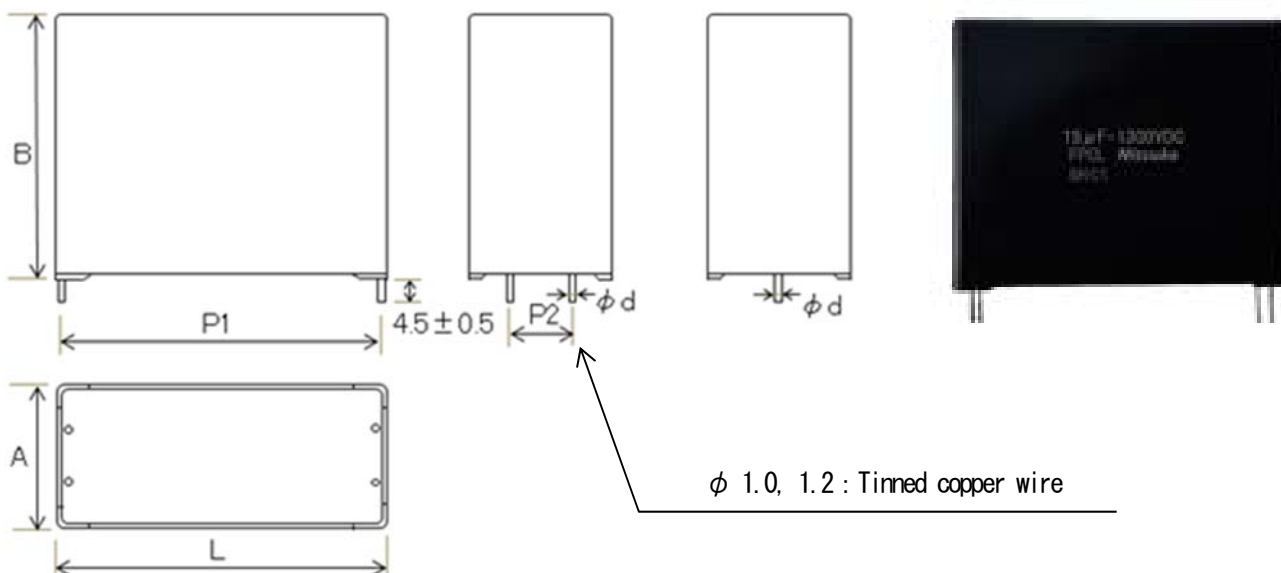
■ Standard dimensions (FPCL 1100V) (mm)

Parts cord	Rated voltage (V <sub>DC</sub> )	Capacitance (μF)	Cap. tolerance (%)	A ±1.0	B ±1.0	L ±1.0	P1 ±0.5	P2 ±0.5	φd	Permissible Current (Peak) I <sub>op</sub> (A)
FPCL1100V105JB-C	1100	1.0	±5	11.0	22.0	30.5	27.5	-	0.8	75
FPCL1100V305JB-C		3.0		18.0	28.0	31.5	27.5	-	1.0	225
FPCL1100V505JB-C		5.0		21.0	32.0	31.5	27.5	-	1.0	375
FPCL1100V705JB-C		7.0		18.0	35.5	41.5	37.5	10.2	1.2	140
FPCL1100V106JB-C		10		21.5	38.5	41.5	37.5	10.2	1.2	200
FPCL1100V156JB-C		15		30.0	45.0	41.5	37.5	10.2	1.2	300
FPCL1100V206JB-C		20		25.0	45.0	57.5	52.5	10.2	1.2	140
FPCL1100V256JB-C		25		30.0	45.0	57.5	52.5	10.2	1.2	175

■ Standard dimensions (FPCL 1300V) (mm)

Parts cord	Rated voltage (V <sub>DC</sub> )	Capacitance (μF)	Cap. tolerance (%)	A ±1.0	B ±1.0	L ±1.0	P1 ±0.5	P2 ±0.5	φd	Permissible Current (Peak) I <sub>op</sub> (A)
FPCL1300V105JB-C	1300	1.0	±5	11.0	22.0	30.5	27.5	-	0.8	100
FPCL1300V305JB-C		3.0		21.0	32.0	31.5	27.5	-	1.0	300
FPCL1300V505JB-C		5.0		18.5	35.5	41.5	37.5	10.2	1.2	250
FPCL1300V705JB-C		7.0		21.5	38.5	41.5	37.5	10.2	1.2	350
FPCL1300V106JB-C		10		25.0	45.0	41.5	37.5	10.2	1.2	500
FPCL1300V156JB-C		15		25.0	45.0	57.5	52.5	10.2	1.2	150

