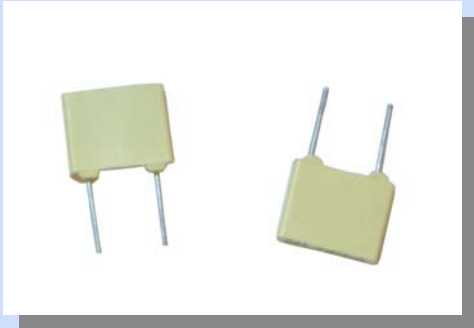


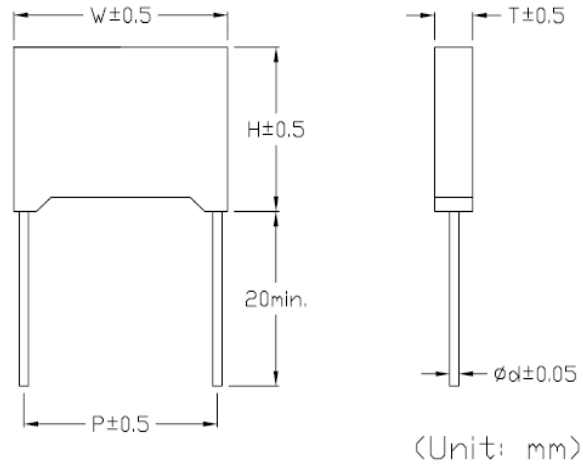
# CMEM Series

Minibox Metallized Polyester Film Capacitors (Encapsulated)  
- With Lead Spacing of 5.0 & 7.5mm

**TRIGON**  
COMPONENTS



## Configuration:



Capacitor

## FEATURES

- Space-saving miniature size.
- Non-inductive construction.
- Self-healing property.
- Flame-retardant plastic case and epoxy resin. (compliance with UL 94V-0)
- High moisture-resistance.
- Good solderability.
- Available on tape and reel for automatic insertion.
- RoHS Compliant.

## ORDERING CODE

**CMEM 223 J 101 L 050 T**  
(1) (2) (3) (4) (5) (6) (7)

- (1) Minibox Metallized Polyester Film Capacitor
- (2) Capacitance Code
- (3) Tolerance Code
- (4) Rated Voltage Code
- (5) Style
- (6) Lead to Lead Distance
- (7) Package

※Please refer to complete Ordering Code document (CPMx-Ord) for more ordering options.

## Specification:

Item	Performance Characteristics
Operating Temperature	-40°C ~ +100°C
Rated Voltage	63, 100, 250, 400 V.D.C
Capacitance Range	0.001 ~ 1.0 $\mu$ F
Dielectric Strength	160% of rated voltage for 2 sec.
Capacitance Tolerance	$\pm$ 5%(J), $\pm$ 10%(K)
Insulation Resistance	$U_R > 100V$ $\geq 7500M\Omega$ , $C_R \leq 0.33 \mu F$ (25°C, 100V, 1min)
	$U_R < 100V$ $\geq 3300M\Omega$ , $C_R > 0.33 \mu F$ $\geq 3750M\Omega$ , $C_R \leq 0.33 \mu F$ (25°C, 100V, 1min)
Dissipation Factor	$\tan \delta \times 10^{-4}$ at 25°C $\pm$ 5°C Frequency $\tan \delta \times 10^{-4}$ 1KHz $\leq 100$ 10KHz $\leq 150$

# CMEM Series

## Minibox Metallized Polyester Film Capacitors (Encapsulated) - With Lead Spacing of 5.0 & 7.5mm

**TRIGON**  
COMPONENTS

### 7.5mm Pin Pitch

Capacitor Thickness (T)	≤3.5	>3.5
Lead Wire Diameter(D±0.05)	0.6	0.6
Dimension Tolerance: W,H,T,P	W±0.5, H±0.5, T±0.5,P±0.5	

