

### Film Chip Capacitor

Type: **ECHU(X)**

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

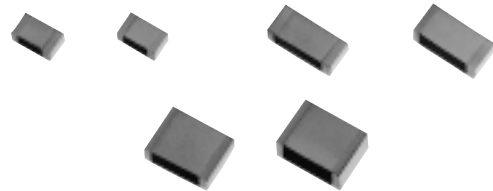
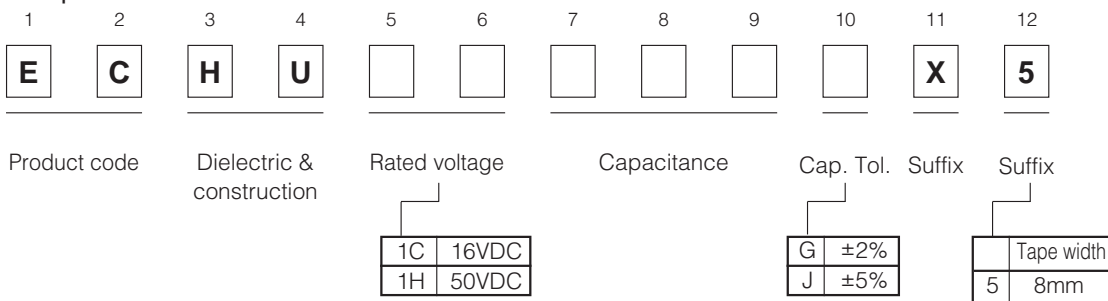
#### ■Features

- Small in size (minimum size 2.0×1.25mm)
- 85°C, 85%RH, W.V. × 1.0 for 500 hours
- Applicable for reflow soldering

#### ■Recommended Applications

- Time - constant
- Filtering
- Oscillation and resonance

#### ■Explanation of Numbers

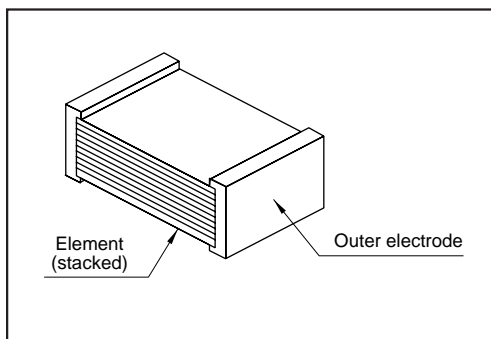


#### ■Specifications

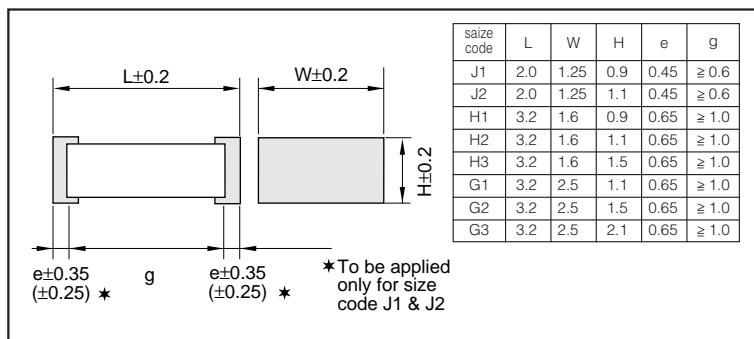
Category temp. range	-55 to +125°C
Rated voltage	16VDC, 50VDC
Capacitance range	0.0001 to 0.1 μF (E12)
Capacitance tolerance	±2%(G), ±5%(J)
Withstand voltage	Between terminals : Rated volt. (VDC)×175% 1 to 5s
Dissipation factor	≤0.6% (20°C, 1kHz)
Insulation resistance	16VDC : ≥ 3000MΩ (20°C, 10VDC 60s) 50VDC : ≥ 3000MΩ (20°C, 50VDC 60s)
Soldering conditions	Reflow soldering : 260°C max. and 30sec max. at more than 230°C (Temp. at cap. surface)

\* Flow soldering Type ECHU(B) is available. Please contact the home page (<http://www.maco.panasonic.co.jp>)

#### ■Construction



#### ■Dimensions in mm (not to scale)



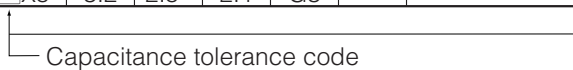
■ Taping Specification for Automatic Insertion(Mounting)

Refer to the PDF file of the taping specification.

