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## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## Metalized Polypropylene Film Capacitor

Type : **ECWFD**

Non-inductive construction using metalized Polypropylene film with flame retardant epoxy resin coating.



### Features

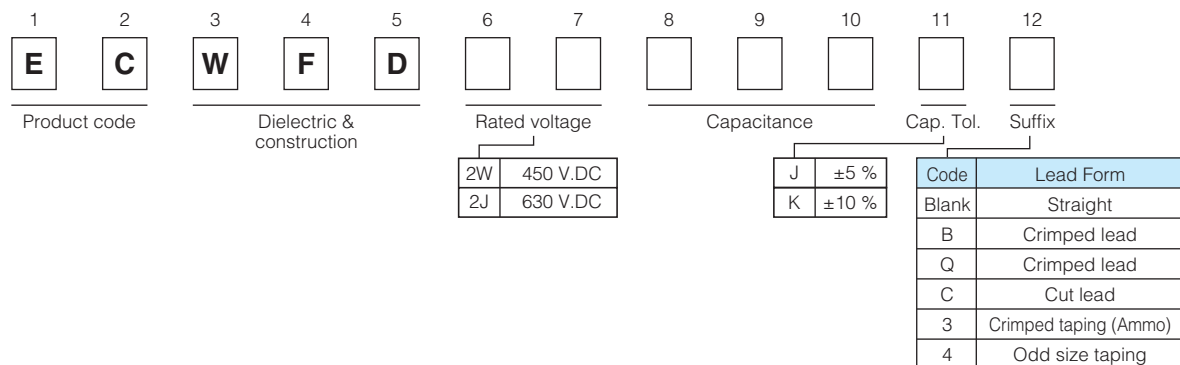
- Small size
- Low loss
- Low Hum Sound Noise
- Excellent frequency characteristics
- Flame-retardant epoxy resin coating
- RoHS directive compliant

### Recommended applications

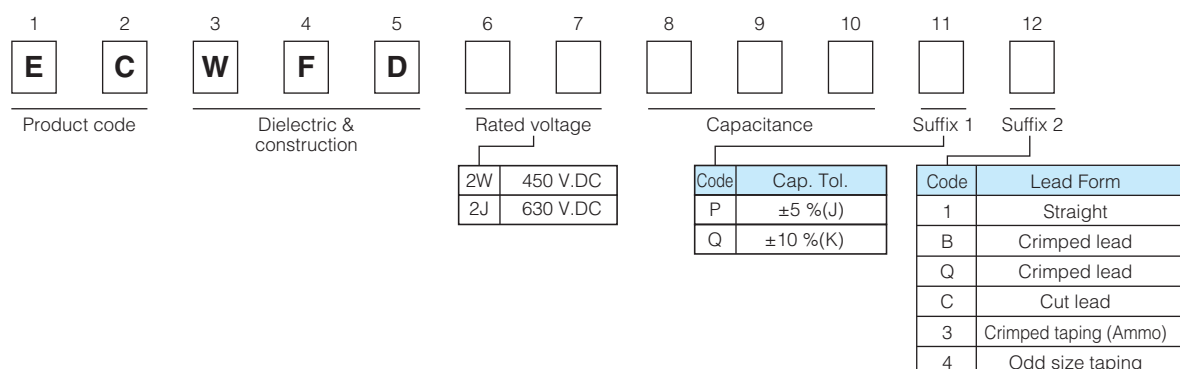
- Activ filter circuits
- High frequency and high current circuits

### Explanation of part number

- Standard product



- Short lead space product 450 V.DC (0.47  $\mu$ F, 0.68  $\mu$ F, 1.0  $\mu$ F), 630 V.DC (1.0  $\mu$ F)