■ Component outline



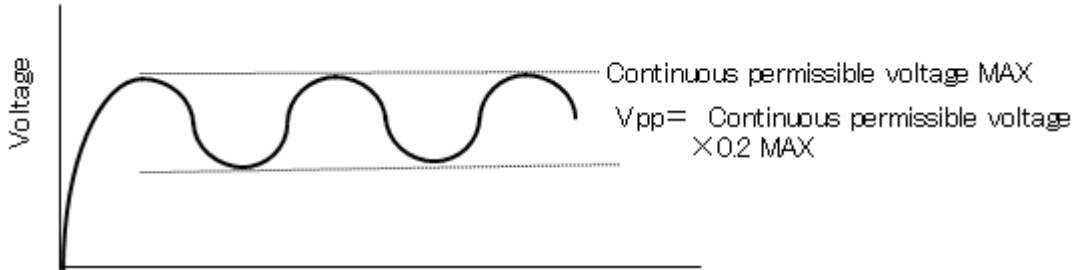
# Capacitors for Power Electronics

## ■ Performance

- FPCL series is for DC voltage only, can not be used with AC  
Please use in following (Applied voltage fluctuation from peak to peak)
- Voltage fluctuation

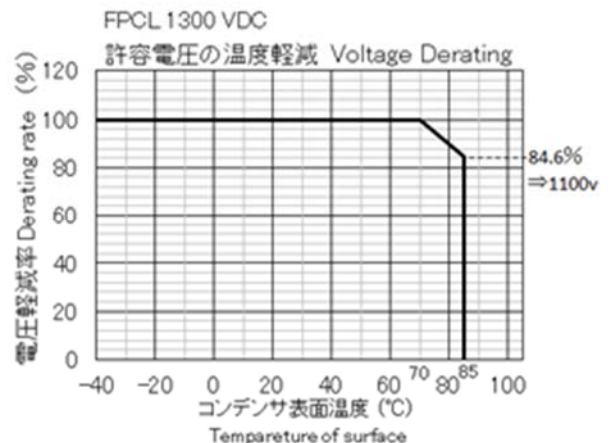
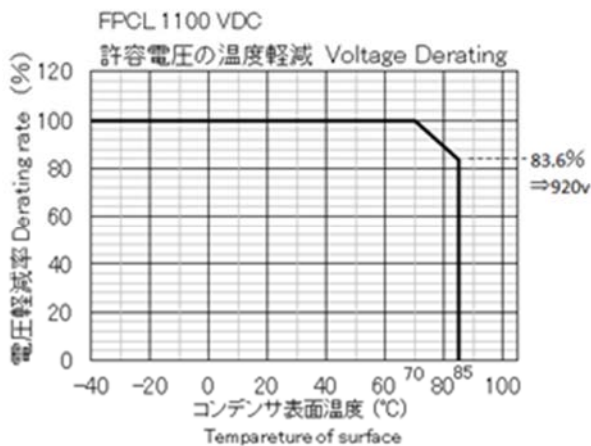
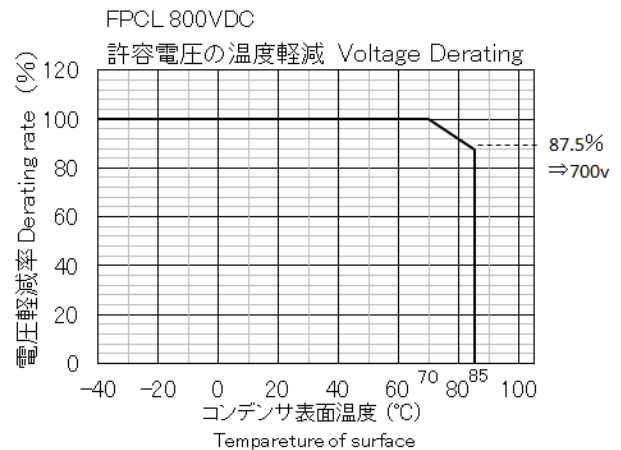
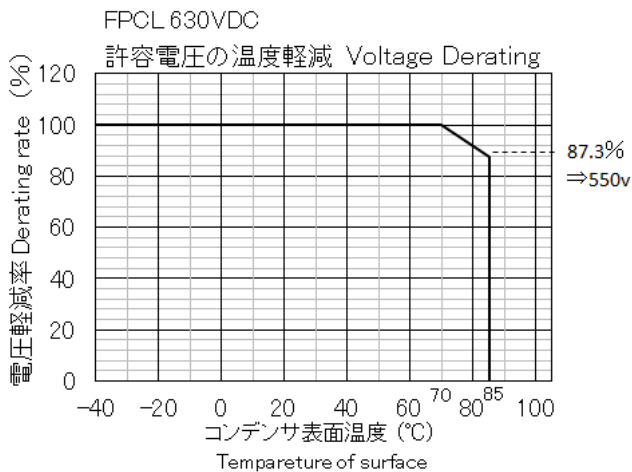
DC only (It cannot be used for AC)

