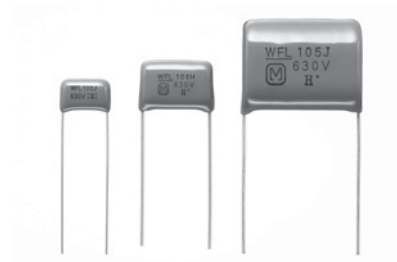# Metallized Polypropylene Film Capacitor
Type : **ECWF(L)**

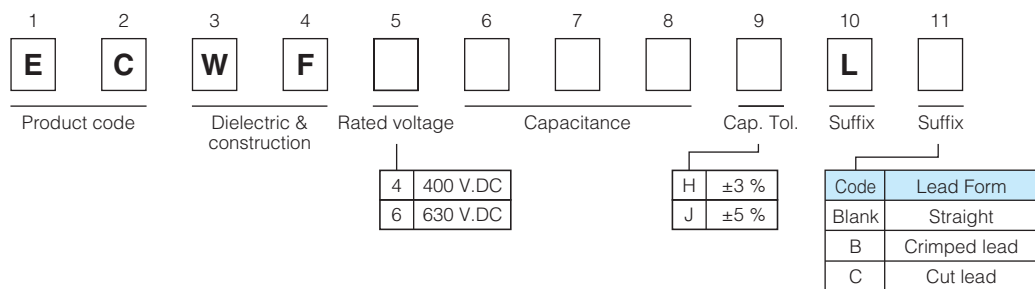Designed for high frequency and current applications.

Features

- Small size
- Excellent frequency characteristics
- Low loss
- 85 °C, 85 % RH, W.V. × 1.0 for 500 hours
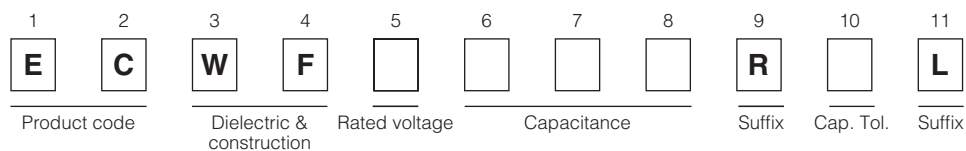- RoHS directive compliant

Recommended applications

- Lighting
- High frequency and high current circuits (Televisions, Monitors, Power Supplies, etc.)
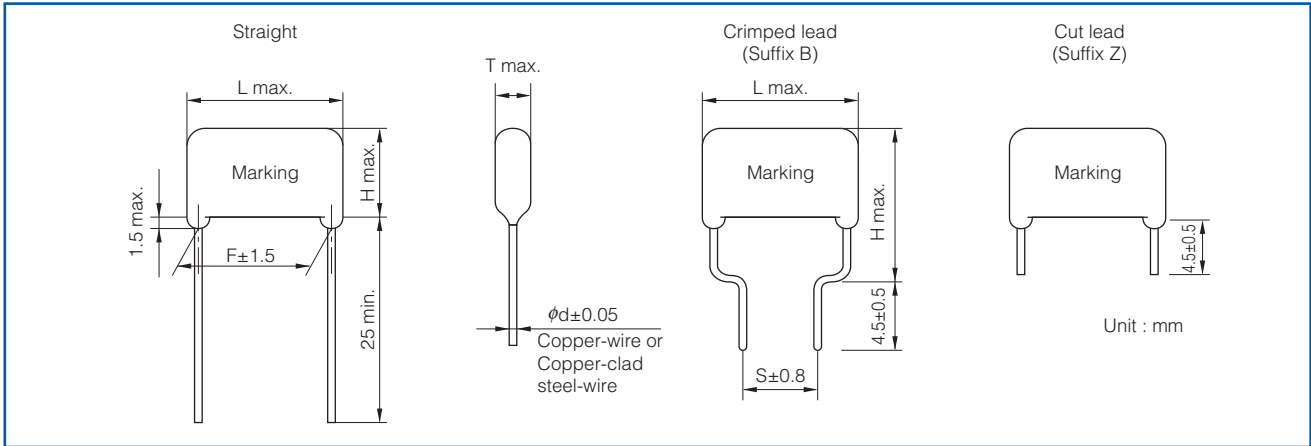
Explanation of part number