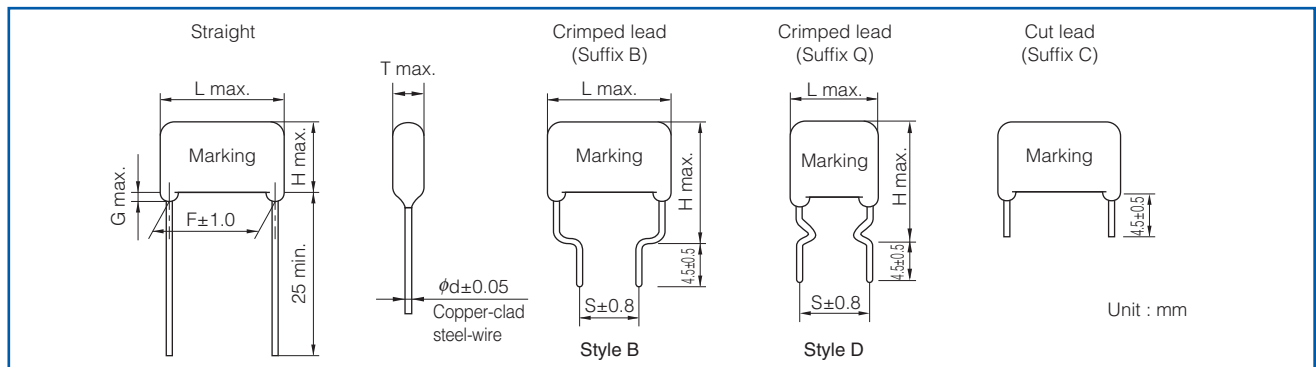


## Specifications

Category temp. range (Including temperature-rise on unit surface)	450 V.DC	- 40 °C to +110 °C
	630 V.DC	- 40 °C to +105 °C
Rated voltage	450 V.DC (Derating of rated voltage by 0.62%/°C at more than 85°C Peak to peak voltage applied on the capacitor should be less than 240 Vp-p, and zero to peak voltage should be less than 450 Vo-p.)	
	630 V.DC (Derating of rated voltage by 1.0%/°C at more than 85°C Peak to peak voltage applied on the capacitor should be less than 400 Vp-p, and zero to peak voltage should be less than 630 Vo-p.)	
Capacitance range	450 V.DC	0.1 μF to 4.7 μF
	630 V.DC	0.047 μF to 4.7 μF
Capacitance tolerance	±5 % (J), ±10 % (K)	
Dissipation factor (tan δ)	tan δ ≤ 0.1 % ( 20 °C, 1 kHz )	
Withstand voltage	Between terminals: Rated voltage (V.DC) × 150 %, 60 s	
Insulation resistance (IR)	450 V.DC	C ≤ 0.33 μF : IR ≥ 30000 MΩ C > 0.33 μF : IR ≥ 10000 MΩ · μF (20 °C, 100 V.DC, 60 s)
	630 V.DC	C ≤ 0.33 μF : IR ≥ 9000 MΩ C > 0.33 μF : IR ≥ 3000 MΩ · μF (20 °C, 500 V.DC, 60 s)

\* 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

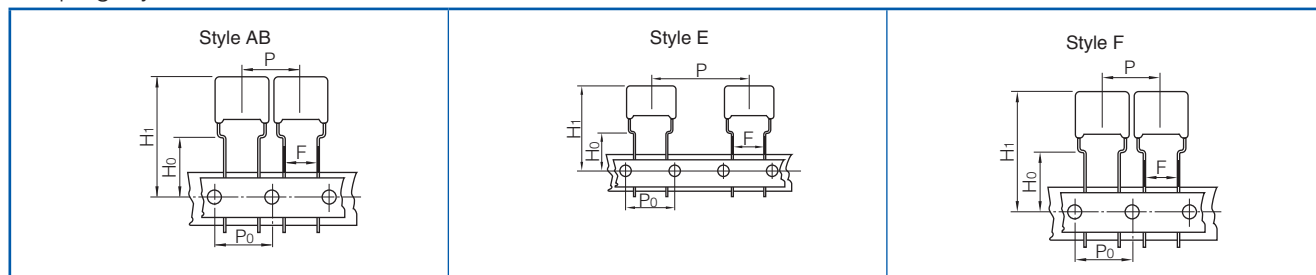


## Packaging specifications for bulk package

- Packing quantity : 100 pcs./bag

## Taping specifications for automatic insertion

- Taping style



\* Refer to the page of taping specifications.

