

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

- Active filter circuit
- High frequency circuit

Explanation of part number

- Standard product

1	2	3	4	5	6	7	8	9	10	11	12																						
E	C	W	F	D																													
Product code		Dielectric & construction			Rated voltage		Capacitance			Cap. Tol.	Suffix																						
					<table><tr><td>2W</td><td>450 V.DC</td></tr><tr><td>2J</td><td>630 V.DC</td></tr></table>		2W	450 V.DC	2J	630 V.DC	<table><tr><td>J</td><td>±5 %</td></tr><tr><td>K</td><td>±10 %</td></tr></table>			J	±5 %	K	±10 %	<table><tr><th>Code</th><th>Lead Form</th></tr><tr><td>Blank</td><td>Straight</td></tr><tr><td>B</td><td>Crimped lead</td></tr><tr><td>Q</td><td>Crimped lead</td></tr><tr><td>C</td><td>Cut lead</td></tr><tr><td>3</td><td>Crimped taping (Ammo)</td></tr><tr><td>4</td><td>Odd size taping</td></tr></table>		Code	Lead Form	Blank	Straight	B	Crimped lead	Q	Crimped lead	C	Cut lead	3	Crimped taping (Ammo)	4	Odd size taping
2W	450 V.DC																																
2J	630 V.DC																																
J	±5 %																																
K	±10 %																																
Code	Lead Form																																
Blank	Straight																																
B	Crimped lead																																
Q	Crimped lead																																
C	Cut lead																																
3	Crimped taping (Ammo)																																
4	Odd size taping																																

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

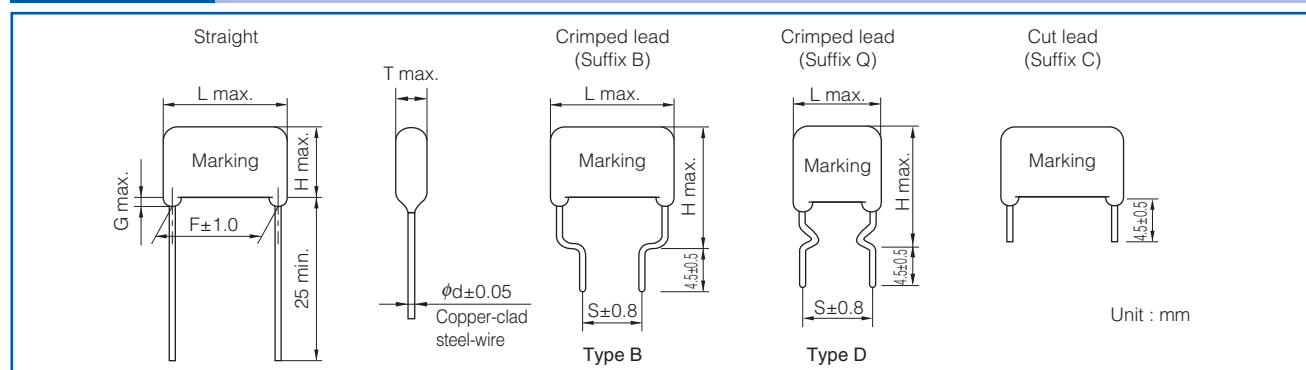
1	2	3	4	5	6	7	8	9	10	11	12																								
E	C	W	F	D																															
Product code		Dielectric & construction			Rated voltage		Capacitance			Suffix 1	Suffix 2																								
					<table><tr><td>2W</td><td>450 V.DC</td></tr><tr><td>2J</td><td>630 V.DC</td></tr></table>		2W	450 V.DC	2J	630 V.DC	<table><tr><th>Code</th><th>Cap. Tol.</th></tr><tr><td>P</td><td>±5 %(J)</td></tr><tr><td>Q</td><td>±10 %(K)</td></tr></table>			Code	Cap. Tol.	P	±5 %(J)	Q	±10 %(K)	<table><tr><th>Code</th><th>Lead Form</th></tr><tr><td>1</td><td>Straight</td></tr><tr><td>B</td><td>Crimped lead</td></tr><tr><td>Q</td><td>Crimped lead</td></tr><tr><td>C</td><td>Cut lead</td></tr><tr><td>3</td><td>Crimped taping (Ammo)</td></tr><tr><td>4</td><td>Odd size taping</td></tr></table>		Code	Lead Form	1	Straight	B	Crimped lead	Q	Crimped lead	C	Cut lead	3	Crimped taping (Ammo)	4	Odd size taping
2W	450 V.DC																																		
2J	630 V.DC																																		
Code	Cap. Tol.																																		
P	±5 %(J)																																		
Q	±10 %(K)																																		
Code	Lead Form																																		
1	Straight																																		
B	Crimped lead																																		
Q	Crimped lead																																		
C	Cut lead																																		
3	Crimped taping (Ammo)																																		
4	Odd size taping																																		

