

Film Capacitors

Metallized Polyester Film Capacitor

Series/Type: CL21

Ordering code: CL2*

Date: September 2024

Version: 01

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■ Features

- Metallized Polyester film, non-inductive wound construction
- Wide capacitance range, small size, and light weight
- Long life due to self-healing effect
- Flame retardation epoxy resin coated

■ Typical Applications

- Suitable for blocking, by-pass and coupling of DC and signals to VHF range
- Widely used in filter and low pulse circuits

■ Reference Standards

- GB/T 7332(IEC 60384-2)
- UL 810

■ Specifications

- Capacitance range 0.001μF...4.7μF
- Capacitance tolerance ±5%(J), ±10%(K), ±20%(M)
- Rated Voltage 100V, 250V, 400/450V, 630V, 1000V, 1250V
- Loss factor(tanδ)at 1KHz,at 20°C ≤1.0%
- Maximum pulse rise time(dv/dt)

U _R (V)	dv/dt				
	P=7.5	P=10	P=15	P=22.5	P=27.5
100	15	9	5	3	--
250	30	20	12	8	5
400/450	40	30	20	10	7
630	50	40	25	12	10
1000	70	60	30	15	12
1250	80	70	40	18	14

- Climatic category 40/105/21
- Rated temperature 85°C
- Operating temperature range -40°C...105°C
(85°C to 105°C, decreasing factor 1.25% per °C for U_R)
- Storage temperature Range -40°C...105°C

■ Test data

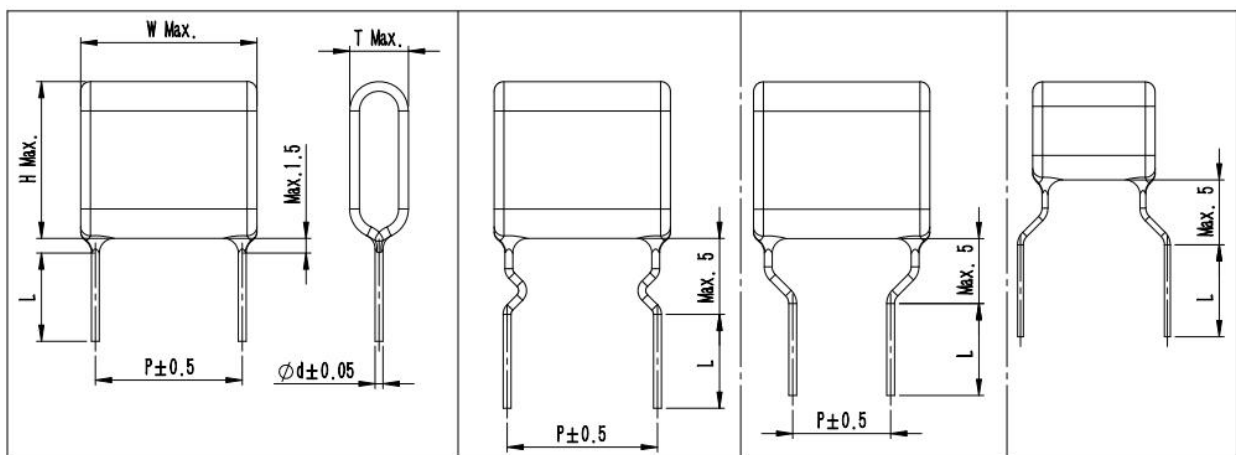
- Capacitance measurement C_R±5%(J); C_R±10%(K); C_R±20%(M)
- Test voltage between terminals 1.6U_R@5S
- Insulation resistance R≥15,000MΩ, C_R≤0.33μF(20°C, 100V, 60S)
R•C_R≥5,000S, C_R>0.33μF(20°C, 100V, 60S)
- Loss factor(tanδ)at 1KHz, at 20°C 1.0%

■ **Structure of ordering code**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
C	L	2	3	1	1	2	2	4	K	6	3	5	L	0	1	G	1
A		B			C			D	E	F		G	H	I	J	K	