Capacitance ( $\mu$ F)	63V - / 40V ~				100V - / 630V ~				250V - / 160V ~				400V - / 200V ~				
	W	H	T	P	W	H	T	P	W	H	T	P	W	H	T	P	
0.0010																	
0.0015																	
0.0022																	
0.0033																	
0.0047																	
0.0068													10.5	6.5	3.5	7.5	
0.0082													10.5	6.5	3.5	7.5	
0.010										10.5	6.5	3.5	7.5	10.5	9.0	4.0	7.5
0.015										10.5	6.5	3.5	7.5	10.5	9.0	4.0	7.5
0.022										10.5	6.5	3.5	7.5	10.5	11.0	5.0	7.5
0.033					10.5	6.5	3.5	7.5	10.5	9.0	4.0	7.5	10.5	12.0	6.0	7.5	
0.047					10.5	6.5	3.5	7.5	10.5	9.0	4.0	7.5					
0.068	10.5	6.5	3.5	7.5	10.5	9.0	4.0	7.5	10.5	11.0	5.0	7.5					
0.082	10.5	6.5	3.5	7.5	10.5	9.0	4.0	7.5	10.5	12.0	6.0	7.5					
0.10	10.5	6.5	3.5	7.5	10.5	9.0	4.0	7.5									
0.15	10.5	6.5	3.5	7.5	10.5	9.0	4.0	7.5									
0.22	10.5	9.0	4.0	7.5	10.5	11.0	5.0	7.5									
0.33	10.5	9.0	4.0	7.5	10.5	11.0	5.0	7.5									
0.47	10.5	11.0	5.0	7.5													
0.68	10.5	11.0	5.0	7.5													
1.0	10.5	12.0	6.0	7.5													

※Please contact us for special item or size not listed.

### 5mm Pin Pitch

Capacitor Thickness (T)	≤3.5	>3.5
Lead Wire Diameter(D±0.05)	0.5	0.6
Dimension Tolerance: W,H,T,P	W±0.5, H±0.5, T±0.5,P±0.5	

Capacitance ( $\mu$ F)	63V - / 40V ~				100V - / 63V ~			
	W	H	T	P	W	H	T	P
0.0010	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.0015	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.0022	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.0033	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.0047	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.0068	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.0082	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.010	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.015	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.022	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.033	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.047	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.068	7.2	6.5	2.5	5.0	7.2	6.5	2.5	5.0
0.082	7.2	6.5	2.5	5.0	7.2	6.0	2.5	5.0
0.10	7.2	6.5	2.5	5.0	7.2	7.5	3.5	5.0
0.15	7.2	7.5	3.5	5.0	7.2	9.5	4.5	5.0
0.22	7.2	7.5	3.5	5.0	7.2	10.0	5.0	5.0
0.33	7.2	9.5	4.5	5.0	7.2	11.0	6.0	5.0
0.47	7.2	10.0	5.0	5.0	7.2	11.0	6.0	5.0
0.68	7.2	11.0	6.0	5.0				
1.0	7.2	11.0	6.0	5.0				

※Please contact us for special item or size not listed.

# CMEM Series

Minibox Metallized Polyester Film Capacitors (Encapsulated)  
- with Lead Spacing of 5.0 & 7.5mm