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

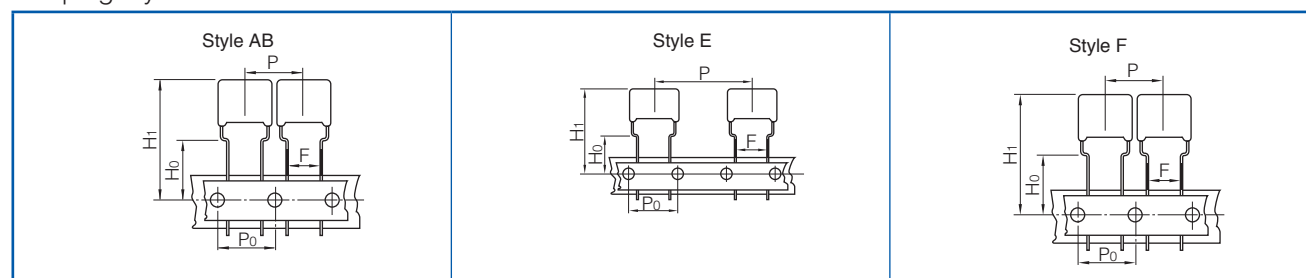


Packaging specifications for bulk package

- 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			○						Ammo	3
		0.47, 0.68, 1.0			○							P3/Q3
		0.10 to 0.39								○		4
		0.47, 0.68, 1.0								○		P4/Q4
	630	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 : $\pm 5\%$ (J), $\pm 10\%$ (K),

Part No.	Cap. (μF)	Dimensions (mm)										Min. order Q'ty			
		L max.	T max.	H max.			F	S		G max.	ød	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() ECWFD2W474Q()	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	
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	—	400		
ECWFD2W684P() ECWFD2W684Q()	0.68	12.6	7.7	12.4	17.4	17.4	10.0	7.5	10.0	1.5	0.6	800			
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	—			
ECWFD2W105P() ECWFD2W105Q()	1.0	12.6	9.2	13.9	18.9	18.9	10.0	7.5	10.0	1.5	0.6	700	600		
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		300		
ECWFD2W155□()	1.5	17.5	9.3	12.5	17.5	19.5	15.0	7.5	15.0	1.5	0.8				
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	—	800		
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				
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 : $\pm 5\%$ (J), $\pm 10\%$ (K),

Part No.	Cap. (μ F)	Dimensions (mm)										Min. order Q'ty		
		L max.	T max.	H max.			F	S		G max.	ϕ 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	–	1000
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	500	1000	1000
ECWFD2J334□()	0.33	17.8	6.6	11.5	16.5	18.5	15.0	7.5	15.0	1.5	0.8	400		
ECWFD2J394□()	0.39	17.8	7.1	12.0	17.0	19.0	15.0	7.5	15.0	1.5	0.8	300		
ECWFD2J474□()	0.47	17.8	7.8	12.7	17.7	19.7	15.0	7.5	15.0	1.5	0.8	200		
ECWFD2J564□()	0.56	17.8	8.4	13.3	18.3	20.3	15.0	7.5	15.0	1.5	0.8	100		
ECWFD2J684□()	0.68	17.8	9.3	14.2	19.2	21.2	15.0	7.5	15.0	1.5	0.8	80		
ECWFD2J824□()	0.82	17.8	10.2	15.1	20.1	22.1	15.0	7.5	15.0	1.5	0.8	60		
★ ECWFD2J105P()	1.0	17.8	11.2	16.1	21.1	23.1	15.0	7.5	15.0	1.5	0.8	50	400	400
ECWFD2J105Q()														
ECWFD2J105□()	1.0	25.3	8.4	13.5	18.5	20.5	22.5	15.0	22.5	1.5	0.8	–	800	900
ECWFD2J125□()	1.2	25.3	9.2	14.3	19.3	21.3	22.5	15.0	22.5	1.5	0.8			
ECWFD2J155□()	1.5	25.3	10.3	15.5	20.5	22.5	22.5	15.0	22.5	1.5	0.8			
ECWFD2J185□()	1.8	25.3	11.2	16.5	21.5	23.5	22.5	15.0	22.5	1.5	0.8			
ECWFD2J225□()	2.2	25.3	12.4	17.7	22.7	24.7	22.5	15.0	22.5	1.5	0.8			
ECWFD2J275□()	2.7	25.3	13.8	19.2	24.2	26.2	22.5	15.0	22.5	1.5	0.8			
ECWFD2J335□()	3.3	25.3	15.3	20.7	25.7	27.7	22.5	15.0	22.5	1.5	0.8			
ECWFD2J395□()	3.9	25.3	16.6	22.1	27.1	29.1	22.5	15.0	22.5	1.5	0.8			
ECWFD2J475□()	4.7	25.3	18.3	23.9	28.9	30.9	22.5	15.0	22.5	1.5	0.8			

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

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