- A: Capacitor series
CL2=CL21
- B: Rated voltage
如: 631=63*10¹=630V
- C: Rated capacitance
如: 224=22*10⁴=220000pF=0.22μF
- D: Capacitance tolerance
±5%(J), ±10%(K), ±20%(M)
- E: Pitch
2=5.0mm 3=7.5mm 4=10mm 5=12.5mm 6=15mm 9=22.5mm
B=27.5mm D=32.5mm F=37.5mm M=52.5mm
- F: Lead length
35=3.5mm E5=15mm N2=22mm S6=36mm
- G: Pin shape
L=Straight foot R=Right foot K=K foot N=Bend inward foot
W=Bend outside foot
- H: Product features
0=Ordinary 1=Double 85 2=Low noise 3=Low power
- I: Raw material
0=No halogen 1=halogen
- J: Product colour
Y=Yellow G=Grey B=Black U=Blue W=white R=Red E=Green
- H: Inner use

■ **Outline Drawing(Specific according to customer requirements)**



Dimensions(mm)

U _R : 100V.dc(63V.ac)							U _R : 100V.dc(63V.ac)						
Cr(μF)	W	H	T	d	P	Part number	Cr(μF)	W	H	T	d	P	Part number
0.12	10	7.0	4.0	0.6	7.5		1.2	12.5	10.9	7.2	0.6	10	
0.15	10	7.8	4.1	0.6	7.5		1.5	12.5	11.6	8.0	0.6	10	
0.18	10	7.5	4.0	0.6	7.5		1.8	17.5	13.6	6.3	0.75	15	
0.22	10	7.8	4.1	0.6	7.5		2.2	17.5	14.2	7.0	0.75	15	
0.27	10	8.1	4.5	0.6	7.5		2.7	17.5	15	7.6	0.75	15	
0.33	10	8.5	4.8	0.6	7.5		3.3	17.5	15.7	8.4	0.75	15	
0.39	10	8.8	5.2	0.6	7.5		3.9	17.5	16.4	9.1	0.75	15	
0.47	10	9.2	5.6	0.6	7.5		4.7	25.5	17	8.1	0.75	22.5	
0.56	12.5	8.8	5.2	0.6	10		5.6	25.5	17.8	8.8	0.75	22.5	
0.68	12.5	9.3	5.6	0.6	10		6.8	25.5	18.5	10.2	0.75	22.5	
0.82	12.5	9.7	6.1	0.6	10		8.2	25.5	19.5	11.1	0.75	22.5	
1.0	12.5	10.3	6.6	0.6	10		10	25.5	21.5	11.6	0.75	22.5	
U _R : 250V.dc(160V.ac)							U _R : 250V.dc(160V.ac)						
0.010	10	7	3.5	0.6	7.5		0.33	12.5	10.7	5.5	0.6	10	
0.012	10	7.2	3.7	0.6	7.5		0.39	17.5	10.4	5.2	0.75	15	
0.015	10	7.4	3.8	0.6	7.5		0.47	17.5	10.8	5.6	0.75	15	
0.018	10	7.6	4.0	0.6	7.5		0.56	17.5	12.3	5.5	0.75	15	
0.022	10	7.4	3.8	0.6	7.5		0.68	17.5	12.8	6.0	0.75	15	
0.027	10	7.7	4.1	0.6	7.5		1.0	17.5	14.4	7.1	0.75	15	
0.033	10	7.3	3.7	0.6	7.5		1.2	17.5	15	7.7	0.75	15	
0.039	10	7.5	3.9	0.6	7.5		1.5	17.5	15.9	9.1	0.75	15	
0.047	10	7.8	4.1	0.6	7.5		1.8	17.5	16.2	9.9	0.75	15	
0.056	10	8.0	4.4	0.6	7.5		2.2	25.5	15.6	8.8	0.75	22.5	
0.068	10	7.5	3.9	0.6	7.5		2.7	25.5	16.5	9.7	0.75	22.5	
0.082	10	7.8	4.1	0.6	7.5		3.3	25.5	17.4	10.6	0.75	22.5	
0.10	10	8.1	4.4	0.6	7.5		3.9	25.5	19.2	10.9	0.75	22.5	
0.12	10	8.4	4.8	0.6	7.5		4.7	25.5	20.3	11.9	0.75	22.5	
0.15	10	8.8	5.2	0.6	7.5		5.6	30.5	20.4	12.1	0.75	27.5	
0.18	12.5	8.9	4.5	0.6	10		6.8	30.5	21.6	13.3	0.75	27.5	
0.22	12.5	9.3	4.8	0.6	10		8.2	30.5	22.9	14.5	0.75	27.5	
0.27	12.5	9.7	5.3	0.6	10		10.0	30.5	24.5	16	0.75	27.5	

