

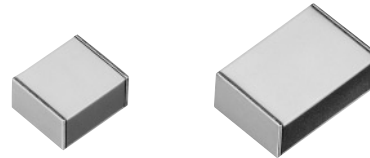
Stacked Metallized PEN Film Chip Capacitor

Type: **ECWU(C)**

Stacked metallized PEN film as dielectric with simple mold-less construction

■ Features

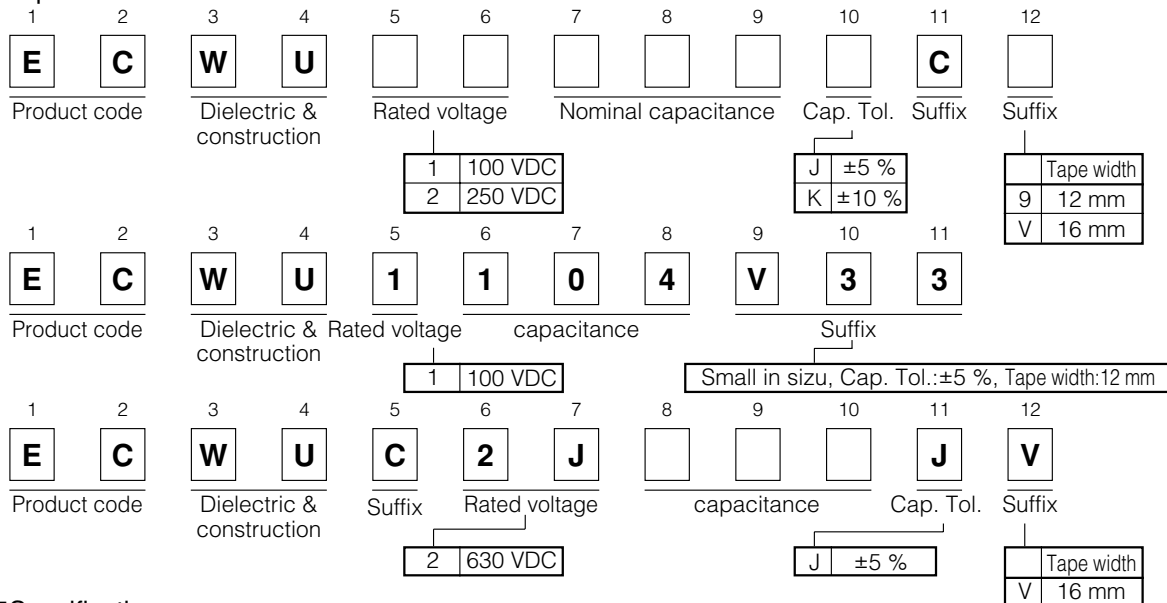
- Small in size
- For reflow soldering
- RoHS directive compliant



■ Recommended Applications

- General purpose (Coupling, By-pass)

■ Explanation of Part Numbers



■ Specifications

Category temp.range (Including temperature-rise on unit surface)	-55 °C to +125 °C	
Rated voltage	100 VDC, 250 VDC, 630 VDC (Derating of rated voltage by 1.25 %/°C more than 85 °C)	
Capacitance range	100 VDC	0.012 μF to 1.0 μF (E12)
	250 VDC	0.0010 μF to 0.12 μF (E12)
	630 VDC	0.022 μF, 0.027 μF, 0.033 μF
Capacitance tolerance	100 VDC	±5 % (J), ±10 % (K) (C ≥ 0.18 μF : ±10 % (K) only)
	250 VDC	±5 % (J), ±10 % (K)
	630 VDC	±5 % (J)
Withstand voltage	Between terminals: Rated volt. (VDC) × 150 % 60 s	
Dissipation factor (tan δ)	tan δ ≤ 1.0 % (20 °C, 1 kHz)	
Insulation resistance (IR)	C ≤ 0.33 μF	100 VDC, 250 VDC, 630 VDC : IR ≥ 3000 MΩ · (20 °C, 100 VDC, 60 s)
	C > 0.33 μF	100 VDC : IR ≥ 1000 MΩ · μF (20 °C, 100 VDC, 60 s)
Soldering conditions	100 VDC	Reflow soldering : 240 °C max. and 60 s max. at more than 220 °C (Temp. at cap. surface) (Please consult us for Reflow 250 °C max. product.)
	250 VDC	
	630 VDC	Reflow soldering : 250 °C max. and 60 s to 150s. at more than 217 °C (Temp. at cap. surface)