Please use the voltage fluctuation within the range below



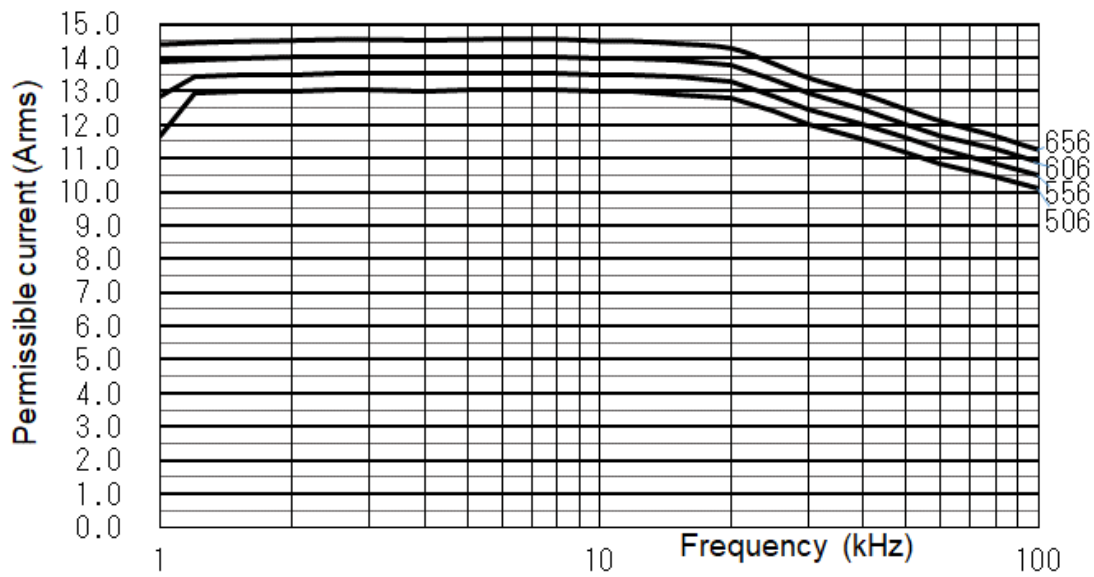
