

Film Chip Capacitor

Type: **ECWU(C)**

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

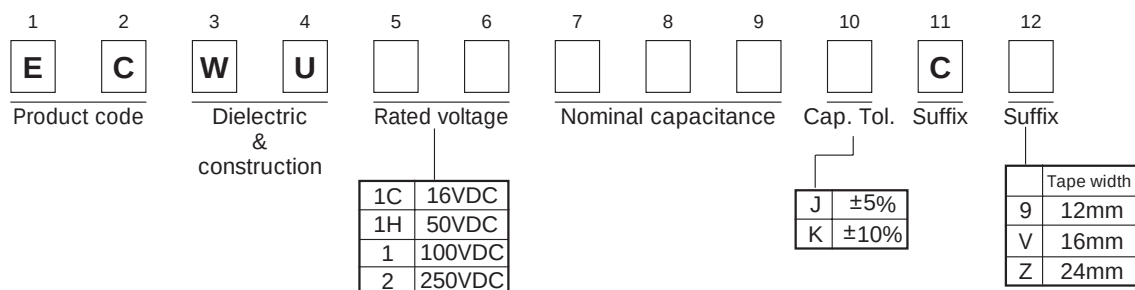
■ Features

- ◆ Small in size
- ◆ Applicable for reflow soldering

■ Recommended Applications

- ◆ Coupling
- ◆ By - pass
- ◆ General purpose

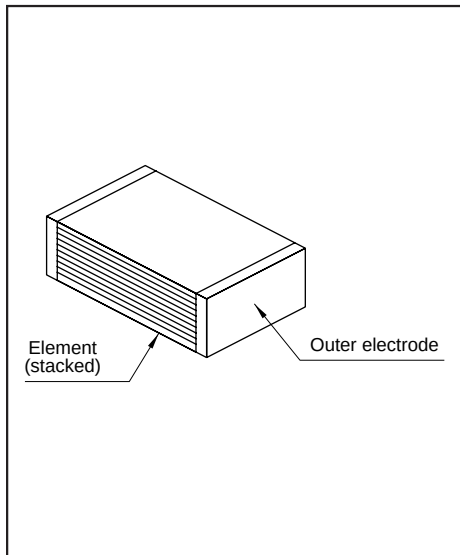
■ Explanation of Part Numbers



■ Specifications

Category temp.range	16VDC, 50VDC: - 55 to + 105℃	
	100VDC, 250VDC: - 40 to + 85℃	
Rated voltage	16VDC, 50VDC, 100VDC, 250VDC	
Capacitance range	16VDC	0.12 to 0.47 μF (E12)
	50VDC	0.056 to 0.22 μF (E12)
	100VDC	0.012 to 1.0 μF (E12)
	250VDC	0.001 to 1.0 μF (E12)
Capacitance tolerance	16VDC,50VDC	± 5%(J)
	100VDC,250VDC	± 10%(K) (100VDC, C≤0.15 μF ± 5%(J), ± 10%(K))
Withstand voltage	Between terminals 16VDC, 50VDC:Rated volt. (VDC)x175% 1 to 5s 100VDC, 250VDC:Rated volt. (VDC)x150% 60s	
Dissipation factor	≤ 1.0%(20℃,1kHz)	
Insulation resistance	C ≤ 0.33 μF	16VDC:≥ 3000MΩ • (20℃,10VDC, 60s) 50VDC:≥ 3000MΩ • (20℃,50VDC, 60s) 100VDC, 250VDC:≥ 3000MΩ • (20℃,100VDC,60s)
	C > 0.33 μF	16VDC:1000MΩ • μF min. (20℃,10VDC, 60s) 100VDC, 250VDC:1000MΩ • μF min. (20℃,100VDC,60s)
Soldering conditions	Reflow soldering 16VDC, 50VDC:240℃ max. and 30 sec max. at more than 210℃ (Temp. at cap. surface) 100VDC, 250VDC:230℃ max. and 30 sec max.at more than 210℃ (Temp.at cap.surface)	

■ Construction



■ Dimensions in mm (not to scale)

Size code	L	Tol.	W	Tol.	H	Tol.
E1	4.8	± 0.2	3.3	± 0.3	1.4	± 0.2
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	± 0.4	4.1	± 0.4	2.0	± 0.3
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	± 0.5	5.0	± 0.4		± 0.3
X	7.7		5.5			
Y	7.1		6.3			
V	9.8		6.3			
U	9.8		8.0			
T	15.2	± 0.5	8.0			
S	15.2		10.0			

0.35±0.2 0.35±0.2

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

■ Taping Specification for Automatic Insertion(Mounting)

Refer to the PDF file of taping specifications.

■ Rating, Dimensions & Quantity/Reel

● Capacitance tolerance : ±5% (J)

Cap. (μF)	Rated volt. 16VDC						Rated volt. 50VDC						
	Part No	Dimensions (mm)			Size code	Q'ty	Part No	Dimensions (mm)			Size code	Q'ty	
		L	W	H				L	W	H			
0.056							ECWU1H563JC9	4.8	3.3	2.0	E2	3000	
0.068							ECWU1H683JC9	4.8	3.3	2.0	E2		
0.082							ECWU1H823JC9	4.8	3.3	2.4	E3a	2000	
0.1							ECWU1H104JC9	4.8	3.3	2.8	E3		
0.12	ECWU1C124JC9	4.8	3.3	1.4	E1	3000	ECWU1H124JC9	6.0	4.1	1.8	D1	3000	
0.15	ECWU1C154JC9	4.8	3.3	2.0	E2		ECWU1H154JC9	6.0	4.1	2.0	D2		
0.18	ECWU1C184JC9	4.8	3.3	2.0	E2	2000	ECWU1H184JC9	6.0	4.1	2.4	D3	2000	
0.22	ECWU1C224JC9	4.8	3.3	2.4	E3a		ECWU1H224JC9	6.0	4.1	2.8	D4		
0.27	ECWU1C274JC9	6.0	4.1	1.8	D1	3000							
0.33	ECWU1C334JC9	6.0	4.1	2.0	D2								
0.39	ECWU1C394JC9	6.0	4.1	2.4	D3	2000							
0.47	ECWU1C474JC9	6.0	4.1	2.8	D4								

