

Chip

### Stacked Metallized PEN Film Chip Capacitor

Type: **ECWU(V16)**

Stacked metallized PEN film dielectric with simple mold-less construction

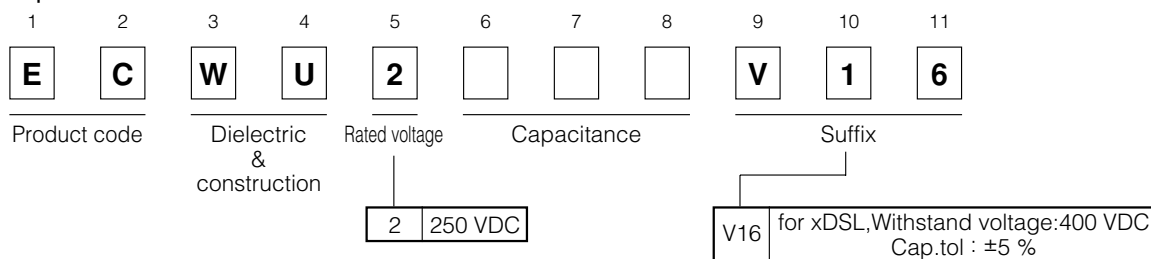
#### ■ Features

- Small in size
- For reflow soldering
- RoHS directive compliant

#### ■ Recommended Applications

- DC Blocking for xDSL

#### ■ Explanation of Part Numbers



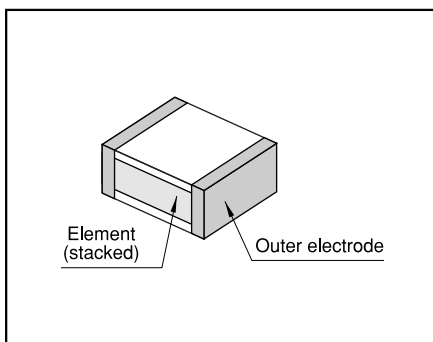
#### ■ Specifications

Category temp.range (Including temperature-rise on unit surface)	-55 °C to +85 °C
Rated voltage	250 VDC
Capacitance range	0.0010 µF to 0.12 µF (E12)
Capacitance tolerance	±5 %(J)
Withstand voltage	Between terminals 400 VDC 60 s
Dissipation factor (tanδ)	tanδ ≤ 1.0 % (20 °C, 1 kHz)
Insulation resistance (IR)	IR ≥ 3000 MΩ (20 °C, 100 VDC, 60 s)
Soldering conditions	Reflow soldering : 240 °C max. and 60 sec max. at more than 220 °C (Temp. at cap. surface) (Please consult us for Reflow 250 °C max product.)

\* Application of this capacitor is limited to DC Blocking for xDSL, such as ADSL.

\* Please consult us for 400 VDC rating product.

#### ■ Construction



#### ■ Dimensions in mm (not to scale)

Size code	L	W	H
E1	4.8	3.3	1.4
E2	4.8	3.3	2.0
E3a	4.8	3.3	2.4
E3	4.8	3.3	2.8
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	*

\* To be applied only for size code B

\* Refer to the column "Rating, Dimensions & Quantity".

Design, Specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use. Whenever a doubt about safety arises from this product, please inform us immediately for technical consultation without fail.

### ■ Taping Specification for Automatic Mounting

Refer to the page of taping specifications.

