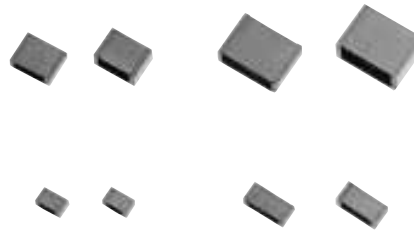


### Film Chip Capacitor

Type: **ECHU** (High grade)

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



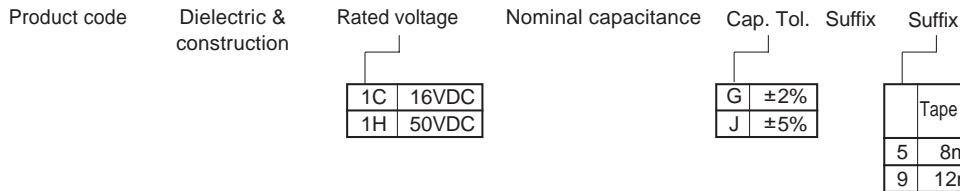
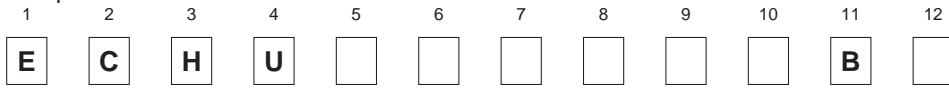
#### ■ Features

- 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

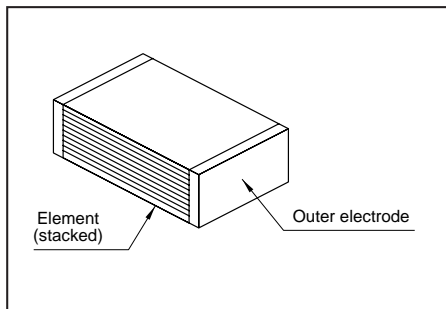
#### ■ Explanation of Part Numbers



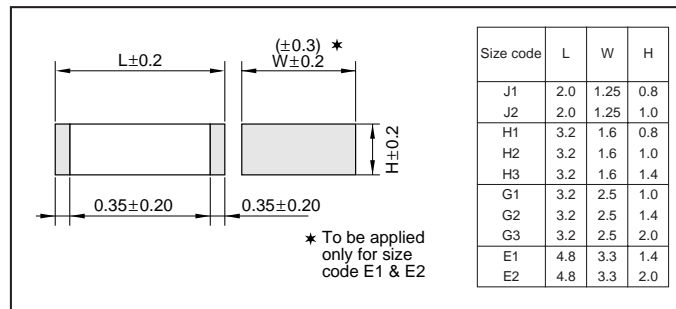
#### ■ Specifications

Operating 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	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)



### Rating, Dimensions & Quantity/Reel

Cap. (μF)	Rating volt. 16VDC						Rating volt. 50VDC											
	Part No.	Dimensions (mm)			Code	Qty	Part No.	Dimensions (mm)			Code	Qty						
		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		3000	ECHU1H332 B5	3.2	1.6	0.8	H1
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								
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								
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