1	2	3	4	5	6	7	8	9	10	11
E	C	W	F						L	
Product code		Dielectric & construction		Rated voltage	Capacitance			Cap. Tol.	Suffix	Suffix

4	400 V.DC
6	630 V.DC

H	±3 %
J	±5 %

Code	Lead Form
Blank	Straight
B	Crimped lead
C	Cut lead

- Odd size taping

1	2	3	4	5	6	7	8	9	10	11
E	C	W	F					R		L
Product code		Dielectric & construction		Rated voltage	Capacitance			Suffix	Cap. Tol.	Suffix

Specifications

Category temp. range (Including temperature-rise on unit surface)	− 40 °C to +105 °C	
Rated voltage	400 V.DC, 630 V.DC	
Capacitance range	400 V.DC	0.022 µF to 2.4 µF
	630 V.DC	0.010 µF to 1.3 µF
Capacitance tolerance	±3 %(H), ±5 %(J)	
Dissipation factor (tan δ)	tan $\delta \leq 0.05$ % (20 °C, 1 kHz) tan $\delta \leq 0.20$ % (20 °C, 10 kHz)	
Withstand voltage	Between terminals : Rated volt. (V.DC)×150 %, 60 s	
Insulation resistance (IR)	C ≤ 0.33 µF : IR ≥ 9000 MΩ (20 °C, 100 V.DC, 60 s for 400 V.DC) C > 0.33 µF : IR ≥ 3000 MΩ · µF (20 °C, 500 V.DC, 60 s for 630 V.DC)	

＊ In case of applying voltage in alternating current (50 Hz or 60 Hz sine wave) to a capacitor with DC rated voltage, please refer to the page of "Permissible voltage (R.M.S) in alternating current corresponding to DC rated voltage".
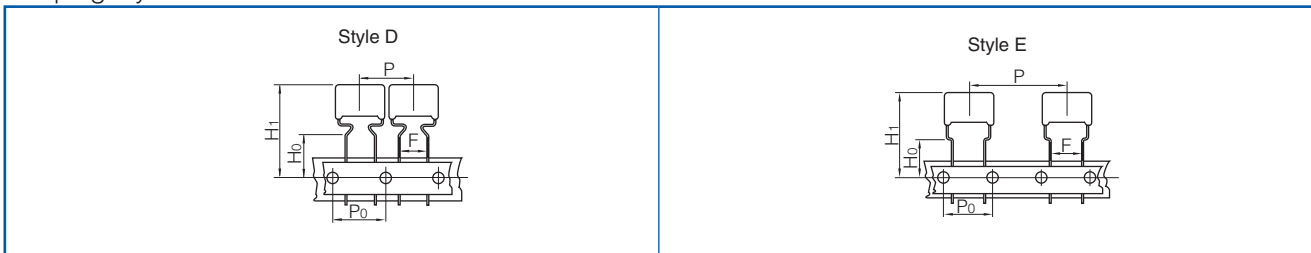
Dimensions

Straight

L max.

T max.

Marking

1.5 max.

F±1.5

H max.

25 min.

φd±0.05
Copper-wire or
Copper-clad
steel-wire

Crimped lead
(Suffix B)

L max.

Marking

H max.

4.5±0.5

S±0.8

Cut lead
(Suffix Z)

Marking

4.5±0.5

Unit : mm

Packaging specifications for bulk package

● Packing quantity : 100 pcs./bag

Taping specifications for automatic insertion

● Taping style

Style D

P

H₁

H₀

F

P₀

Style E

P

H₁

H₀

F

P₀

✲ Refer to the page of taping specifications.

