



THE DATASHEET OF ECH-U1H221JB5

Film Chip Capacitor

Type: **ECHU(B)**

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 both flow and reflow soldering

■Recommended Applications

- ◆ Time-constant
- ◆ Filtering
- ◆ Oscillation and resonance

■Explanation of Part Numbers

1

2

3

4

5

6

7

8

9

10

11

12

E

C

H

U

B

Product code

Dielectric & construction

Rated voltage

Capacitance

Cap. Tol.

Suffix

Suffix

1C

16VDC

1H

50VDC

G

±2%

J

±5%

Tape width

5

8mm

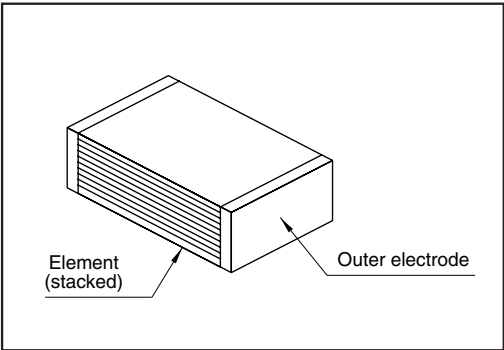
9

12mm

■Specifications

Category temp. range	−5 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	Flow soldering : 260°C max. 5sec max. Reflow soldering : 260°C max. and 30sec max. at more than 230°C (Temp. at cap. surface)

■Construction



■Dimensions in mm (not to scale)

L±0.2

(±0.3) *
W±0.2

H±0.2

0.35±0.20

0.35±0.20

★ To be applied only for size code E1 & E2

Size code	L	W	H
J1	2.0	1.25	0.8
J2	2.0	1.25	1.0
H1	3.2	1.6	0.8
H2	3.2	1.6	1.0
H3	3.2	1.6	1.4
G1	3.2	2.5	1.0
G2	3.2	2.5	1.4
G3	3.2	2.5	2.0
E1	4.8	3.3	1.4
E2	4.8	3.3	2.0

■Taping Specification for Automatic Insertion(Mounting)

Refer to the PDF file of taping specifications

■Rating, Dimensions & Quantity/Reel

Cap. (μF)	Rated volt. 16VDC						Rated volt. 50VDC													
	Part No.	Dimensions (mm)			Code	Q'ty	Part No.	Dimensions (mm)			Code	Q'ty								
		L	W	H				L	W	H										
0.0001	Please use 50VDC rating of ECHU(B)						ECHU1H101	B5	2.0	1.25	0.8	J1	3000							
0.00012							ECHU1H121	B5	2.0	1.25	0.8	J1								
0.00015							ECHU1H151	B5	2.0	1.25	0.8	J1								
0.00018							ECHU1H181	B5	2.0	1.25	0.8	J1								
0.00022							ECHU1H221	B5	2.0	1.25	0.8	J1								
0.00027							ECHU1H271	B5	2.0	1.25	0.8	J1								
0.00033							ECHU1H331	B5	2.0	1.25	0.8	J1								
0.00039							ECHU1H391	B5	2.0	1.25	0.8	J1								
0.00047							ECHU1H471	B5	2.0	1.25	0.8	J1								
0.00056							ECHU1H561	B5	2.0	1.25	0.8	J1								
0.00068							ECHU1H681	B5	2.0	1.25	0.8	J1								
0.00082							ECHU1H821	B5	2.0	1.25	0.8	J1								
0.001							ECHU1H102	B5	2.0	1.25	0.8	J1								
0.0012							ECHU1H122	B5	2.0	1.25	0.8	J1								
0.0015							ECHU1H152	B5	2.0	1.25	0.8	J1								
0.0018							ECHU1H182	B5	2.0	1.25	0.8	J1								
0.0022							ECHU1H222	B5	2.0	1.25	0.8	J1								
0.0027							ECHU1H272	B5	2.0	1.25	0.8	J1								
0.0033							ECHU1C332	B5	2.0	1.25	0.8	J1		ECHU1H332	B5	3.2	1.6	0.8	H1	2000
0.0039							ECHU1C392	B5	2.0	1.25	0.8	J1		ECHU1H392	B5	3.2	1.6	0.8	H1	
0.0047	ECHU1C472	B5	2.0	1.25	0.8	J1	ECHU1H472	B5	3.2	1.6	0.8	H1								
0.0056	ECHU1C562	B5	2.0	1.25	0.8	J1	ECHU1H562	B5	3.2	1.6	0.8	H1								
0.0068	ECHU1C682	B5	2.0	1.25	0.8	J1	ECHU1H682	B5	3.2	1.6	0.8	H1								
0.0082	ECHU1C822	B5	2.0	1.25	1.0	J2	ECHU1H822	B5	3.2	1.6	1.0	H2								
0.01	ECHU1C103	B5	2.0	1.25	1.0	J2	ECHU1H103	B5	3.2	1.6	1.0	H2								
0.012	ECHU1C123	B5	3.2	1.6	0.8	H1	ECHU1H123	B5	3.2	2.5	1.0	G1	3000							
0.015	ECHU1C153	B5	3.2	1.6	0.8	H1	ECHU1H153	B5	3.2	2.5	1.0	G1								
0.018	ECHU1C183	B5	3.2	1.6	0.8	H1	ECHU1H183	B5	3.2	2.5	1.4	G2								
0.022	ECHU1C223	B5	3.2	1.6	0.8	H1	ECHU1H223	B5	3.2	2.5	1.4	G2								
0.027	ECHU1C273	B5	3.2	1.6	1.0	H2	ECHU1H273	B5	3.2	2.5	1.4	G2								
0.033	ECHU1C333	B5	3.2	1.6	1.0	H2	ECHU1H333	B5	3.2	2.5	2.0	G3								
0.039	ECHU1C393	B5	3.2	1.6	1.4	H3	ECHU1H393	B5	3.2	2.5	2.0	G3								
0.047	ECHU1C473	B5	3.2	1.6	1.4	H3	ECHU1H473	B9	4.8	3.3	1.4	E1								
0.056	ECHU1C563	B5	3.2	2.5	1.4	G2	ECHU1H563	B9	4.8	3.3	1.4	E1	3000							
0.068	ECHU1C683	B5	3.2	2.5	1.4	G2	ECHU1H683	B9	4.8	3.3	1.4	E1								
0.082	ECHU1C823	B5	3.2	2.5	2.0	G3	ECHU1H823	B9	4.8	3.3	2.0	E2								
0.1	ECHU1C104	B5	3.2	2.5	2.0	G3	ECHU1H104	B9	4.8	3.3	2.0	E2								

Capacitance tolerance code G, J

■Example for Land Dimensions (mm)

Code	Land dimensions					
	Flow soldering			Reflow soldering		
	A	B	C	A	B	C
J1	1.0	2.7	1.1	1.0	2.7	1.1
J2	1.0	2.7	1.1	1.0	2.7	1.1
H1	2.2	3.8	1.4	2.2	3.8	1.4
H2	2.2	3.8	1.4	2.2	3.8	1.4
H3	2.2	3.8	1.4	2.2	3.8	1.4
G1	2.2	3.8	2.3	2.2	3.8	2.3
G2	2.2	3.8	2.3	2.2	3.8	2.3
G3	2.2	3.8	2.3	2.2	3.8	2.3
E1	2.6	6.6	3.0	2.6	6.6	3.0
E2	2.6	6.6	3.0	2.6	6.6	3.0

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