### ■ Rating, Dimensions & Quantity/Reel

● Capacitance tolerance :  $\pm 5\%$  (J)

Cap. ( $\mu\text{F}$ )	Rated volt. 250 VDC					Q'ty
	Part No	Dimensions (mm)			Size code	
		L	W	H		
0.0010	ECWU2102V16	4.8	3.3	1.4	E1	3000
0.0012	ECWU2122V16	4.8	3.3	1.4	E1	
0.0015	ECWU2152V16	4.8	3.3	1.4	E1	
0.0018	ECWU2182V16	4.8	3.3	1.4	E1	
0.0022	ECWU2222V16	4.8	3.3	1.4	E1	
0.0027	ECWU2272V16	4.8	3.3	1.4	E1	
0.0033	ECWU2332V16	4.8	3.3	1.4	E1	
0.0039	ECWU2392V16	4.8	3.3	1.4	E1	
0.0047	ECWU2472V16	4.8	3.3	1.4	E1	
0.0056	ECWU2562V16	4.8	3.3	1.4	E1	
0.0068	ECWU2682V16	4.8	3.3	1.4	E1	
0.0082	ECWU2822V16	4.8	3.3	1.4	E1	
0.010	ECWU2103V16	4.8	3.3	1.4	E1	
0.012	ECWU2123V16	4.8	3.3	1.4	E1	
0.015	ECWU2153V16	4.8	3.3	1.4	E1	
0.018	ECWU2183V16	4.8	3.3	2.0	E2	
0.022	ECWU2223V16	4.8	3.3	2.0	E2	
0.027	ECWU2273V16	4.8	3.3	2.4	E3a	2000
0.033	ECWU2333V16	4.8	3.3	2.8	E3	
0.039	ECWU2393V16	6.0	4.1	2.0	D2	
0.047	ECWU2473V16	6.0	4.1	2.4	D3	2000
0.056	ECWU2563V16	6.0	4.1	2.8	D4	
0.068	ECWU2683V16	6.0	4.1	3.2	D5	
0.082	ECWU2823V16	6.0	5.0	3.2	B	1500
0.10	ECWU2104V16	6.0	5.0	3.8	B	
0.12	ECWU2124V16	6.0	5.0	4.5	B	

### ■ Recommended for Land Dimensions (mm)

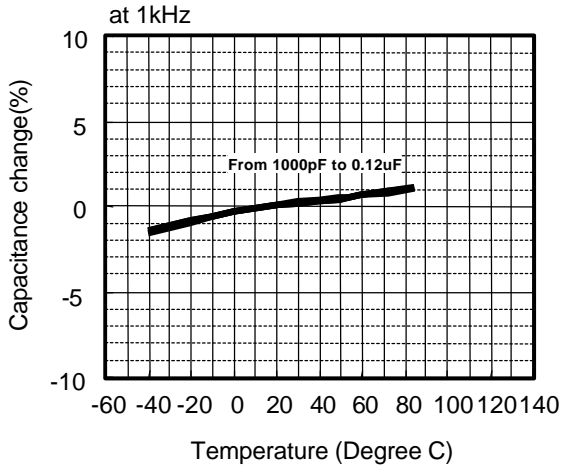
Size code	Land dimensions for reflow soldering		
	A	B	C
E1, E2, E3a, E3	2.6	6.6	3.0
D2, D3, D4, D5	3.8	7.8	3.8
B	3.8	7.8	4.6

\* It is not warrantable that you can mount the capacitor without trouble under all the mounting condition when "Recommender for Land dimensions" is adopted.

