

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

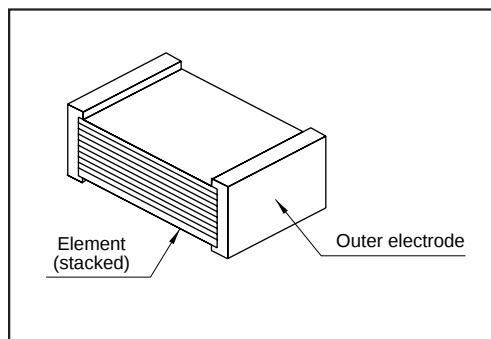
1	2	3	4	5	6	7	8	9	10	11	12												
E	C	H	U							X	5												
Product code		Dielectric & construction		Rated voltage		Capacitance		Cap. Tol.		Suffix	Suffix												
				<table><tr><td>1C</td><td>16VDC</td></tr><tr><td>1H</td><td>50VDC</td></tr></table>		1C	16VDC	1H	50VDC			<table><tr><td>G</td><td>±2%</td></tr><tr><td>J</td><td>±5%</td></tr></table>		G	±2%	J	±5%		<table><tr><td></td><td>Tape width</td></tr><tr><td>5</td><td>8mm</td></tr></table>		Tape width	5	8mm
1C	16VDC																						
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■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)

size code	L	W	H	e	g
J1	2.0	1.25	0.9	0.45	≥ 0.6
J2	2.0	1.25	1.1	0.45	≥ 0.6
H1	3.2	1.6	0.9	0.65	≥ 1.0
H2	3.2	1.6	1.1	0.65	≥ 1.0
H3	3.2	1.6	1.5	0.65	≥ 1.0
G1	3.2	2.5	1.1	0.65	≥ 1.0
G2	3.2	2.5	1.5	0.65	≥ 1.0
G3	3.2	2.5	2.1	0.65	≥ 1.0

$L \pm 0.2$
 $W \pm 0.2$
 $H \pm 0.2$
 $e \pm 0.35 (\pm 0.25) *$
 g

*To be applied only for size code J1 & J2

■Taping Specification for Automatic Insertion(Mounting)

Refer to the PDF file of the taping specification.

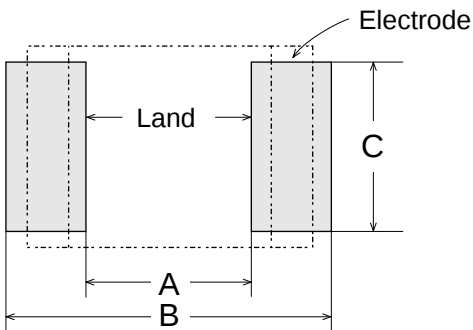
■Rating, Dimensions & Quantity/Reel

●Capacitance tolerance : $\pm 2\%$ (G), $\pm 5\%$ (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							

Capacitance tolerance code

■Example for Land Dimensions (mm)



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