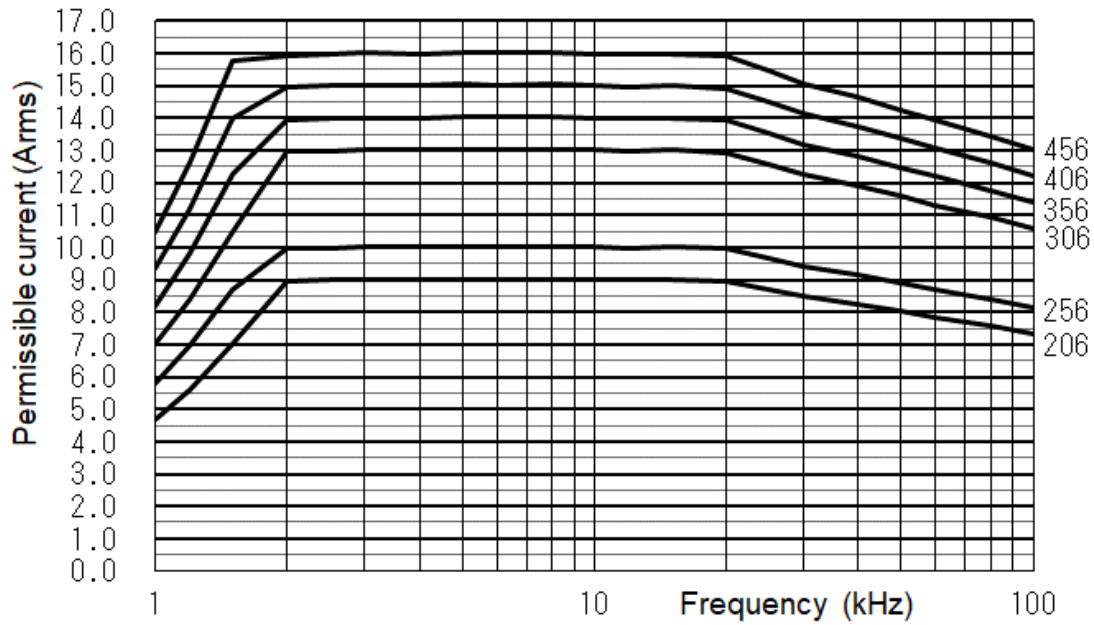
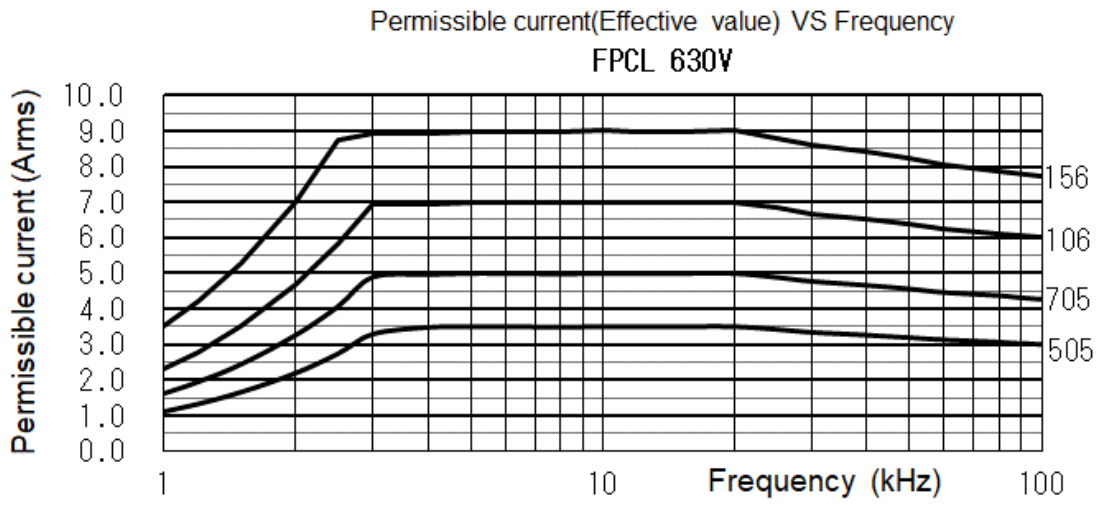
## ● Continuous applied voltage