Dimensions(mm)

UR: 400V.dc/450V.dc(200V.ac)							UR: 400V.dc/450V.dc(200V.ac)						
CR(μF)	W	H	T	d	P	Part number	CR(μF)	W	H	T	d	P	Part number
0.010	10	7.2	3.6	0.6	7.5		0.27	17.5	12	6.8	0.75	15	
0.012	10	7.4	3.8	0.6	7.5		0.33	17.5	12.7	7.4	0.75	15	
0.015	10	7.8	4.2	0.6	7.5		0.39	17.5	13.7	8.0	0.75	15	
0.018	10	7.3	3.7	0.6	7.5		0.47	17.5	14.4	9.2	0.75	15	
0.022	10	7.5	3.9	0.6	7.5		0.56	17.5	15.1	9.9	0.75	15	
0.027	10	7.8	4.2	0.6	7.5		0.68	17.5	16	10.8	0.75	15	
0.033	10	8.1	4.5	0.6	7.5		0.82	17.5	17	11.8	0.75	15	
0.039	10	8.2	4.6	0.6	7.5		1.0	25.5	17.5	9.1	0.75	22.5	
0.047	10	8.6	4.9	0.6	7.5		1.2	25.5	18.3	9.9	0.75	22.5	
0.056	12.5	8.8	4.3	0.6	10		1.5	25.5	19.4	11	0.75	22.5	
0.068	12.5	9.1	4.7	0.6	10		1.8	30.5	19.1	10.8	0.75	27.5	
0.082	12.5	9.4	5.0	0.6	10		2.2	30.5	21.2	11.3	0.75	27.5	
0.10	12.5	9.5	5.4	0.6	10		2.7	30.5	22.4	12.5	0.75	27.5	
0.12	12.5	10.3	5.9	0.6	10		3.3	30.5	23.8	13.9	0.75	27.5	
0.15	17.5	10.6	5.4	0.75	15		3.9	30.5	25.1	15.1	0.75	27.5	
0.18	17.5	11	5.8	0.75	15		4.7	30.5	26.6	16.7	0.75	27.5	
0.22	17.5	11.5	6.3	0.75	15								
UR: 630V.dc(220V.ac)							UR: 630V.dc(220V.ac)						
0.010	12.5	7.4	3.8	0.6	10		0.15	17.5	12.7	7.5	0.75	15	
0.012	12.5	7.6	4.0	0.6	10		0.18	17.5	13.8	8.1	0.75	15	
0.015	12.5	7.7	4.1	0.6	10		0.22	17.5	14.5	9.3	0.75	15	
0.018	12.5	7.9	4.2	0.6	10		0.39	17.5	17.2	12	0.75	15	
0.022	12.5	8.2	4.5	0.6	10		0.47	25.5	16.4	9.7	0.75	22.5	
0.027	12.5	8.5	4.9	0.6	10		0.56	25.5	17.2	10.5	0.75	22.5	
0.033	12.5	8.9	5.2	0.6	10		0.68	25.5	18.2	11.4	0.75	22.5	
0.039	12.5	9.2	5.6	0.6	10		0.82	25.5	19.3	12.5	0.75	22.5	
0.047	12.5	9.7	6.0	0.6	10		1.0	30.5	20	11.6	0.75	27.5	
0.056	12.5	10.1	6.5	0.6	10		1.2	30.5	22	12.6	0.75	27.5	
0.068	12.5	10.7	7.0	0.6	10		1.5	30.5	22.5	14.1	0.75	27.5	
0.082	12.5	11.3	7.6	0.6	10		1.8	30.5	23.8	15.5	0.75	27.5	
0.10	17.5	11.5	6.3	0.75	15		2.2	30.5	25.5	17.1	0.75	27.5	