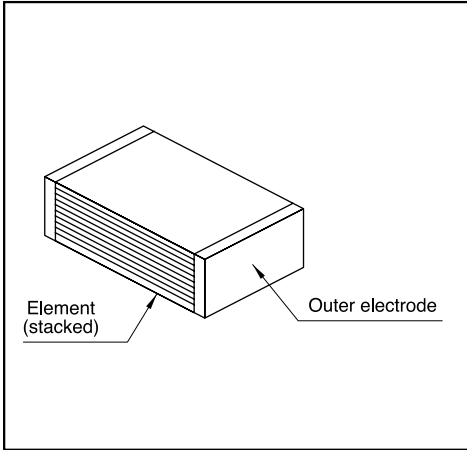
* In case of applying voltage in alternating current (50 Hz or 60 Hz sine wave) to a capacitor with DC rated voltage, please refer to the page of "Permissible voltage (R.M.S) in alternating current corresponding to DC rated voltage".

* Please consult us for capacitance range between 0.15 μF and 1.0 μF. (250 VDC)

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Chip

Construction



Dimensions in mm (not to scale)

$(\pm 0.5)**$
 $(\pm 0.4)*$
 $L \pm 0.2$

$(\pm 0.4)***$
 $W \pm 0.3$

$H \pm 0.2$
 $(\pm 0.3)***$

0.35 ± 0.20 0.35 ± 0.20

* To Be applied only for size Z,X
 ** To Be applied only for size V
 *** To Be applied only for size B,Z,X,V

Size code	L	W	H
E1	4.8	3.3	1.4
E2	4.8	3.3	2.0
E3a	4.8	3.3	2.4
E3	4.8	3.3	2.8
D1	6.0	4.1	1.8
D2	6.0	4.1	2.0
D3	6.0	4.1	2.4
D4	6.0	4.1	2.8
D5	6.0	4.1	3.2
B	6.0	5.0	
Z	7.1	5.0	
Y	7.1	6.3	
X	7.7	5.5	
V	9.8	6.3	

*Refer to the column "Rating, Dimensions & Quantity".

Taping Specification for Automatic Mounting

Refer to the page of taping specifications.

Rating, Dimensions & Quantity/Reel

Capacitance tolerance : $\pm 5\%$ (J), $\pm 10\%$ (K)