$$\text{Derating rate (\%)} = \frac{\text{Continuous applied voltage}}{\text{Rated Voltage}} \times 100$$

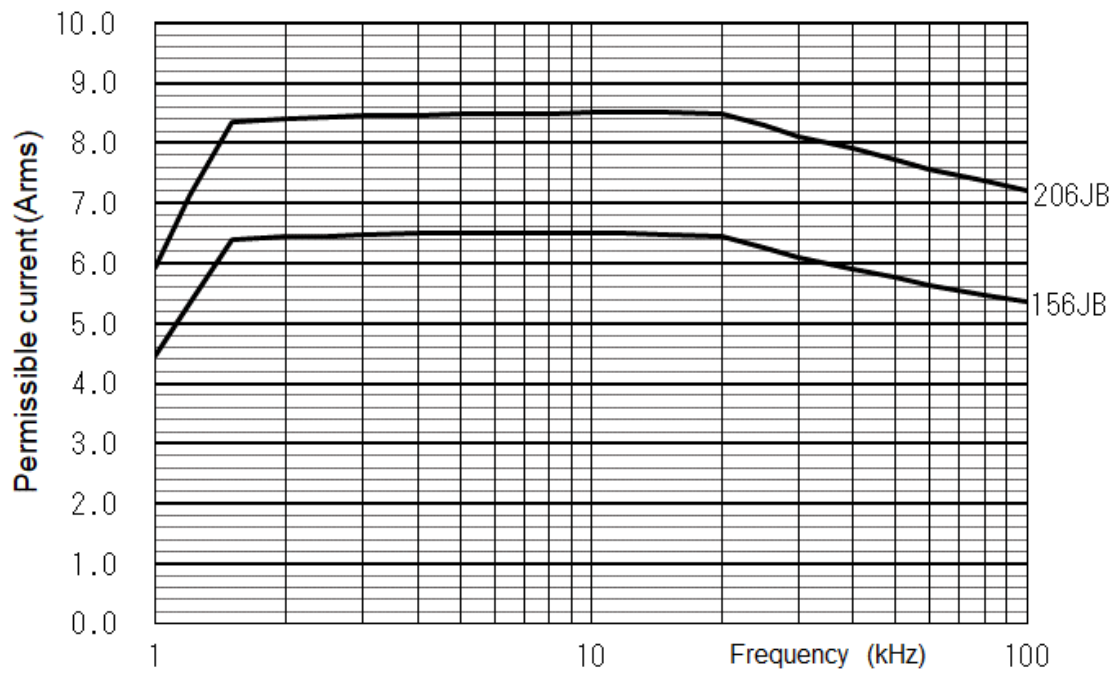
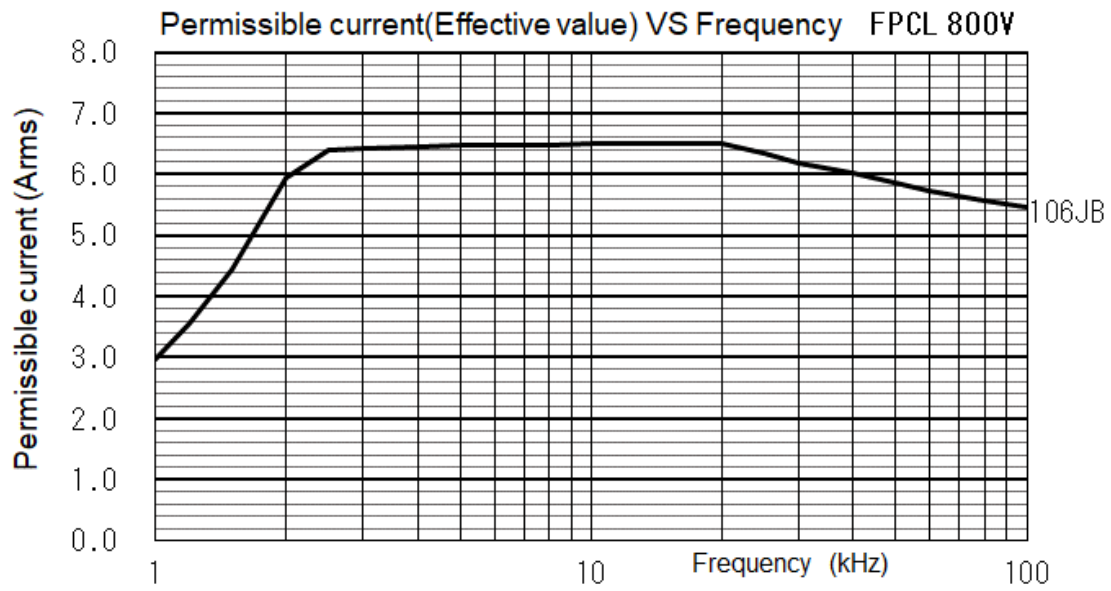