● Packaging specifications

Type	Rated voltage (V.DC)	Capacitance range (µF)	Taping style					Packing	suffix
			AD	AB	C	D	E		
ECWF(L)	400	0.022 to 0.091				◯		Ammo	R( )L
		0.10 to 1.0					◯	Ammo	R( )L
	630	0.010 to 0.043				◯		Ammo	R( )L
		0.047 to 0.43					◯	Ammo	R( )L

● Lead spacing

Style	Lead spacing
D	7.5 mm
E	7.5 mm

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.
Should a safety concern arise regarding this product, please be sure to contact us immediately.

01   Feb. 2016

Rating · Dimensions · Quantity

● Rated voltage : 400 V.DC, Capacitance tolerance : ± 3 %(J), ±5 %(J)

Part No.	Cap. (µF)	Dimensions (mm)								Min. order Q'ty	
		L max.	T max.	H max.		F		S		Taping	Bulk
				Straight	Crimped lead	Straight	Crimped lead	Straight	Crimped lead	φd	7.5 mm	

Part No.	Cap. (µF)	L max.	T max.	Straight	Crimped lead	Straight		Crimped lead	φd	7.5 mm	Bulk
ECWF4223☐L( )	0.022	12.5	5.8	8.6	13.6	10.0		7.5	0.6	1100	
ECWF4243☐L( )	0.024	12.5	6.0	8.8	13.8	10.0		7.5	0.6		
ECWF4273☐L( )	0.027	12.5	6.2	9.0	14.0	10.0		7.5	0.6	1000	
ECWF4303☐L( )	0.030	12.5	6.4	9.3	14.3	10.0		7.5	0.6		
ECWF4333☐L( )	0.033	12.5	6.7	9.5	14.5	10.0		7.5	0.6	900	
ECWF4363☐L( )	0.036	12.5	5.7	8.4	13.4	10.0		7.5	0.6		
ECWF4393☐L( )	0.039	12.5	5.8	8.6	13.6	10.0		7.5	0.6	1100	
ECWF4433☐L( )	0.043	12.5	6.0	8.8	13.8	10.0		7.5	0.6		
ECWF4473☐L( )	0.047	12.5	6.2	9.0	14.0	10.0		7.5	0.6		
ECWF4513☐L( )	0.051	12.5	6.4	9.2	14.2	10.0		7.5	0.6	1000	
ECWF4563☐L( )	0.056	12.5	6.6	9.4	14.4	10.0		7.5	0.6		
ECWF4623☐L( )	0.062	13.0	6.8	9.6	14.6	10.0		7.5	0.8		
ECWF4683☐L( )	0.068	13.0	7.0	9.9	14.9	10.0		7.5	0.8	900	
ECWF4753☐L( )	0.075	13.0	7.3	10.1	15.1	10.0		7.5	0.8		
ECWF4823☐L( )	0.082	13.0	7.5	10.4	15.4	10.0		7.5	0.8	800	
ECWF4913☐L( )	0.091	13.0	7.8	10.7	15.7	10.0		7.5	0.8		
ECWF4104☐L( )	0.10	15.5	6.5	11.0	16.0	12.5		7.5	0.8	500	
ECWF4114☐L( )	0.11	15.5	6.8	11.3	16.3	12.5		7.5	0.8		
ECWF4124☐L( )	0.12	15.5	7.0	11.5	16.5	12.5		7.5	0.8		
