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

### Stacked Coin Type

Not recommended for new design

Series : **SD** Low temperature assured product



### Features

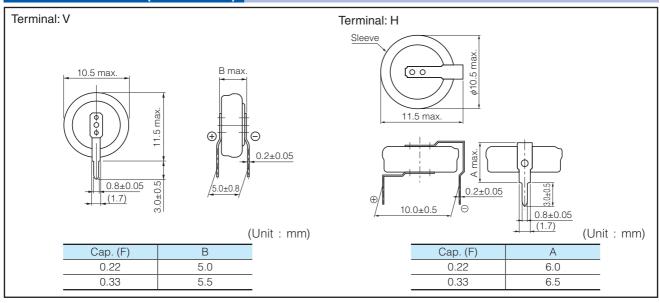
- Endurance : +70 °C 1000 h
- Category temperature range : -40 °C to +70 °C
- RoHS compliant

#### **Recommended applications**

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

Specifications			
Category temp. range	-40 °C to +70 °C		
Maximum operating voltage	5.5 V.DC		
Nominal cap.range	0.22 F, 0.33 F		
Characteristics at	Capacitance change	$\pm 30$ % of initial measured value at +20 °C (at –40 °C)	
low temperature	Internal resistance	$\leq$ 7 times of initial measured value at +20 °C (at -40 °C)	
	After 1000 hours application of 5.5 V.DC at +70 °C, the capacitor shall meet the following limits.		
Endurance	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)



### **Characteristics list**

Maximum operating voltage (V.DC)	Capacitance (F)	Capacitance tolerance (F)	Internal resistance (Initial specified value) (Ω) at 1 kHz	Recommended discharge current (µA)	Parts number	Mass (Reference value) (g)	Min. packaging q'ty (pcs)	
5.5	0.22	0.176 to 0.396	≦ 75	300 or less	EECS0HD224()N	1.0	200	
	0.33	0.264 to 0.594	≦ 75	300 or less	EECS0HD334()N	1.1	200	

() Please use V or H, to indicate the terminal style.

Note : 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 : **SD** 

### Features

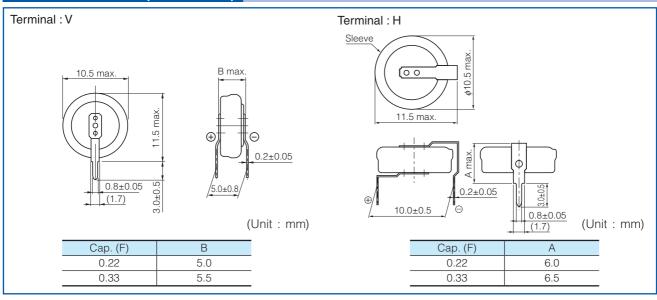
- Endurance : +70 °C 1000 h
- RoHS compliant

### **Recommended applications**

• Memory back-up for video and audio equipment, cameras, telephones, printers, data terminals, rice cookers, 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, 0.33 F		
Characteristics at low temperature	Capacitance change	e $\pm 30$ % of initial measured value at $\pm 20$ °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 ±30 % of initial measured value		
	Internal resistance	≤4 times of initial specified value	
Shelf life	After 1000 hours stora limits for Endurance.	age at +70 °C without load, the capacitor shall meet the specified	

### Dimensions in mm(not to scale)



#### **Characteristics list**

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Panasonic:

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