# Capacitors for Power Electronics

- Permissible effective current



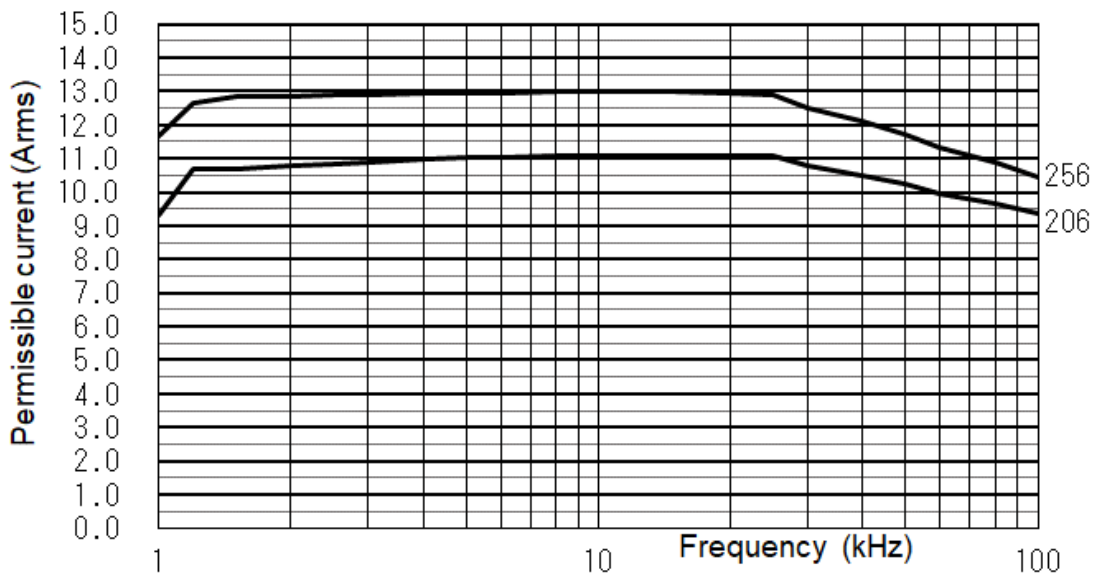
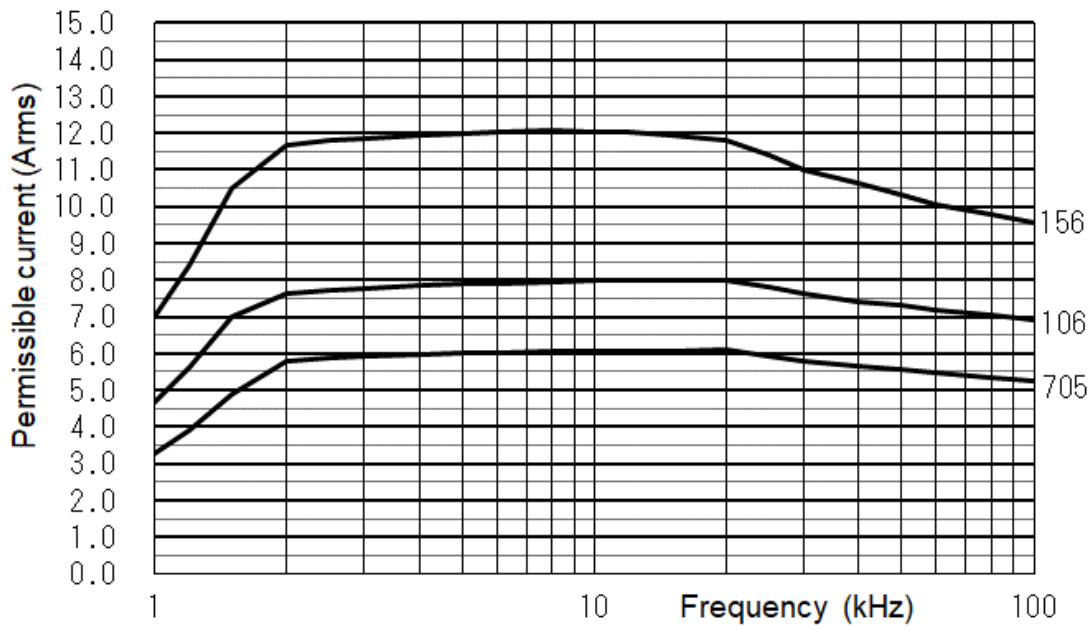
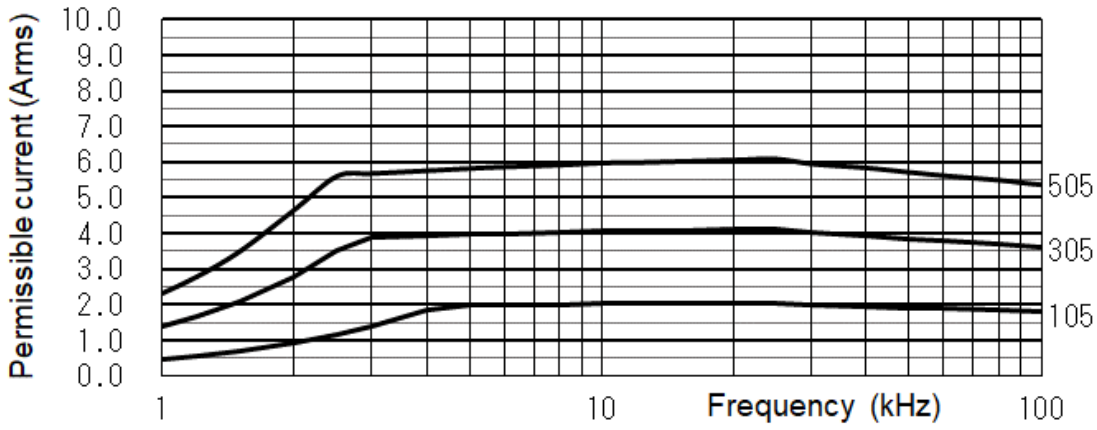
# Capacitors for Power Electronics