ECWF4134☐L( )	0.13	15.5	7.2	11.8	16.8	12.5		7.5	0.8		
ECWF4154☐L( )	0.15	15.5	7.6	12.2	17.2	12.5		7.5	0.8	400	
ECWF4164☐L( )	0.16	15.5	7.8	12.4	17.4	12.5		7.5	0.8		
ECWF4184☐L( )	0.18	15.5	8.2	12.8	17.8	12.5		7.5	0.8		
ECWF4204☐L( )	0.20	15.5	8.6	13.3	18.3	12.5		7.5	0.8		500
ECWF4224☐L( )	0.22	15.5	9.0	13.6	18.6	12.5		7.5	0.8		
ECWF4244☐L( )	0.24	18.0	8.3	13.0	18.0	15.0		10.0	0.8		
ECWF4274☐L( )	0.27	18.0	8.8	13.4	18.4	15.0		10.0	0.8		
ECWF4304☐L( )	0.30	18.0	9.2	13.9	18.9	15.0		10.0	0.8	300	
ECWF4334☐L( )	0.33	18.0	9.6	14.3	19.3	15.0		10.0	0.8		
ECWF4364☐L( )	0.36	18.0	9.9	14.7	19.7	15.0		10.0	0.8		
ECWF4394☐L( )	0.39	18.0	10.3	15.1	20.1	15.0		10.0	0.8		
ECWF4434☐L( )	0.43	18.0	10.7	15.6	20.6	15.0		10.0	0.8		
ECWF4474☐L( )	0.47	18.0	11.2	16.1	21.1	15.0		10.0	0.8	200	
ECWF4514☐L( )	0.51	20.5	10.3	16.8	21.8	17.5		12.5	0.8	300	
ECWF4564☐L( )	0.56	20.5	10.7	17.3	22.3	17.5		12.5	0.8		
ECWF4624☐L( )	0.62	20.5	11.3	17.9	22.9	17.5		12.5	0.8		
ECWF4684☐L( )	0.68	20.5	11.8	18.5	23.5	17.5		12.5	0.8		
ECWF4754☐L( )	0.75	20.5	12.3	19.1	24.1	17.5		12.5	0.8	200	
ECWF4824☐L( )	0.82	23.0	11.8	18.5	23.5	20.0		12.5	0.8		
ECWF4914☐L( )	0.91	23.0	12.4	19.2	24.2	20.0		12.5	0.8		
ECWF4105☐L( )	1.0	23.0	13.0	19.8	24.8	20.0		12.5	0.8		
ECWF4115☐L( )	1.1	23.0	13.6	20.5	25.5	20.0		12.5	0.8		
ECWF4125☐L( )	1.2	28.0	12.3	19.1	24.1	25.0		17.5	0.8		
ECWF4135☐L( )	1.3	28.0	12.8	19.6	24.6	25.0		17.5	0.8		
ECWF4155☐L( )	1.5	28.0	13.7	20.7	25.7	25.0		17.5	0.8		
ECWF4165☐L( )	1.6	28.0	14.2	21.2	26.2	25.0		17.5	0.8	–	
ECWF4185☐L( )	1.8	28.0	15.2	22.2	27.2	25.0		17.5	0.8		
ECWF4205☐L( )	2.0	28.0	16.0	23.1	28.1	25.0		17.5	0.8		
ECWF4225☐L( )	2.2	28.0	16.8	24.0	29.0	25.0		17.5	0.8		
ECWF4245☐L( )	2.4	28.0	17.5	24.8	29.8	25.0		17.5	0.8		

∗ ☐ : Capacitance tolerance code
  ( ) : Suffix for lead crimped

Rating · Dimensions · Quantity

● Rated voltage : 630 V.DC, Capacitance tolerance : ± 3 %(J), ±5 %(J)