Film Capacitors	CL2*
Metallized Polyester Film Capacitor	CL21

Dimensions(mm)

UR: 1000V.dc(250V.ac)							UR: 1000V.dc(250V.ac)						
Cr(μF)	W	H	T	d	P	Part number	Cr(μF)	W	H	T	d	P	Part number
0.0010	10	8.5	4.0	0.6	7.5		0.022	12.5	11.9	6.7	0.6	10	
0.0012	10	8.7	4.3	0.6	7.5		0.027	17.5	11.8	5.0	0.75	15	
0.0015	10	8.5	4.1	0.6	7.5		0.033	17.5	12.3	5.5	0.75	15	
0.0018	10	8.7	4.3	0.6	7.5		0.039	17.5	12.7	5.9	0.75	15	
0.0022	10	8.5	4.1	0.6	7.5		0.047	17.5	13.2	6.5	0.75	15	
0.0027	10	8.8	4.4	0.6	7.5		0.056	17.5	13.8	7.0	0.75	15	
0.0033	10	8.7	4.3	0.6	7.5		0.068	17.5	14.5	7.7	0.75	15	
0.0039	10	8.9	4.5	0.6	7.5		0.082	17.5	15.2	8.5	0.75	15	
0.0047	10	9.3	4.8	0.6	7.5		0.10	17.5	16.6	9.7	0.75	15	
0.0056	12.5	8.5	4.1	0.6	10		0.12	25.5	15.3	8.3	0.75	22.5	
0.0068	12.5	8.8	4.4	0.6	10		0.15	25.5	16.2	9.2	0.75	22.5	
0.0082	12.5	9.1	4.7	0.6	10		0.18	25.5	17.1	10.1	0.75	22.5	
0.010	12.5	9.4	5.0	0.6	10		0.22	25.5	18.1	11.1	0.75	22.5	
0.012	12.5	9.8	5.4	0.6	10		0.27	25.5	20.2	11.7	0.75	22.5	
0.015	12.5	10.8	5.6	0.6	10		0.33	30.5	20.1	11.6	0.75	27.5	
0.018	12.5	11.3	6.1	0.6	10		0.39	25.5	21.2	12.6	0.75	22.5	
UR: 1250V.dc(250V.ac)							UR: 1250V.dc(250V.ac)						
0.0010	10	8.5	4.0	0.6	7.5		0.018	17.5	10	5.4	0.75	15	
0.0012	10	8.8	4.3	0.6	7.5		0.022	17.5	10.4	5.9	0.75	15	
0.0015	10	8.5	4.0	0.6	7.5		0.027	25.5	9.7	5.2	0.75	22.5	
0.0018	10	8.8	4.3	0.6	7.5		0.033	25.5	10.2	5.7	0.75	22.5	
0.0022	10	8.5	4.0	0.6	7.5		0.039	25.5	10.6	6.1	0.75	22.5	
0.0027	10	8.8	4.3	0.6	7.5		0.047	25.5	11.1	6.6	0.75	22.5	
0.0033	10	9.2	4.7	0.6	7.5		0.056	30.5	11.4	6.2	0.75	27.5	
0.0047	12.5	8.7	4.2	0.6	10		0.068	30.5	12	6.7	0.75	27.5	
0.0056	12.5	9.0	4.5	0.6	10		0.082	30.5	12.6	7.3	0.75	27.5	
0.0068	12.5	9.5	5.0	0.6	10		0.10	30.5	14.8	7.8	0.75	27.5	
0.0082	17.5	9.1	4.6	0.75	15		0.12	30.5	15.4	8.5	0.75	27.5	
0.010	17.5	9.5	4.5	0.75	15		0.15	30.5	16.4	9.4	0.75	27.5	
0.012	17.5	9.2	4.7	0.75	15		0.18	30.5	18.3	9.7	0.75	27.5	
0.015	17.5	9.6	5.1	0.75	15		0.22	30.5	19.3	10.7	0.75	27.5	