# Capacitors for Power Electronics

Permissible current(Effective value) VS Frequency

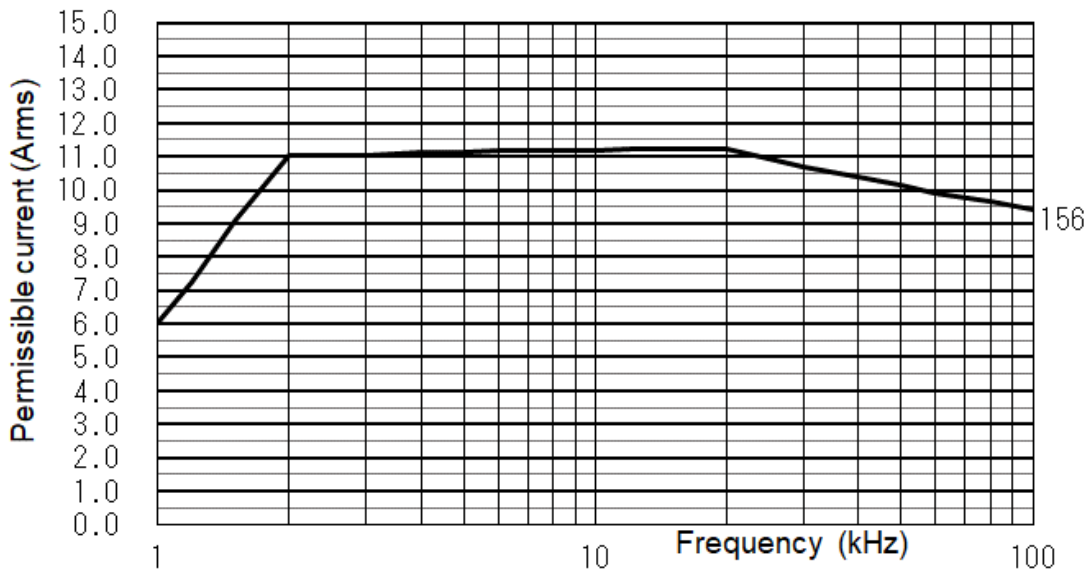
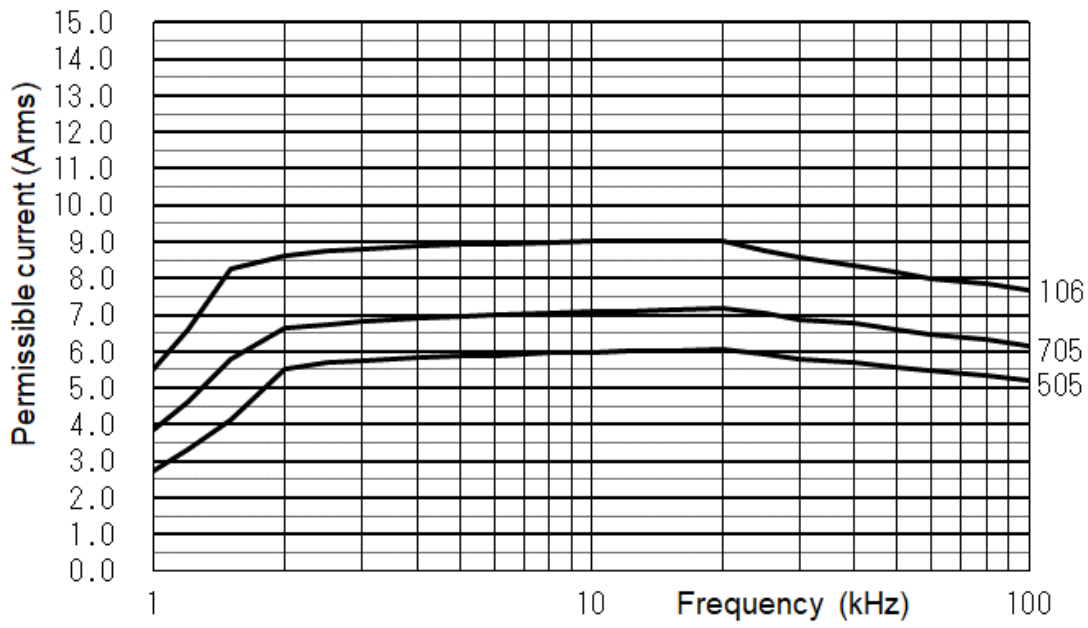
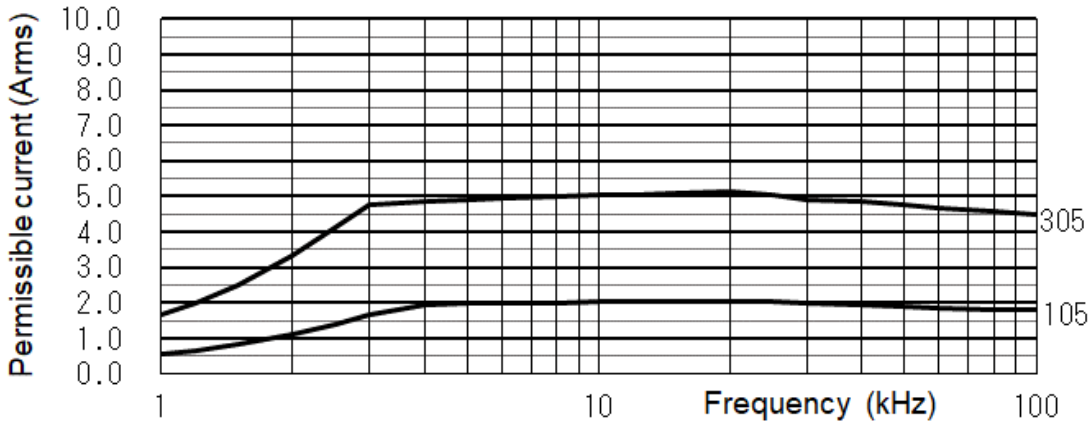
FPCL 1100V