Part No.	Cap. (μF)	Dimensions (mm)								Min. order Q'ty	
		L max.	T max.	H max.		F		S		Taping	Bulk
				Straight	Crimped lead	Straight	Crimped lead		φd	7.5 mm	
ECWF6103□L( )	0.010	12.5	5.2	8.0	13.0	10.0		7.5	0.6		
ECWF6113□L( )	0.011	12.5	5.4	8.2	13.2	10.0		7.5	0.6	1200	
ECWF6123□L( )	0.012	12.5	5.5	8.3	13.3	10.0		7.5	0.6		
ECWF6133□L( )	0.013	12.5	5.6	8.5	13.5	10.0		7.5	0.6		
ECWF6153□L( )	0.015	12.5	5.9	8.7	13.7	10.0		7.5	0.6	1100	
ECWF6163□L( )	0.016	12.5	6.0	8.9	13.9	10.0		7.5	0.6		
ECWF6183□L( )	0.018	12.5	6.2	9.1	14.1	10.0		7.5	0.6		
ECWF6203□L( )	0.020	12.5	6.5	9.3	14.3	10.0		7.5	0.6		
ECWF6223□L( )	0.022	12.5	6.2	9.0	14.0	10.0		7.5	0.6	1000	
ECWF6243□L( )	0.024	12.5	6.4	9.2	14.2	10.0		7.5	0.6		
ECWF6273□L( )	0.027	13.0	6.6	9.5	14.5	10.0		7.5	0.8		
ECWF6303□L( )	0.030	13.0	6.9	9.7	14.7	10.0		7.5	0.8		
ECWF6333□L( )	0.033	13.0	7.1	10.0	15.0	10.0		7.5	0.8	900	
ECWF6363□L( )	0.036	13.0	7.3	10.2	15.2	10.0		7.5	0.8		
ECWF6393□L( )	0.039	13.0	7.6	10.4	15.4	10.0		7.5	0.8	800	
ECWF6433□L( )	0.043	13.0	7.9	10.7	15.7	10.0		7.5	0.8		
ECWF6473□L( )	0.047	15.5	6.4	10.8	15.8	12.5		7.5	0.8	500	
ECWF6513□L( )	0.051	15.5	6.6	11.0	16.0	12.5		7.5	0.8		
ECWF6563□L( )	0.056	15.5	6.8	11.2	16.2	12.5		7.5	0.8		
ECWF6623□L( )	0.062	15.5	7.1	11.5	16.5	12.5		7.5	0.8		
ECWF6683□L( )	0.068	15.5	7.4	11.8	16.8	12.5		7.5	0.8		
ECWF6753□L( )	0.075	15.5	7.7	12.1	17.1	12.5		7.5	0.8	400	
ECWF6823□L( )	0.082	15.5	8.0	12.4	17.4	12.5		7.5	0.8		
ECWF6913□L( )	0.091	15.5	8.3	12.7	17.7	12.5		7.5	0.8		500
ECWF6104□L( )	0.10	18.0	7.7	12.1	17.1	15.0		10.0	0.8		
ECWF6114□L( )	0.11	18.0	8.0	12.4	17.4	15.0		10.0	0.8		
ECWF6124□L( )	0.12	18.0	8.3	12.7	17.7	15.0		10.0	0.8		
ECWF6134□L( )	0.13	18.0	8.5	13.0	18.0	15.0		10.0	0.8		
ECWF6154□L( )	0.15	18.0	9.1	13.5	18.5	15.0		10.0	0.8		
ECWF6164□L( )	0.16	18.0	9.3	13.8	18.8	15.0		10.0	0.8	300	
ECWF6184□L( )	0.18	18.0	9.8	14.2	19.1	15.0		10.0	0.8		
ECWF6204□L( )	0.20	18.0	10.3	14.7	19.7	15.0		10.0	0.8		
ECWF6224□L( )	0.22	18.0	10.8	15.5	20.5	15.0		10.0	0.8		
ECWF6244□L( )	0.24	18.0	11.2	15.9	20.9	15.0		10.0	0.8	200	
ECWF6274□L( )	0.27	20.5	10.4	16.7	21.7	17.5		12.5	0.8	300	
ECWF6304□L( )	0.30	20.5	10.9	17.2	22.2	17.5		12.5	0.8		
ECWF6334□L( )	0.33	20.5	11.4	17.7	22.7	17.5		12.5	0.8		
ECWF6364□L( )	0.36	20.5	11.9	18.5	23.5	17.5		12.5	0.8	200	
ECWF6394□L( )	0.39	20.5	12.4	19.0	24.0	17.5		12.5	0.8		
ECWF6434□L( )	0.43	20.5	13.0	19.5	24.5	17.5		12.5	0.8		
ECWF6474□L( )	0.47	20.5	13.5	20.1	25.1	17.5		12.5	0.8		
ECWF6514□L( )	0.51	28.0	11.1	17.3	22.3	25.0		17.5	0.8		
ECWF6564□L( )	0.56	28.0	11.6	17.8	22.8	25.0		17.5	0.8		
ECWF6624□L( )	0.62	28.0	12.1	18.7	23.7	25.0		17.5	0.8		
ECWF6684□L( )	0.68	28.0	12.7	19.3	24.3	25.0		17.5	0.8		
ECWF6754□L( )	0.75	28.0	13.3	19.9	24.9	25.0		17.5	0.8	—	
ECWF6824□L( )	0.82	28.0	13.9	20.5	25.5	25.0		17.5	0.8		
ECWF6914□L( )	0.91	28.0	14.6	21.2	26.2	25.0		17.5	0.8		
ECWF6105□L( )	1.0	28.0	15.5	22.3	27.3	25.0		17.5	0.8		
ECWF6115□L( )	1.1	28.0	16.3	23.0	28.0	25.0		17.5	0.8		
ECWF6125□L( )	1.2	28.0	17.0	23.7	28.7	25.0		17.5	0.8		
ECWF6135□L( )	1.3	28.0	17.6	24.4	29.4	25.0		17.5	0.8		