■ Rating, Dimensions & Quantity/Reel

● Capacitance tolerance : ±2%(G), ±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							
0.0001	Please use 50VDC rating of ECHU(X)					ECHU1H101 X5	2.0	1.25	0.9	J1	3000						
0.00012						ECHU1H121 X5	2.0	1.25	0.9	J1							
0.00015						ECHU1H151 X5	2.0	1.25	0.9	J1							
0.00018						ECHU1H181 X5	2.0	1.25	0.9	J1							
0.00022						ECHU1H221 X5	2.0	1.25	0.9	J1							
0.00027						ECHU1H271 X5	2.0	1.25	0.9	J1							
0.00033						ECHU1H331 X5	2.0	1.25	0.9	J1							
0.00039						ECHU1H391 X5	2.0	1.25	0.9	J1							
0.00047						ECHU1H471 X5	2.0	1.25	0.9	J1							
0.00056						ECHU1H561 X5	2.0	1.25	0.9	J1							
0.00068						ECHU1H681 X5	2.0	1.25	0.9	J1							
0.00082						ECHU1H821 X5	2.0	1.25	0.9	J1							
0.001						ECHU1H102 X5	2.0	1.25	0.9	J1							
0.0012						ECHU1H122 X5	2.0	1.25	0.9	J1							
0.0015						ECHU1H152 X5	2.0	1.25	0.9	J1							
0.0018						ECHU1H182 X5	2.0	1.25	0.9	J1							
0.0022						ECHU1H222 X5	2.0	1.25	0.9	J1							
0.0027						ECHU1H272 X5	2.0	1.25	0.9	J1							
0.0033						ECHU1C332 X5	2.0	1.25	0.9	J1		ECHU1H332 X5	3.2	1.6	0.9	H1	2000
0.0039						ECHU1C392 X5	2.0	1.25	0.9	J1		ECHU1H392 X5	3.2	1.6	0.9	H1	
0.0047	ECHU1C472 X5	2.0	1.25	0.9	J1	ECHU1H472 X5	3.2	1.6	0.9	H1							
0.0056	ECHU1C562 X5	2.0	1.25	0.9	J1	ECHU1H562 X5	3.2	1.6	0.9	H1							
0.0068	ECHU1C682 X5	2.0	1.25	0.9	J1	ECHU1H682 X5	3.2	1.6	0.9	H1							
0.0082	ECHU1C822 X5	2.0	1.25	1.1	J2	ECHU1H822 X5	3.2	1.6	1.1	H2							
0.01	ECHU1C103 X5	2.0	1.25	1.1	J2	ECHU1H103 X5	3.2	1.6	1.1	H2							
0.012	ECHU1C123 X5	3.2	1.6	0.9	H1	ECHU1H123 X5	3.2	2.5	1.1	G1							
0.015	ECHU1C153 X5	3.2	1.6	0.9	H1	ECHU1H153 X5	3.2	2.5	1.1	G1							
0.018	ECHU1C183 X5	3.2	1.6	0.9	H1	ECHU1H183 X5	3.2	2.5	1.5	G2							
0.022	ECHU1C223 X5	3.2	1.6	0.9	H1	ECHU1H223 X5	3.2	2.5	1.5	G2							
0.027	ECHU1C273 X5	3.2	1.6	1.1	H2	ECHU1H273 X5	3.2	2.5	1.5	G2							
0.033	ECHU1C333 X5	3.2	1.6	1.1	H2	ECHU1H333 X5	3.2	2.5	2.1	G3							
0.039	ECHU1C393 X5	3.2	1.6	1.5	H3	ECHU1H393 X5	3.2	2.5	2.1	G3							
0.047	ECHU1C473 X5	3.2	1.6	1.5	H3	Please use 50VDC rating of ECHU(C)											
0.056	ECHU1C563 X5	3.2	2.5	1.5	G2												
0.068	ECHU1C683 X5	3.2	2.5	1.5	G2												
0.082	ECHU1C823 X5	3.2	2.5	2.1	G3												
0.1	ECHU1C104 X5	3.2	2.5	2.1	G3												



■ Example for Land Dimensions (mm)

Electrode

Land

C

A

B

Size Code	Land dimensions		
	Reflow soldering		
	A	B	C
J1,J2	0.8	2.4	1.1
H1,H2,H3	1.8	3.6	1.4
G1,G2,G3	1.8	3.6	2.3