



## PRODUCT SPECIFICATIONS

## **DESCRIPTIONS** : **Subminiature Metallized Polyester Film Capacitor**

**TYPE** : CL21X

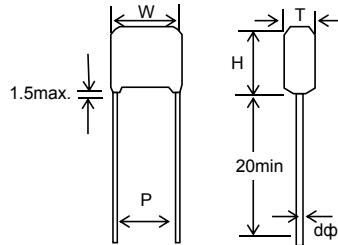


Fig. 1

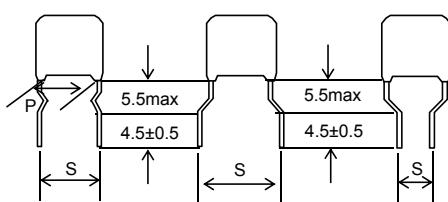


Fig. 2

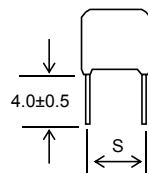


Fig. 5

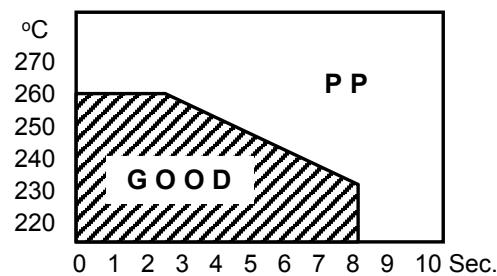
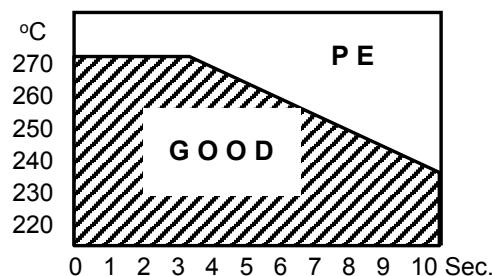
## 1. PRODUCT DIMENSIONS :

unit : mm

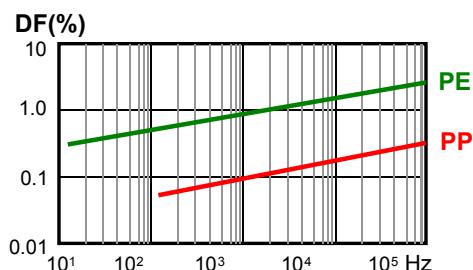
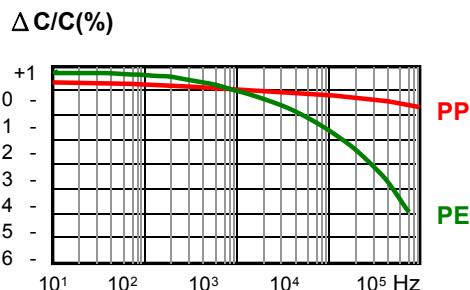
Characteristics				TYPE :CL21	
No.	Test items	Test method	Characteristics		
1	Climatic Category	/	40/85/21		
2	Rated voltage	/	50V — 250VDC		
3	Withstand Voltage(TV)	160% of rated voltage for 5sec.	Shall be no abnormality.		
4	Capacitance(CAP)	Measuring Frequency:1KHz±10%. Measuring Voltage :1Vrms.max.	0.001uF — 1.0uF		
5	Tolerance (%)	/	J(±5%); K (±10%)		
6	Dissipation Factor(DF)	Measuring Frequency:1KHz±10%. Measuring Voltage :1Vrms.max.	0.01 (1%)max. at 1 KHz.		
7	Insulation resistance(IR)	Apply 100V±15%for 60±5sec.at+20 ±2°C .	$\geq 30,000\text{M}\Omega (C \leq 0.33\mu\text{F})$ $\geq 15,000\text{M}\Omega \cdot \mu\text{F/C} (C > 0.33\mu\text{F})$		
8	Terminal Strength	Tensile	Apply 1.0 kg for 10 ± 1sec. to the terminal in the axial direction, and acting in a direction away from the body.	Shall be no abnormality.	
9		Bending	Apply 0.5 kg for 2 cycles. Each cycle includes: 90°once, return to its initial position for 2-3 sec. and then to the opposite direction once.	Shall be no abnormality.	
10	Solderability	Soldering temperature:250 ±3°C ; Immersion duration: 2.0 ±0.5sec	Good Tinning.		
11	Soldering Heat Resistance	Soldering Temperature : +260 ± 5°C . Immersion Duration : 10 ±1sec.	CAP( $\triangle C/C$ ) Within ±2% of the value before test. DF 0.003(0.3%) max.at 1Khz		
12	Rapid Temperature Change	Test Temperature Cycle : Total 5 cycles. High Temperature : +85±5 °C Low Temperature : -40 ±5°C 30 min ± 10% for each temperature.	Shall be no abnormality. CAP( $\triangle C/C$ ) Within ±5% of the value before test. DF 1 KHz : 0.003 (0.3%) max.		
13	Damp Heat Loading	Test temperature :+40 ± 2°C Test humidity : 90% to 95% R.H. Test voltage : rated voltage. Test duration : 500 +24/-0 hrs.	Shall be no remarkable change. The marking shall be legible. CAP( $\triangle C/C$ ) Within ±5% of the value before test. DF 0.005 (0.5%) max.at 1Khz		
14	Climatic Sequence	Dry heat	Temperature: 85°C,Duration: 16 hrs.	Shall be no abnormality. Shall be no remarkable change.	
		Humid Cool	—40°C,Duration: 2 hrs.		
	Climatic Sequence	Air pressure	Temperature: 15°C—35°C,Pressure: 8.5KPa; Duration: 1 hr; After experiment, applied votage 1 min.	CAP( $\triangle C/C$ ) Within ±5% of the value before test. DF 0.005 (0.5%) max.at 1Khz IR≥50% of the limit value of No. 7	
		Temperature Cycle	Test Temperature Cycle:Total 5 cycles. Each cycle includes : 1. +20 ±2 °C for 3min. 2. -40 ±3 °C for 30 min. 3. +20 ±2 °C for 3min. 4. +100 +3/-0 °C for 30 min. 5. +20 ±2 °C for 3 min.		
15	Durability	85°C,Applied 1.25 multiple rate voltage, Duration: 1000 hours (41.6 days)	No visible damage and clear mark; CAP( $\triangle C/C$ ) Within ±5% of the value before test. DF 0.005 (0.5%) max.at 1Khz IR≥50% of the limit value of No. 7		
16	Charge & Discharge	Experiment period :10000 times; Charge duration: 0.5s; Discharge duration: 0.5s;	CAP( $\triangle C/C$ ) Within ±5% of the value before test. DF 0.005 (0.5%) max.at 1Khz IR≥50% of the limit value of No. 7		