∗ □ : Capacitance tolerance code
( ) : Suffix for lead crimped

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ECW-F4104JL   ECW-F4104JLB   ECW-F4104RHL   ECW-F4104RJL   ECW-F4105HL   ECW-F4105HLB   ECW-F4105JLB   ECW-F4105RHL   ECW-F4105RJL   ECW-F4114HL   ECW-F4114HLB   ECW-F4114JL   ECW-F4114JLB   ECW-F4114RHL   ECW-F4114RJL   ECW-F4115HL   ECW-F4115HLB   ECW-F4115JL   ECW-F4115JLB   ECW-F4124HL   ECW-F4124HLB   ECW-F4124JL   ECW-F4124JLB   ECW-F4124RHL   ECW-F4124RJL   ECW-F4125HL   ECW-F4125HLB   ECW-F4125JL   ECW-F4125JLB   ECW-F4134HL   ECW-F4134HLB   ECW-F4134JL   ECW-F4134JLB   ECW-F4134RHL   ECW-F4134RJL   ECW-F4135HL   ECW-F4135HLB   ECW-F4135JL   ECW-F4135JLB   ECW-F4154HL   ECW-F4154HLB   ECW-F4154JL   ECW-F4154JLB   ECW-F4154RHL   ECW-F4154RJL   ECW-F4155HL   ECW-F4155HLB   ECW-F4155JL   ECW-F4155JLB   ECW-F4164HL   ECW-F4164HLB   ECW-F4164JL   ECW-F4164JLB   ECW-F4164RHL   ECW-F4164RJL   ECW-F4165HL   ECW-F4165HLB   ECW-F4165JL   ECW-F4165JLB   ECW-F4184HL   ECW-F4184HLB   ECW-F4184JL   ECW-F4184JLB   ECW-F4184RHL   ECW-F4184RJL   ECW-F4185HL   ECW-F4185HLB   ECW-F4185JL   ECW-F4185JLB   ECW-F4204HL   ECW-F4204HLB   ECW-F4204JL   ECW-F4204JLB   ECW-F4204RHL   ECW-F4204RJL   ECW-F4205HLB   ECW-F4205JL   ECW-F4205JLB   ECW-F4223HL   ECW-F4223HLB   ECW-F4223JL   ECW-F4223JLB   ECW-F4223RHL   ECW-F4223RJL   ECW-F4224HL   ECW-F4224HLB   ECW-F4224JL   ECW-F4224JLB   ECW-F4224RHL   ECW-F4224RJL   ECW-F4225HL   ECW-F4225HLB   ECW-F4225JL