# Capacitors for Power Electronics

Permissible current(Effective value) VS Frequency

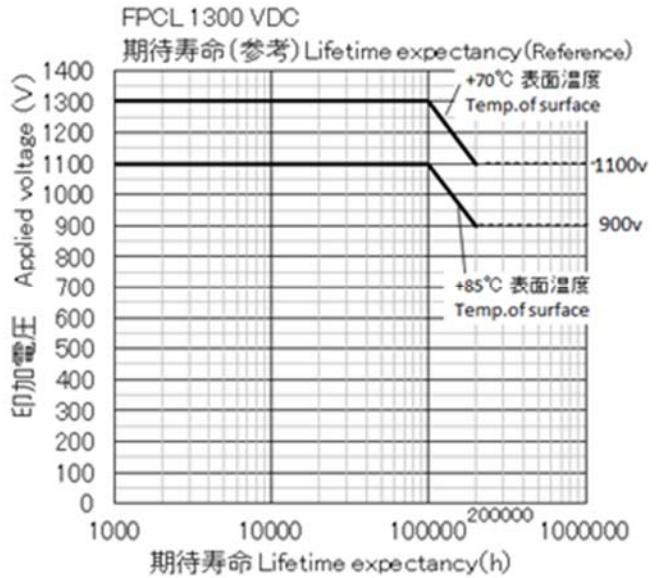
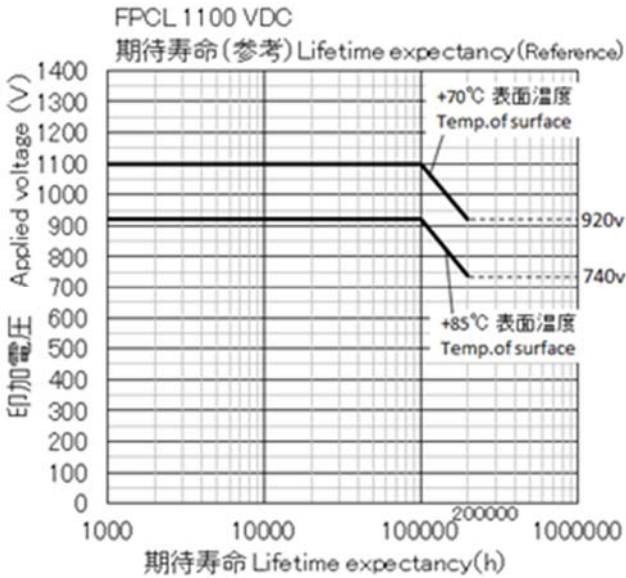
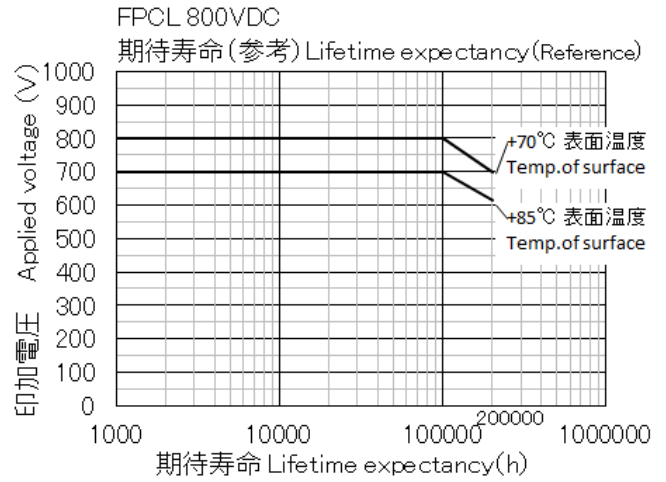
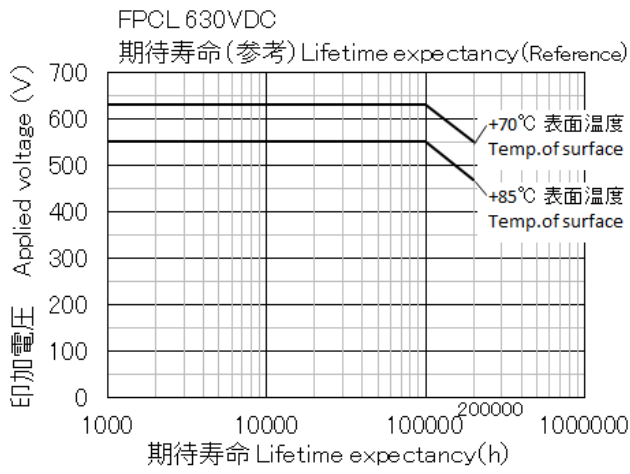
FPCL 1300V





# Capacitors for Power Electronics

## ● Lifetime expectancy ( Reference data)



If you consider, please request materials such as specifications.  
Other items (capacitance, rated voltage, etc.), please contact us.