■ Example for Land Dimensions (mm)

Size code	Land dimensions		
	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
X	5.1	9.7	5.0
Y	4.5	9.0	5.7
V	7.2	11.9	5.7
U	7.2	11.9	7.2
T	12.6	17.3	7.2
S	12.6	17.3	9.0

■ Rating, Dimensions & Quantity/Reel

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

Cap. (μ F)	Rated volt. 100VDC						Rated volt. 250VDC													
	Part	No	Dimensions (mm)			Size code	Q'ty	Part	No	Dimensions (mm)			Size code	Q'ty						
			L	W	H					L	W	H								
0.001	Please use 100VDC rating ECWU(X)						ECWU2102KC9	4.8	3.3	1.4	E1	3000								
0.0012							ECWU2122KC9	4.8	3.3	1.4	E1									
0.0015							ECWU2155KC9	4.8	3.3	1.4	E1									
0.0018							ECWU2182KC9	4.8	3.3	1.4	E1									
0.0022							ECWU2222KC9	4.8	3.3	1.4	E1									
0.0027							ECWU2272KC9	4.8	3.3	1.4	E1									
0.0033							ECWU2332KC9	4.8	3.3	1.4	E1									
0.0039							ECWU2392KC9	4.8	3.3	1.4	E1									
0.0047							ECWU2472KC9	4.8	3.3	1.4	E1									
0.0056							ECWU2562KC9	4.8	3.3	1.4	E1									
0.0068							ECWU2682KC9	4.8	3.3	1.4	E1									
0.0082							ECWU2822KC9	4.8	3.3	1.4	E1									
0.01							ECWU2103KC9	4.8	3.3	1.4	E1									
0.012							ECWU1123	C9	4.8	3.3	1.4		E1	3000	ECWU2123KC9	4.8	3.3	1.4	E1	2000
0.015							ECWU1153	C9	4.8	3.3	1.4		E1		ECWU2153KC9	4.8	3.3	1.4	E1	
0.018	ECWU1183	C9	4.8	3.3	1.4	E1	ECWU2183KC9	4.8	3.3	2.0	E2									
0.022	ECWU1223	C9	4.8	3.3	1.4	E1	ECWU2223KC9	4.8	3.3	2.0	E2									
0.027	ECWU1273	C9	4.8	3.3	1.4	E1	ECWU2273KC9	4.8	3.3	2.4	E3a									
0.033	ECWU1333	C9	4.8	3.3	1.4	E1	ECWU2333KC9	4.8	3.3	2.8	E3									
0.039	ECWU1393	C9	4.8	3.3	1.4	E1	ECWU2393KC9	6.0	4.1	2.0	D2	3000								
0.047	ECWU1473	C9	4.8	3.3	2.0	E2	ECWU2473KC9	6.0	4.1	2.4	D3									
0.056	ECWU1563	C9	4.8	3.3	2.0	E2	ECWU2563KC9	6.0	4.1	2.8	D4	2000								
0.068	ECWU1683	C9	4.8	3.3	2.4	E3a	ECWU2683KC9	6.0	4.1	3.2	D5									
0.082	ECWU1823	C9	4.8	3.3	2.8	E3	2000	ECWU2823KC9	6.0	5.0	3.2	B	1500							
0.1	ECWU1104	C9	6.0	4.1	1.8	D1		ECWU2104KC9	6.0	5.0	3.8	B								
0.12	ECWU1124	C9	6.0	4.1	2.4	D3	2000	ECWU2124KCV	7.1	6.3	2.8	Y	1000							
0.15	ECWU1154	C9	6.0	4.1	2.8	D4		ECWU2154KCV	7.1	6.3	3.5	Y								
0.18	ECWU1184KC9		7.1	5.0	2.0	Z	1500	ECWU2184KCV	7.1	6.3	4.1	Y								
0.22	ECWU1224KC9		7.1	5.0	2.4	Z		ECWU2224KCV	7.1	6.3	5.1	Y								
0.27	ECWU1274KC9		7.1	5.0	2.9	Z		ECWU2274KCV	9.8	6.3	3.9	V								
0.33	ECWU1334KC9		7.1	5.0	3.5	Z		ECWU2334KCV	9.8	6.3	4.8	V								
0.39	ECWU1394KCV		7.7	5.5	3.4	X	1000	ECWU2394KCV	9.8	8.0	4.4	U								
0.47	ECWU1474KCV		7.7	5.5	4.0	X		ECWU2474KCV	9.8	8.0	5.3	U								
0.56	ECWU1564KCV		9.8	6.3	3.0	V		ECWU2564KCZ	15.2	8.0	3.7	T	750							
0.68	ECWU1684KCV		9.8	6.3	3.6	V		ECWU2684KCZ	15.2	8.0	4.4	T								
0.82	ECWU1824KCV		9.8	6.3	4.3	V		ECWU2824KCZ	15.2	10.0	4.2	S								
1.0	ECWU1105KCV		9.8	6.3	5.1	V		ECWU2105KCZ	15.2	10.0	5.1	S								

 Capacitance tolerance code

※ Please consult us capacitance tolerance $\pm 5\%$ (J).