- Taping style

Type	Rated voltage (V.DC)	Capacitance range (μF)	Taping style							Packing	suffix		
			AD	AS	AB	B	C	D	E			F	
ECWFD	450	0.10 to 0.39			○							3	
		0.47, 0.68, 1.0			○							P3/Q3	
		0.10 to 0.39								○		4	
	630	0.47, 0.68, 1.0									○		P4/Q4
		0.47 to 2.2							○			4	
		0.047 to 0.22								○		4	
		0.27 to 0.82								○		4	
		1.0							○		P4/Q4		

- Lead spacing

Style	Lead spacing
AB	5.0 mm
E	7.5 mm
F	7.5 mm



## Rating · Dimensions · Quantity

● Rated voltage : 450 V.DC, Capacitance tolerance : ±5 % (J), ± 10 % (K),

Part No.	Cap. ( $\mu$ F)	Dimensions (mm)										Min. order Q'ty				
		L max.	T max.	H max.			F	S		G max.	$\phi$ d	Taping		Bulk		
				Straight	Crimped lead (Suffix B)	Crimped lead (Suffix Q)		Crimped lead (Suffix B)	Crimped lead (Suffix Q)			5.0 mm	7.5 mm	Straight	Crimped lead	
ECWFD2W104□( )	0.10	12.6	4.5	-	13.9	13.9	-	7.5	10.0	-	0.6	1500	1400	-	1000	
ECWFD2W124□( )	0.12	12.6	4.6		14.0	14.0		7.5	10.0		0.6					
ECWFD2W154□( )	0.15	12.6	4.6		14.1	14.1		7.5	10.0		0.6					
ECWFD2W184□( )	0.18	12.6	4.8		14.3	14.3		7.5	10.0		0.6	1400	1300			
ECWFD2W224□( )	0.22	12.6	5.0		14.6	14.6		7.5	10.0		0.6		1200			
ECWFD2W274□( )	0.27	12.6	5.3		15.0	15.0		7.5	10.0		0.6	1300	1100			
ECWFD2W334□( )	0.33	12.6	5.6		15.4	15.4		7.5	10.0		0.6	1200				
ECWFD2W394□( )	0.39	12.6	6.0		15.7	15.7		7.5	10.0		0.6	1100	1000			
★ ECWFD2W474P( )	0.47	12.6	6.5	11.2	16.2	16.2	10.0	7.5	10.0	1.5	0.6	1000	900			1000
ECWFD2W474Q( )																
ECWFD2W474□( )	0.47	17.5	5.8	9.0	14.0	16.0	15.0	7.5	15.0	1.5	0.8	-	500			
ECWFD2W564□( )	0.56	17.5	6.2	9.4	14.4	16.4	15.0	7.5	15.0	1.5	0.8	-	500			
★ ECWFD2W684P( )	0.68	12.6	7.7	12.4	17.4	17.4	10.0	7.5	10.0	1.5	0.6	800	700			
ECWFD2W684Q( )																
ECWFD2W684□( )	0.68	17.5	6.7	9.9	14.9	16.9	15.0	7.5	15.0	1.5	0.8	-	400			
ECWFD2W824□( )	0.82	17.5	7.2	10.4	15.4	17.4	15.0	7.5	15.0	1.5	0.8	-	400			
★ ECWFD2W105P( )	1.0	12.6	9.2	13.9	18.9	18.9	10.0	7.5	10.0	1.5	0.6	700	600			
ECWFD2W105Q( )																
ECWFD2W105□( )	1.0	17.5	7.8	11.0	16.0	18.0	15.0	7.5	15.0	1.5	0.8	-	400			
ECWFD2W125□( )	1.2	17.5	8.5	11.6	16.6	18.6	15.0	7.5	15.0	1.5	0.8					
ECWFD2W155□( )	1.5	17.5	9.3	12.5	17.5	19.5	15.0	7.5	15.0	1.5	0.8		300			
ECWFD2W185□( )	1.8	17.5	10.1	13.3	18.3	20.3	15.0	7.5	15.0	1.5	0.8					
ECWFD2W225□( )	2.2	17.5	11.1	14.3	19.3	21.3	15.0	7.5	15.0	1.5	0.8		200			
ECWFD2W275□( )	2.7	25.3	9.0	13.7	18.7	20.7	22.5	15.0	22.5	1.5	0.8					
ECWFD2W335□( )	3.3	25.3	9.8	14.6	19.6	21.6	22.5	15.0	22.5	1.5	0.8					
ECWFD2W395□( )	3.9	25.3	10.7	15.4	20.4	22.4	22.5	15.0	22.5	1.5	0.8		-	800		
ECWFD2W475□( )	4.7	25.3	11.7	16.4	21.4	23.4	22.5	15.0	22.5	1.5	0.8			600	600	

\* □ : Capacitance tolerance code  
( ) : Suffix for lead crimped

Note) Part Number marked with ★ is Short Lead Space Product.