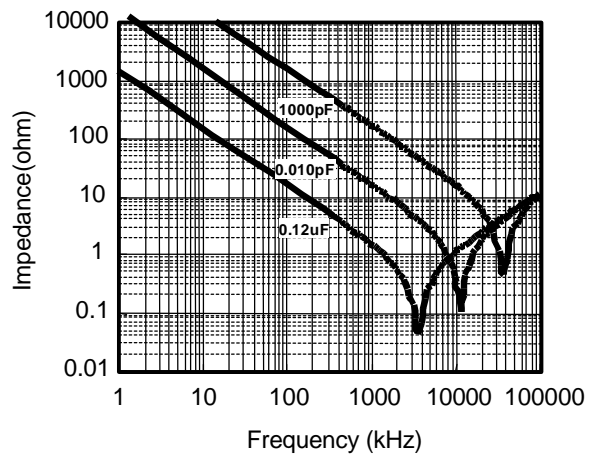
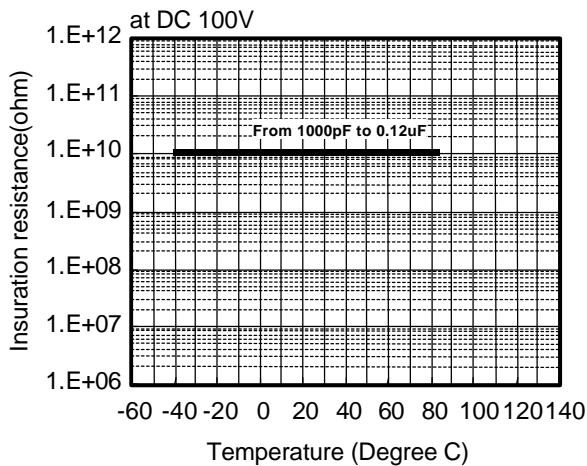
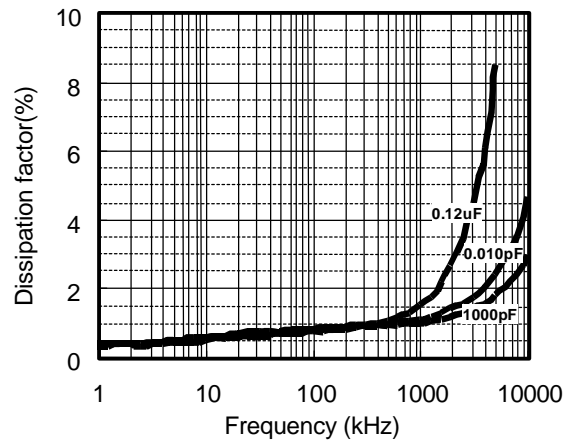
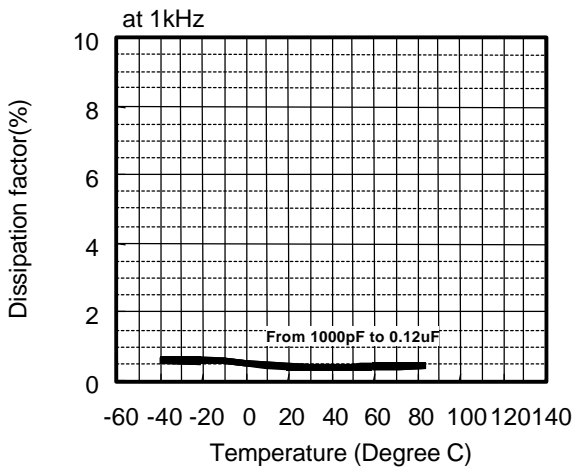
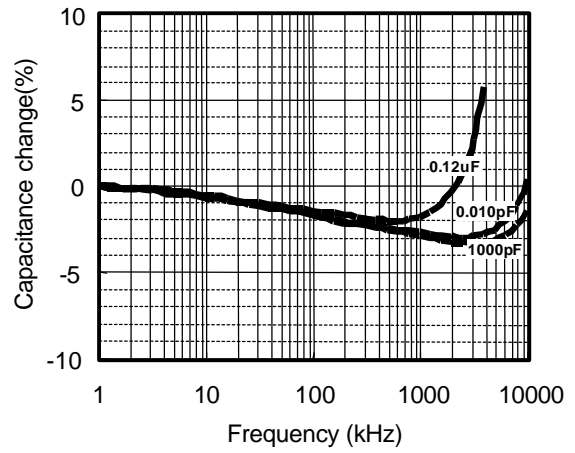
**ECWU (V16) Type (for xDSL) DC250V series (Stacked Metallized Film)**