# CHARACTERISTICS REFERENCE

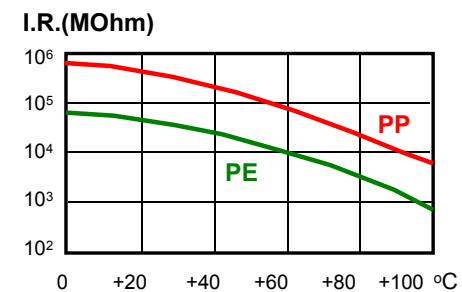
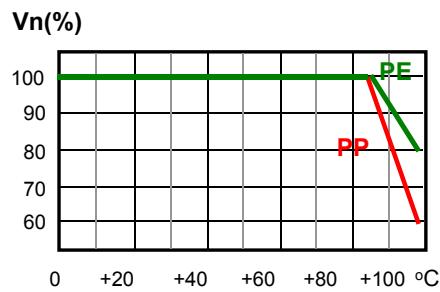
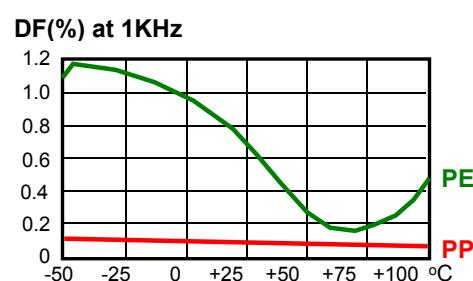
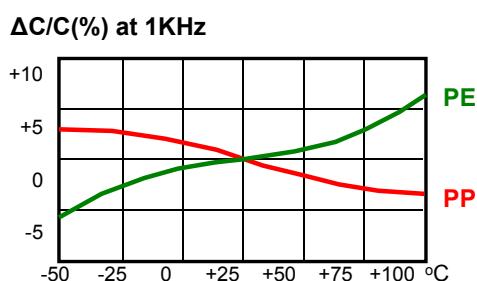
## Soldering Temperature VS Time



## Frequency Characteristics



## Temperature Characteristics



# CL21 Permissible AC Voltage VS Frequency Curve