**TRIGON**  
COMPONENTS

## Characteristics:

NO.	TEST ITEM		CHARACTERISTICS	TEST METHOD						
1	Operating Temperature		-40°C ~ +100°C	/						
2	Rated Voltage		63, 100, 250, 400V.D.C.	/						
3	Withstand Voltage	Between Terminals	Abnormality	Add DC test voltage of 1.6Vn applied for 2sec. at 25°C±5°C						
4	Insulation Resistance		$\geq 7500\text{M}\Omega$ for CR $\leq 0.33\mu\text{F}$ (a) $\geq 3300\text{M}\Omega$ for CR $> 0.33\mu\text{F}$ (b) $\geq 3750\text{M}\Omega$ for CR $\leq 0.33\mu\text{F}$ (c) $\geq 1250\text{M}\Omega$ for CR $> 0.33\mu\text{F}$ (d)	Charge time: 60sec Charge voltage: (a, b). 50VDC R.V. $> 100\text{VDC}$ (c, d). 10VDC R.V. $< 100\text{VDC}$ Test temp: 25°C±5°C for 1min						
5	Capacitance		Within Specified Tolerance	At 1KHz Measure R.V as 5 Vrms or Below, test temp: 20~25°C						
6	Dissipation Factor		<table border="1"> <thead> <tr> <th>KHz</th> <th>tan<math>\delta \times 10^{-4}</math></th> </tr> </thead> <tbody> <tr> <td>1</td> <td><math>\leq 100</math></td> </tr> <tr> <td>10</td> <td><math>\leq 150</math></td> </tr> </tbody> </table>	KHz	tan $\delta \times 10^{-4}$	1	$\leq 100$	10	$\leq 150$	Measure at tan $\delta 10^{-4}$ at 25°C±5°C
KHz	tan $\delta \times 10^{-4}$									
1	$\leq 100$									
10	$\leq 150$									
7	Terminal	Pull Strength	No Cutting or slack of terminals	Wire diameter: 0.6 & 0.8mm Load: 1Kg, time: 10sec Wire diameter: 1.0mm Load: 2Kg, time: 20sec						
	Strength	Bending Strength		Wire diameter: 0.6 & 0.8mm Load: 0.5Kg, 90° ×4time Wire diameter: 1.0mm Load: 1Kg, 90° ×4time						
8	Vibration Proof		No Abnormality of the appearance	Frequency range 55±10Hz Amplitude: 1.5mm, 2Hrs Per direction ×3 directions						
9	Solderability		At Least 95% of the circumference of the lead wire. Around load surface dipped into with new solder.	Solder temp: 245 ±5°C Immersion time 2 ±0.5sec						

# CMEM Series

## Minibox Metallized Polyester Film Capacitors (Encapsulated) - With Lead Spacing of 5.0 & 7.5mm

**TRIGON**  
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10	Resistance to Soldering Heat	Appearance	No abnormality	Solder temp: 270-0/+2°C Immersion time 10±0.5sec
		Withstand Voltage	No abnormality	
		Capacitance Variation	Within +5/-0% of the value before test	
		Dissipation Factor	≅ 1.0% 1KHz	
		Insulation Resistance	≅ 10000MΩ for C ≅ 0.33uF ≅ 3000MΩ*uF for C > 0.33uF	
11	Cold Resistance	Capacitance Variation	Within +0/-8% of the value before test	Temp: -40 ±2°C Duration: 2+1/-0Hrs
12	Dry Heat	Insulation Resistance	≅ 3000MΩ for C ≅ 0.33uF ≅ 1000MΩ*√F for C > 0.33uF (at+100°C)	Temp: 85 ±2°C Duration: 48+2/-0Hrs
		Capacitance Variation	Within +0/-3% of the value before test	
13	Humidity Resistance	Appearance	No abnormality Marking to be legible	Humidity of 90~95% RH Temp: 40 ±2°C Duration: 500+24/-0Hrs Applied Voltage: R.V Withstand Voltage: 130% R.V for 1 min
		Withstand Voltage	No abnormality	
		Capacitance Variation	Within ±8% of the value before test	
		Insulation Resistance	Over 30% of article 4 (at+25°C)	
		Dissipation Factor	≅ 1.1% 1KHz (25°C)	
14	High Temp Loading Test	Appearance	No abnormality Marking to be legible	Temp: 85 ±2°C Duration: 1000+48/-0Hrs Applied Voltage: 125%*R.V (50/60Hz) Withstand Voltage: 130% R.V for 1 min
		Withstand Voltage	No abnormality	
		Capacitance Variation	Within ±5% of the value before test	
		Insulation Resistance	Over 30% of article 4 (at+25°C)	
		Dissipation Factor	≅ 1.1% 1KHz (25°C)	

