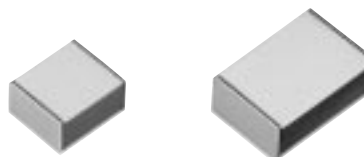


Film Chip Capacitor

Type: **ECWU(C)**

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



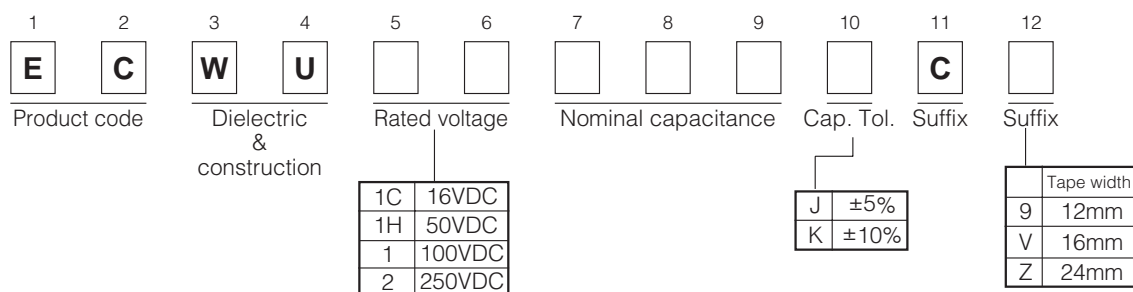
■ Features

- Small in size
- Applicable for reflow soldering

■ Recommended Applications

- Coupling
- By-pass
- General purpose

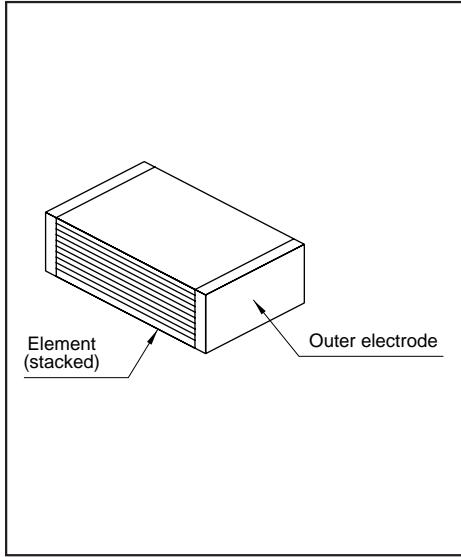
■ Explanation of Part Numbers



■ Specifications

Category temp.range	16VDC, 50VDC : -55 to +105°C	
	100VDC, 250VDC : -40 to +85°C	
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)×175% 1 to 5s 100VDC, 250VDC : Rated volt. (VDC)×150% 60s	
Dissipation factor	≤1.0% (20°C, 1kHz)	
Insulation resistance	C≤0.33 μF	16VDC : ≥3000MΩ · (20°C, 10VDC, 60s) 50VDC : ≥3000MΩ · (20°C, 50VDC, 60s) 100VDC, 250VDC : ≥3000MΩ · (20°C, 100VDC, 60s)
	C>0.33 μF	16VDC : 1000MΩ · μF min. (20°C, 10VDC, 60s) 100VDC, 250VDC : 1000MΩ · μF min. (20°C, 100VDC, 60s)
Soldering conditions	Reflow soldering 16VDC, 50VDC : 240°C max. and 30 s max. at more than 210°C (Temp. at cap. surface) 100VDC, 250VDC : 230°C max. and 30 s max. at more than 210°C (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		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	±0.4	5.0	±0.4		* ±0.3
X	7.7		5.5			
Y	7.1		6.3			
V	9.8	±0.5	6.3	±0.4		* ±0.3
U	9.8		8.0			
T	15.2		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 Mounting

See page 24 for automatic mounting.

Rating, Dimensions & Quantity/Reel

● Capacitance tolerance : ±5% (J), ±10% (K)

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						ECWU1H563□C9	4.8	3.3	2.0	E2	3000	
0.068						ECWU1H683□C9	4.8	3.3	2.0	E2		
0.082						ECWU1H823□C9	4.8	3.3	2.4	E3a		
0.1						ECWU1H104□C9	4.8	3.3	2.8	E3	2000	
0.12	ECWU1C124□C9	4.8	3.3	1.4	E1	3000	ECWU1H124□C9	6.0	4.1	1.8	D1	3000
0.15	ECWU1C154□C9	4.8	3.3	2.0	E2		ECWU1H154□C9	6.0	4.1	2.0	D2	
0.18	ECWU1C184□C9	4.8	3.3	2.0	E2		ECWU1H184□C9	6.0	4.1	2.4	D3	
0.22	ECWU1C224□C9	4.8	3.3	2.4	E3a	2000	ECWU1H224□C9	6.0	4.1	2.8	D4	2000
0.27	ECWU1C274□C9	6.0	4.1	1.8	D1	3000						
0.33	ECWU1C334□C9	6.0	4.1	2.0	D2							
0.39	ECWU1C394□C9	6.0	4.1	2.4	D3							
0.47	ECWU1C474□C9	6.0	4.1	2.8	D4	2000						

↑ Capacitance tolerance code

Recommended for Land Dimensions (mm)

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
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 : ±5%(J), ±10%(K)

Cap. (μF)	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)					ECWU2102	C9	4.8	3.3	1.4	E1	3000	
0.0012						ECWU2122	C9	4.8	3.3	1.4	E1		
0.0015						ECWU2152	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		
0.01						ECWU2103	C9	4.8	3.3	1.4	E1		
0.012						ECWU1123	C9	4.8	3.3	1.4	E1		3000
0.015	ECWU1153	C9	4.8	3.3	1.4	E1							
0.018	ECWU1183	C9	4.8	3.3	1.4	E1							
0.022	ECWU1223	C9	4.8	3.3	1.4	E1							
0.027	ECWU1273	C9	4.8	3.3	1.4	E1							
0.033	ECWU1333	C9	4.8	3.3	1.4	E1							
0.039	ECWU1393	C9	4.8	3.3	1.4	E1							
0.047	ECWU1473	C9	4.8	3.3	2.0	E2							
0.056	ECWU1563	C9	4.8	3.3	2.0	E2							
0.068	ECWU1683	C9	4.8	3.3	2.4	E3a							
0.082	ECWU1823	C9	4.8	3.3	2.8	E3							
0.1	ECWU1104	C9	6.0	4.1	1.8	D1	3000	1500					
0.12	ECWU1124	C9	6.0	4.1	2.4	D3	2000						
0.15	ECWU1154	C9	6.0	4.1	2.8	D4	2000	1000					
0.18	ECWU1184KCV	7.1	5.0	2.0	Z	1500	ECWU2184KCV		7.1	6.3	4.1	Y	
0.22	ECWU1224KCV	7.1	5.0	2.4	Z		ECWU2224KCV		7.1	6.3	5.1	Y	
0.27	ECWU1274KCV	7.1	5.0	2.9	Z		ECWU2274KCV		9.8	6.3	3.9	V	
0.33	ECWU1334KCV	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		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		1000		ECWU2564KCZ	15.2	8.0	3.7	T
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 ±5%(J).