## Rating · Dimensions · Quantity

● Rated voltage : 630 V.DC, Capacitance tolerance : ±5 % (J), ± 10 % (K),

Part No.	Cap. ( $\mu$ F)	Dimensions (mm)										Min. order Q'ty		
		L max.	T max.	H max.			F	S		G max.	$\phi$ d	Taping	Bulk	
				Straight	Crimped lead (Suffix B)	Crimped lead (Suffix Q)		Crimped lead (Suffix B)	Crimped lead (Suffix Q)			7.5 mm	Straight	Crimped lead
ECWFD2J473□( )	0.047	12.6	4.4		12.8	12.8		7.5	10.0		0.6	1300		
ECWFD2J563□( )	0.056	12.6	4.7		13.1	13.1		7.5	10.0		0.6	1200		
ECWFD2J683□( )	0.068	12.6	5.0		13.4	13.4		7.5	10.0		0.6	1000		
ECWFD2J823□( )	0.082	12.6	5.4		13.7	13.7		7.5	10.0		0.6	900		
ECWFD2J104□( )	0.10	12.6	5.8	-	14.2	14.2	-	7.5	10.0	-	0.6	700	-	
ECWFD2J124□( )	0.12	12.6	6.2		14.6	14.6		7.5	10.0		0.6	500		
ECWFD2J154□( )	0.15	12.6	6.8		15.2	15.2		7.5	10.0		0.6	400		
ECWFD2J184□( )	0.18	12.6	7.4		15.7	15.7		7.5	10.0		0.6	300		
ECWFD2J224□( )	0.22	12.6	8.1		16.4	16.4		7.5	10.0		0.6	200		
ECWFD2J274□( )	0.27	17.8	6.0	11.0	16.0	18.0	15.0	7.5	15.0	1.5	0.8	1000		
ECWFD2J334□( )	0.33	17.8	6.6	11.5	16.5	18.5	15.0	7.5	15.0	1.5	0.8	900		
ECWFD2J394□( )	0.39	17.8	7.1	12.0	17.0	19.0	15.0	7.5	15.0	1.5	0.8	800		
ECWFD2J474□( )	0.47	17.8	7.8	12.7	17.7	19.7	15.0	7.5	15.0	1.5	0.8	700		
ECWFD2J564□( )	0.56	17.8	8.4	13.3	18.3	20.3	15.0	7.5	15.0	1.5	0.8	600		
ECWFD2J684□( )	0.68	17.8	9.3	14.2	19.2	21.2	15.0	7.5	15.0	1.5	0.8	500		
ECWFD2J824□( )	0.82	17.8	10.2	15.1	20.1	22.1	15.0	7.5	15.0	1.5	0.8	400		
★ ECWFD2J105P( )	1.0	17.8	11.2	16.1	21.1	23.1	15.0	7.5	15.0	1.5	0.8	300		
★ ECWFD2J105Q( )	1.0	17.8	11.2	16.1	21.1	23.1	15.0	7.5	15.0	1.5	0.8	200		
ECWFD2J105□( )	1.0	25.3	8.4	13.5	18.5	20.5	22.5	15.0	22.5	1.5	0.8	1000		
ECWFD2J125□( )	1.2	25.3	9.2	14.3	19.3	21.3	22.5	15.0	22.5	1.5	0.8	900		
ECWFD2J155□( )	1.5	25.3	10.3	15.5	20.5	22.5	22.5	15.0	22.5	1.5	0.8	800		
ECWFD2J185□( )	1.8	25.3	11.2	16.5	21.5	23.5	22.5	15.0	22.5	1.5	0.8	700		
ECWFD2J225□( )	2.2	25.3	12.4	17.7	22.7	24.7	22.5	15.0	22.5	1.5	0.8	600		
ECWFD2J275□( )	2.7	25.3	13.8	19.2	24.2	26.2	22.5	15.0	22.5	1.5	0.8	500		
ECWFD2J335□( )	3.3	25.3	15.3	20.7	25.7	27.7	22.5	15.0	22.5	1.5	0.8	400		
ECWFD2J395□( )	3.9	25.3	16.6	22.1	27.1	29.1	22.5	15.0	22.5	1.5	0.8	300		
ECWFD2J475□( )	4.7	25.3	18.3	23.9	28.9	30.9	22.5	15.0	22.5	1.5	0.8	200		

\* □ : Capacitance tolerance code  
( ) : Suffix for lead crimped

Note) Part Number marked with ★ is Short Lead Space Product.