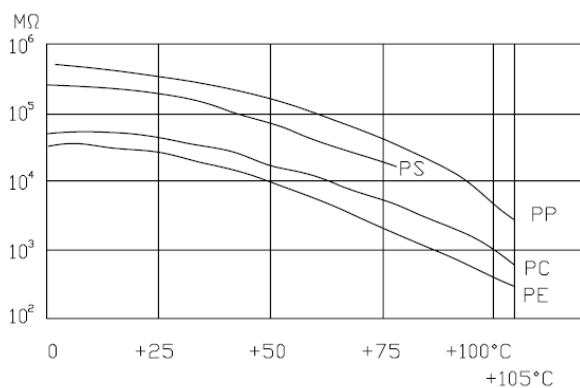
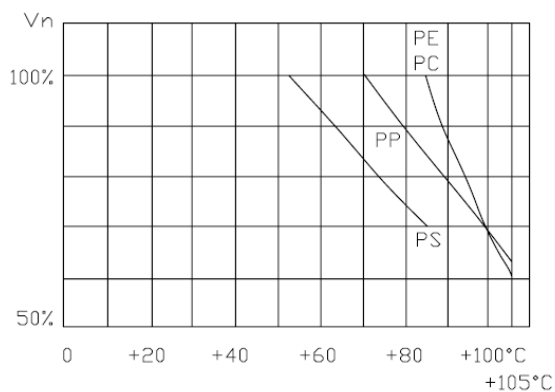
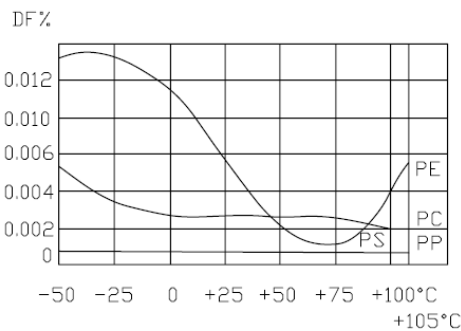
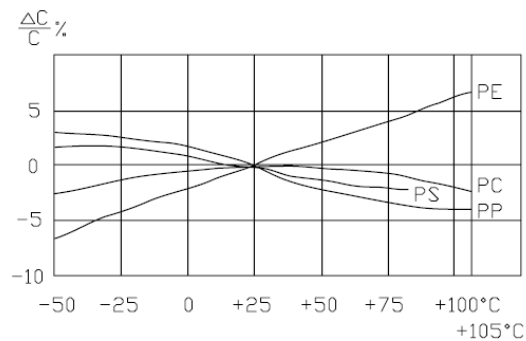
Capacitor

# CMEM Series

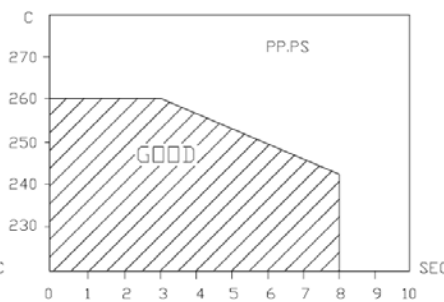
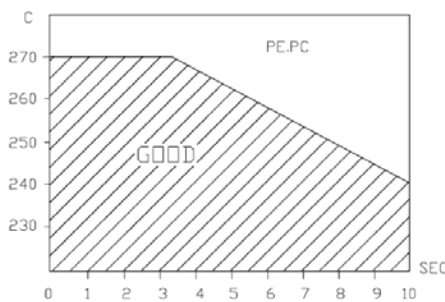
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TRIGON  
COMPONENTS

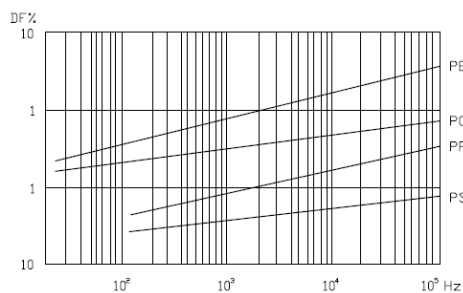
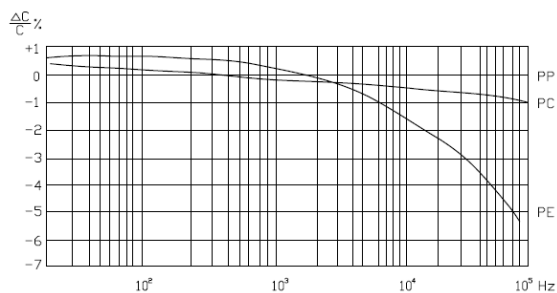
## Temperature Characteristic



