# **Panasonic** Electric Double Layer Capacitors (Gold Capacitor)

# Stacked Coin Type

Series : SE Low temperature assured product

## Features

- Endurance : +70 °C 1000 h
- Category temperature range : -40 °C to +70 °C
- Automatic insertion available
- RoHS compliant

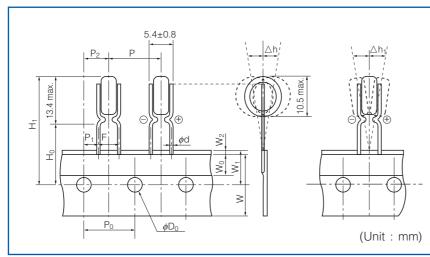
#### **Recommended applications**

• Memory back-up for video and audio equipment, cameras, telephones, printers, data terminals, rice cookers and intelligent remote controls.

#### Specifications

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Category temp. range	–40 °C to +70 °C			
Maximum operating voltage	5.5 V.DC			
Nominal cap.range	0.22 F			
Characteristics at low temperature	Capacitance change	±30 % of initial measured value at +20 °C (at -40 °C)		
	Internal resistance	≤7 times of initial measured value at +20 °C (at -40 °C)		
Endurance	After 1000 hours application of 5.5 V.DC at +70 °C, the capacitor shall meet the following limits.			
	Capacitance change ±30 % of initial measured value			
	Internal resistance	≤4 times of initial specified value		
Shelf life	After 1000 hours storage at +70 °C without load, the capacitor shall meet the specified			
Shell life	limits for Endurance.			

### Dimensions in mm(not to scale)



Dimensions	Nominal	Tolerance
<i>ø</i> d	0.55 ±0.05	
Po	12.7	±0.2
F	5.0	+0.8 -0.2
W	18.0	±0.5
Wo	5.5 ≦	-
W1	9.0	±0.5
W2	0 to 3.0	-
Ho	16.4	±0.5
$\phi D \circ$	4.0	±0.2
Р	12.7	±1.0
P1	3.85	±0.50
P <sub>2</sub>	6.35	±1.00
$\Delta h$ , $\Delta h_1$	0	±1.0
H1	30.3 ≧	-

#### **Characteristics list**

Maximu operatir voltage (V.DC)	g Capacitance	Capacitance tolerance (F)	Internal resistance (Initial specified value) (Ω) at 1kHz	Recommended discharge current (µA)	Part number	Mass (Reference value) (g)	Min. packaging q'ty (pcs)
5.5	0.22	0.176 to 0.396	≦ 75	300 or less	EECSE0H224N	1.0	1000

Note: 1. When ordering please observe the minimum packaging quantity.

2. When the surface mount component goes through UV or a heat oven to affix the adhesive glue, the capacitor's surface temperature should not exceed 100 °C for more than 60 seconds (maximum temperature should not exceed 105 °C)

3. Do not use reflow soldering. (IR, Atmosphere heating methods, etc.)

Please refer to the page of "Application guidelines".

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use Should a safety concern arise regarding this product, please be sure to contact us immediately.



# **Stacked Coin Type**

Series : SE

# Features

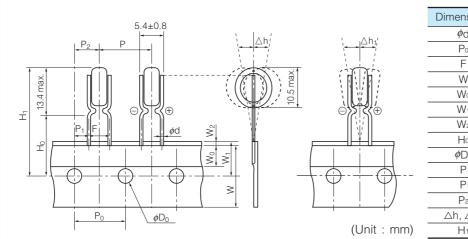
- Endurance : +70 °C 1000 h
- Automatic insertion available
- RoHS compliant

#### **Recommended applications**

• Memory back-up for video and audio equipment, cameras, telephones, printers, data terminals, rice cookers and intelligent remote controls.

Specifications					
Category temp. range	−25 °C to +70 °C				
Maximum operating voltage	5.5 V.DC				
Nominal cap.range	0.22 F				
Characteristics at low temperature	Capacitance change	±30 % of initial measured value at +20 °C (at -25 °C)			
	Internal resistance	≤5 times of initial measured value at +20 °C (at -25 °C)			
Endurance	After 1000 hours application of 5.5 V.DC at +70 °C, the capacitor shall meet the following limits.				
	Capacitance change	Capacitance change ±30 % of initial measured value			
	Internal resistance	≤4 times of initial specified value			
Shelf life	After 1000 hours storage at +70 °C without load, the capacitor shall meet the specified limits for Endurance.				

# Dimensions in mm(not to scale)



Dimensions	Nominal	Tolerance
<i>ø</i> d	0.55	±0.05
Po	12.7	±0.2
F	5.0	+0.8 -0.2
W	18.0	±0.5
Wo	5.5 ≦	-
W <sub>1</sub>	9.0	±0.5
W2	0 to 3.0	-
Ho	16.4	±0.5
$\phi$ Do	4.0	±0.2
Р	12.7	±1.0
P1	3.85	±0.50
P <sub>2</sub>	6.35	±1.00
$\Delta h$ , $\Delta h_1$	0	±1.0
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