**Electrical Characteristics < Typical Data >**

**Temperature Characteristics**

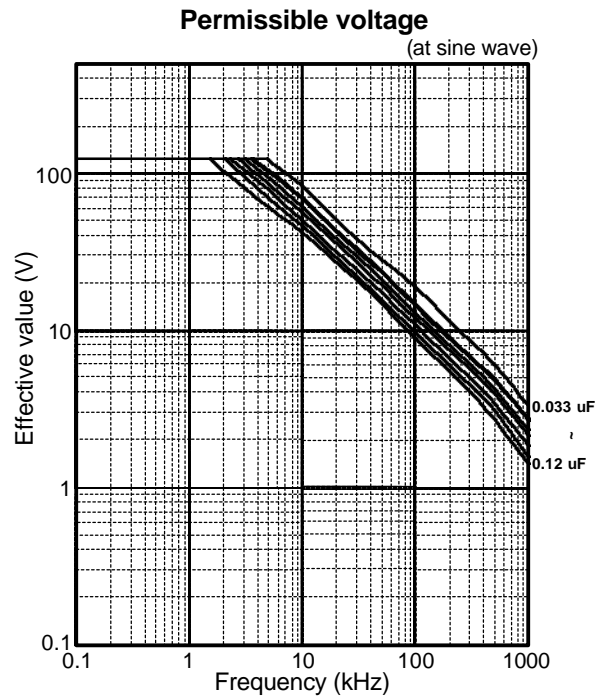
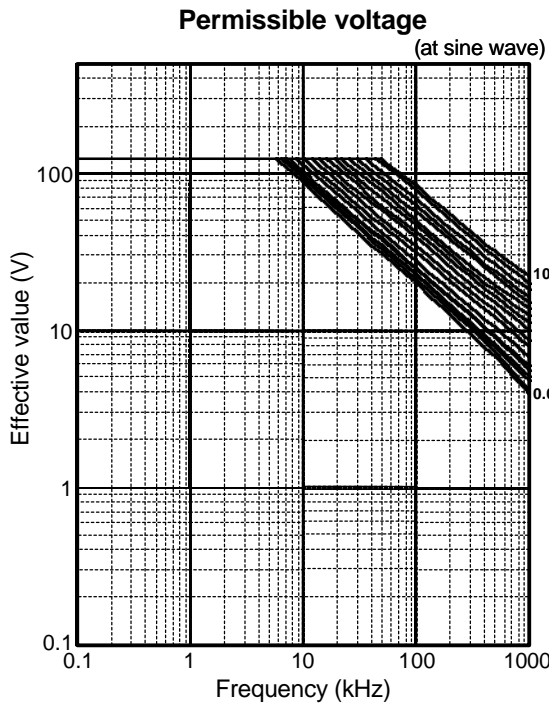
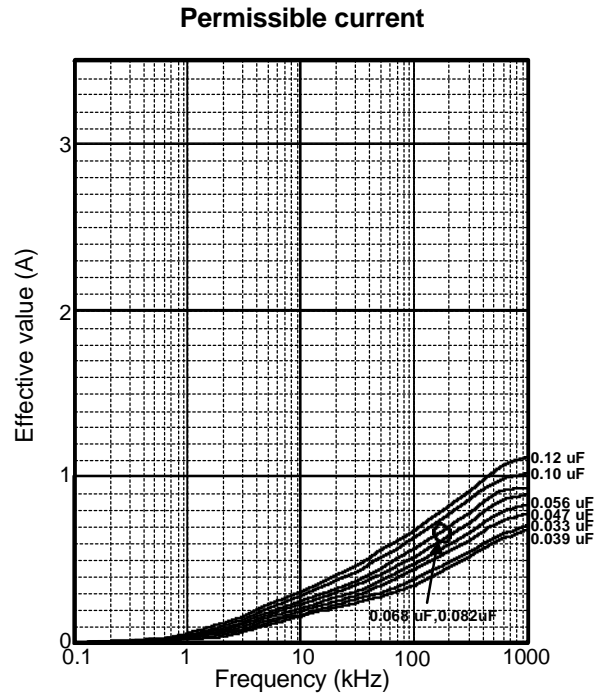
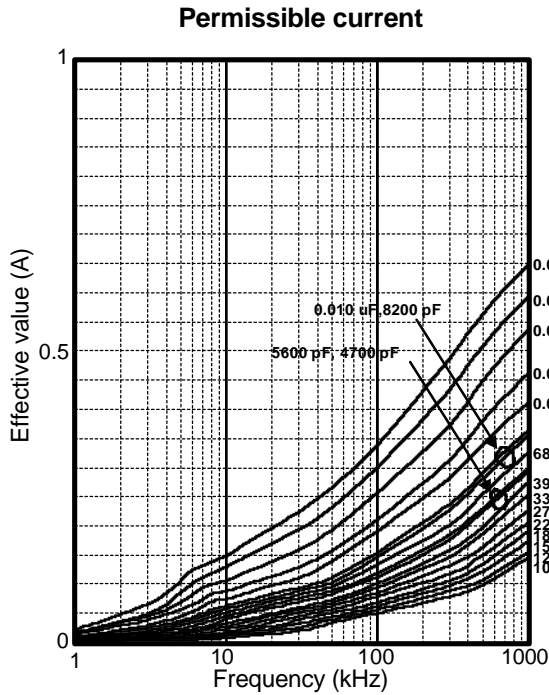