## Soldering temperature VS Time



## Frequency Characteristic



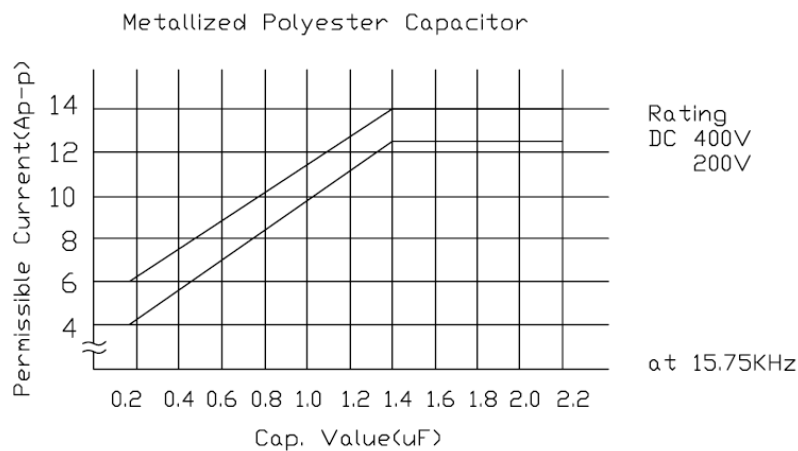
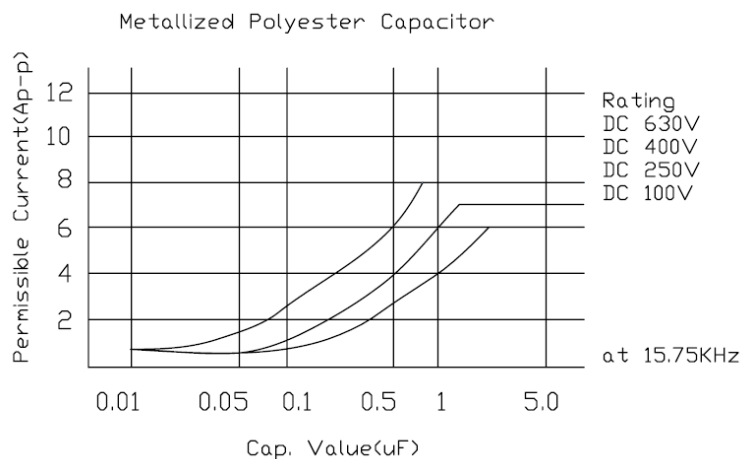
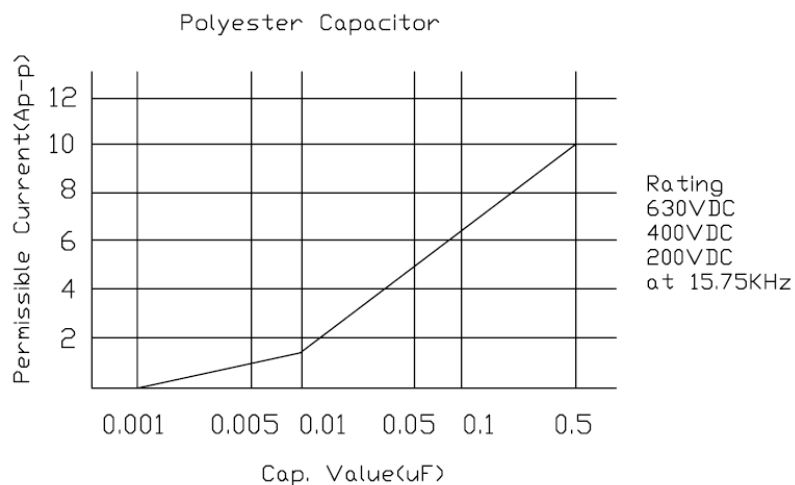
Capacitor