Cap. (μ F)	Rated volt. 100 VDC					Rated volt. 250 VDC											
	Part No	Dimensions (mm)			Size code	Q'ty	Part No	Dimensions (mm)			Size code	Q'ty					
		L	W	H				L	W	H							
0.0010	Please use 100 VDC rating ECWU(X)					ECWU2102□C9	4.8	3.3	1.4	E1	3000						
0.0012						ECWU2122□C9	4.8	3.3	1.4	E1							
0.0015						ECWU2155□C9	4.8	3.3	1.4	E1							
0.0018						ECWU2182□C9	4.8	3.3	1.4	E1							
0.0022						ECWU2222□C9	4.8	3.3	1.4	E1							
0.0027						ECWU2272□C9	4.8	3.3	1.4	E1							
0.0033						ECWU2332□C9	4.8	3.3	1.4	E1							
0.0039						ECWU2392□C9	4.8	3.3	1.4	E1							
0.0047						ECWU2472□C9	4.8	3.3	1.4	E1							
0.0056						ECWU2562□C9	4.8	3.3	1.4	E1							
0.0068						ECWU2682□C9	4.8	3.3	1.4	E1							
0.0082						ECWU2822□C9	4.8	3.3	1.4	E1							
0.010						ECWU2103□C9	4.8	3.3	1.4	E1							
0.012						ECWU1123□C9	4.8	3.3	1.4	E1		ECWU2123□C9	4.8	3.3	1.4	E1	2000
0.015						ECWU1153□C9	4.8	3.3	1.4	E1		ECWU2153□C9	4.8	3.3	1.4	E1	
0.018	ECWU1183□C9	4.8	3.3	1.4	E1	ECWU2183□C9	4.8	3.3	2.0	E2							
0.022	ECWU1223□C9	4.8	3.3	1.4	E1	ECWU2223□C9	4.8	3.3	2.0	E2							
0.027	ECWU1273□C9	4.8	3.3	1.4	E1	ECWU2273□C9	4.8	3.3	2.4	E3a							
0.033	ECWU1333□C9	4.8	3.3	1.4	E1	ECWU2333□C9	4.8	3.3	2.8	E3							
0.039	ECWU1393□C9	4.8	3.3	1.4	E1	ECWU2393□C9	6.0	4.1	2.0	D2							
0.047	ECWU1473□C9	4.8	3.3	2.0	E2	ECWU2473□C9	6.0	4.1	2.4	D3							
0.056	ECWU1563□C9	4.8	3.3	2.0	E2	ECWU2563□C9	6.0	4.1	2.8	D4							
0.068	ECWU1683□C9	4.8	3.3	2.4	E3a	ECWU2683□C9	6.0	4.1	3.2	D5							
0.082	ECWU1823□C9	4.8	3.3	2.8	E3	ECWU2823□C9	6.0	5.0	3.2	B							
0.10	ECWU1104□C9	6.0	4.1	1.8	D1	ECWU2104□C9	6.0	5.0	3.8	B	1500						
	ECWU1104V33	4.8	3.3	2.8	E3	ECWU2124□C9	6.0	5.0	4.5	B							
0.12	ECWU1124□C9	6.0	4.1	2.4	D3												
0.15	ECWU1154□C9	6.0	4.1	2.8	D4												
0.18	ECWU1184KC9	7.1	5.0	2.0	Z												
0.22	ECWU1224KC9	7.1	5.0	2.4	Z												
0.27	ECWU1274KC9	7.1	5.0	2.9	Z												
0.33	ECWU1334KC9	7.1	5.0	3.5	Z												
0.39	ECWU1394KCV	7.7	5.5	3.4	X												
0.47	ECWU1474KCV	7.7	5.5	4.0	X												
0.56	ECWU1564KCV	9.8	6.3	3.0	V												
0.68	ECWU1684KCV	9.8	6.3	3.6	V												
0.82	ECWU1824KCV	9.8	6.3	4.3	V												
1.0	ECWU1105KCV	9.8	6.3	5.1	V												

↑ Cap. tol. code

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■ Rating, Dimensions & Quantity/Reel

● Capacitance tolerance : $\pm 5\%$ (J)

Cap. (μF)	Rated volt. 630 VDC					Q'ty
	Part No.	Dimensions (mm)			Size Code	
		L	W	H		
0.022	ECWUC2J223JV	7.1	6.3	3.6	Y	1000
0.027	ECWUC2J273JV	7.1	6.3	4.1	Y	
0.033	ECWUC2J333JV	7.1	6.3	5.1	Y	

■ Recommended for Land Dimensions (mm)

The diagram shows a top-down view of a capacitor with two rectangular electrodes. The distance between the inner edges of the electrodes is labeled 'A'. The distance between the outer edges is labeled 'B'. The height of the electrodes is labeled 'C'. The area between the electrodes is labeled 'Land'. One of the electrodes is labeled 'Electrode'.

Size code	Land dimensions for reflow soldering		
	A	B	C
E1,E2,E3a,E3	2.6	6.6	3.0
D1,D2,D3,D4,D5	3.8	7.8	3.8
B	3.8	7.8	4.6
Z	4.5	9.0	4.6
Y	4.5	9.0	5.7
X	5.1	9.7	5.0
V	7.2	11.9	5.7