**Frequency Characteristics**



**ECWU (V16) Type DC250V series (Stacked Metallized Film)**

**Applicable Specifications**



\* Please consult Panasonic if your condition exceeds the above spec.  
 \*Permissible voltage graph is the case of sine waveform. When you use this product, peak voltage must not exceed DC rated voltage.  
 \*The current<sub>(0-P)</sub> value is calculated using nominal capacitance.



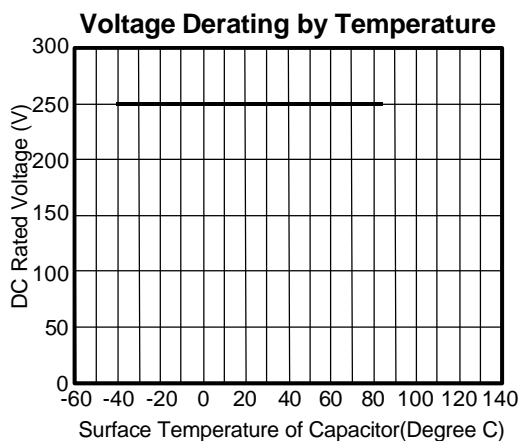
## ECWU (V16) Type DC250V series (Stacked Metallized Film)

### Applicable Specifications

#### Pulse Handling Capability (dv/dt) (Max 10000cycles)

Rating Voltage	Capacitance Value(uF)	Code	dv/dt(V/us)	Current <sub>(o.p)</sub> (A)
DC 250V	0.0010	102	615	0.62
	0.0012	122		0.74
	0.0015	152		0.92
	0.0018	182		1.11
	0.0022	222		1.35
	0.0027	272		1.66
	0.0033	332		2.03
	0.0039	392		2.40
	0.0047	472	360	1.69
	0.0056	562		2.02
	0.0068	682		2.45
	0.0082	822		2.95
	0.010	103		3.60
	0.012	123		4.32
	0.015	153		5.40
	0.018	183		6.48
	0.022	223		7.92
	0.027	273		9.72
	0.033	333		11.88

Rating Voltage	Capacitance Value(uF)	Code	dv/dt(V/us)	Current <sub>(o.p)</sub> (A)
DC 250V	0.039	393	240	9.36
	0.047	473		11.28
	0.056	563		13.44
	0.068	683		16.32
	0.082	823		19.68
	0.10	104		24.00
	0.12	124		28.80



\* Please consult Panasonic if your condition exceeds the above spec.

\*Permissible voltage graph is the case of sine waveform. When you use this product, peak voltage must not exceed DC rated voltage.

\*The current<sub>(o.p)</sub> value is calculated using nominal capacitance.