# CMEM Series

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**TRIGON**  
COMPONENTS

## Permissible Current



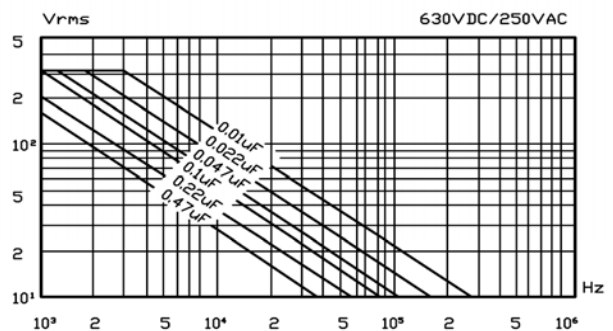
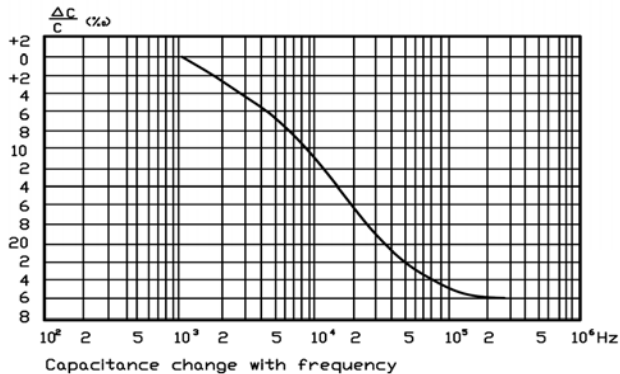
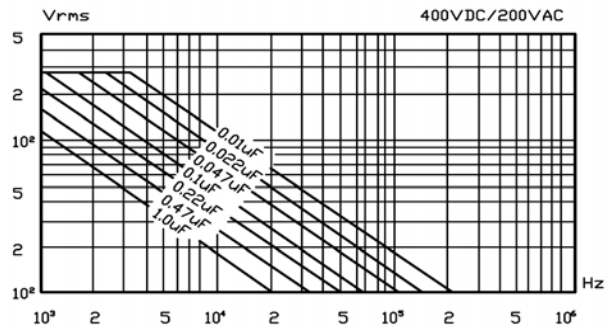
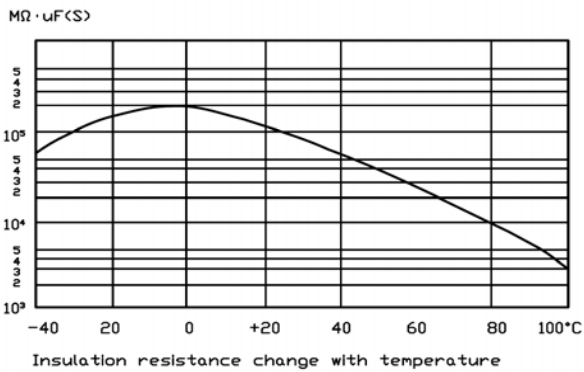
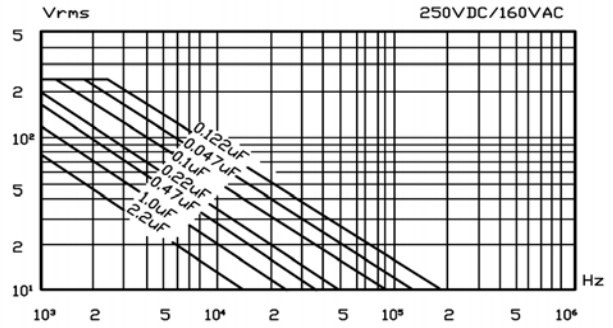
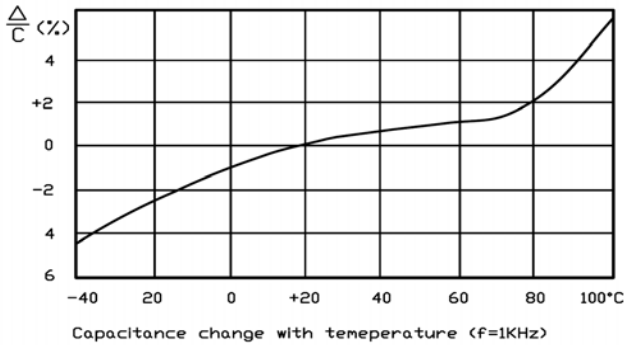
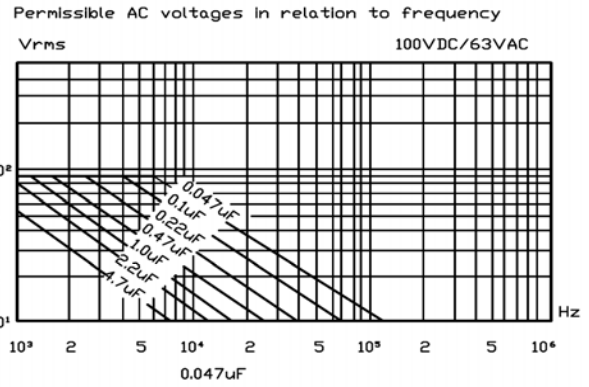
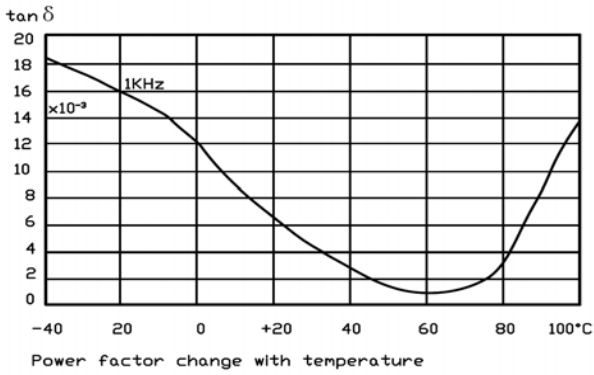
Capacitor

# CMEM Series

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**TRIGON**  
COMPONENTS

## Polyester Film Capacitors Reference Data



Capacitor

# CMEM Series

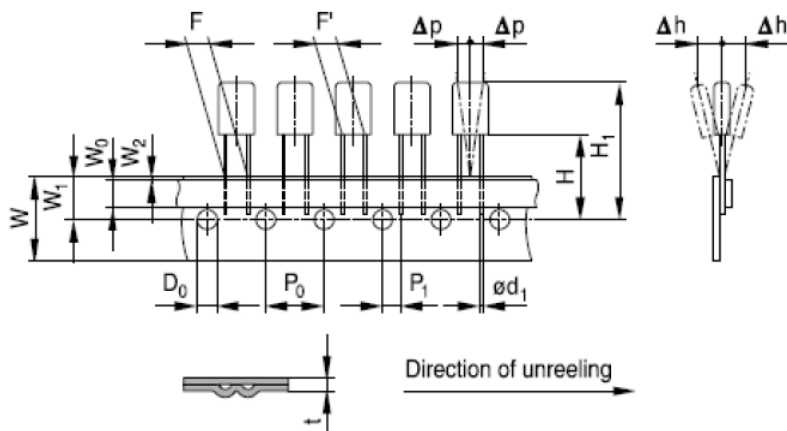
Minibox Metallized Polyester Film Capacitors (Encapsulated)  
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**TRIGON**  
COMPONENTS

## Package Information

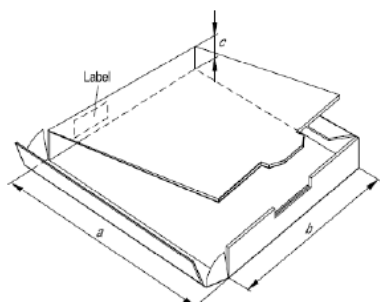
### Taping

Standard 5 mm  
 $P_0 = 12.7$  mm



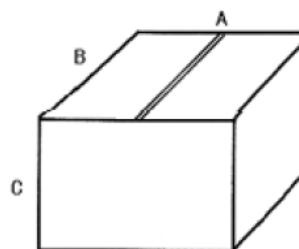
Symbol	$\phi d_1$	$D_0$	$F$	$F'$	$H$	$H_1$	$P_0$	$P_1$
Dimension (mm)	0.5	4.0	5.0	5.0	18.5	32.2	12.7	3.8
Tolerance (mm)	$\pm 0.05$	$\pm 0.2$	$+0.6/-0.1$	$\pm 0.4$	$\pm 0.5$	max.	$\pm 0.2$	$\pm 0.7$
Symbol	$W$	$W_0$	$W_1$	$W_2$	$t$	$\Delta h$	$\Delta p$	
Dimension (mm)	18.0	6.0	9.0	0.5	0.7	0	0	
Tolerance (mm)	$\pm 0.5$	$\pm 0.5$	$\pm 0.5$	$\pm 0.05$	$\pm 0.2$			

### Ammo



**A: 280 mm**  
**B: 330mm**  
**C: 50mm**

### Carton



**A: 340 Max**  
**B: 560 Max**  
**C: 290 Max**