



PRODUCT SPECIFICATION

规格书

Customer (客户名称):

Customer P/N (客户料号):

Aillen P/N(爱伦料号):MEF Series

CATEGORY(品名): Metallized Polyester Film Capacitor

DESCRIPTION(型号):

Spec No.(承认书编号):

Date(发行日期):

AILLEN

PREPARED
(拟定)

CHECKED
(审核)

CUSTOMER

Please sign a copy after accepting

APPROVAL
(批准)

SIGNATURE
(签名)

香港: 香港湾仔庄士敦道 181 号大有大厦 10 楼 1001 室

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1. Application

This specification applied to capacitor for type MEF(Metallized Polypropylene Film Capacitor(Dipped))
Reference Standard GB/T 7332 (IEC 60384-2)

2. Feature&Application

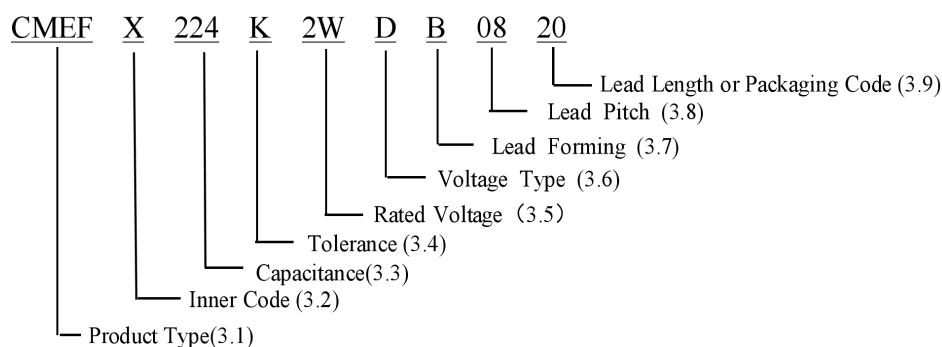
2-1 Feature

- Metallized polyester film
- Wide capacitance range, small size,and light weight
- Long life due to self-healing effect
- Flame retardant epoxy resin coated

2-2 Recommended Application

- General purpose usage
- Blocking, by-passing, filtering, timing
- Fluorescent lamp, HID lamp ballast
- Air conditioner, Fan, Motor running & Other industrial equipment

3. Part Number System



3-1 tape:

Code	CMEF	CMPP	CMEB	CMPB
Type	MEF	MPP	MEB	MPB

3-2 Inner Code

3-3 Capacitance:

Code	102	103	104	105	106
Capacitance	0.001μF	0.01μF	0.1μF	1μF	10μF

3-4 Tolerance:

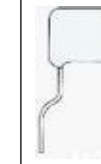
Code	H	J	K
Tolerance	±3%	±5%	±10%

3-5 Rated Voltage:

Code	2A	2E	2G	2W	2J
Voltage	100	250	400	450	630

3-6 Voltage Tyoe: D→DC; A→AC

3-7 Lead forming:

Code	B	K	R	U	W	S	T
Lead Forming							Taping

3-8 Lead Pitch:

Code	08	10	15	20	22	27	31	AX
Pitch(mm)	7.5mm	10mm	15mm	20mm	22mm	27mm	31mm	Axial Lead 

3-9 Lead length or Packaging Code:

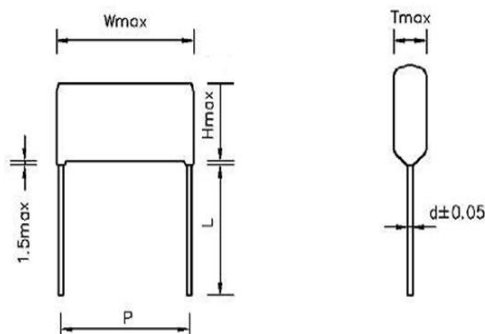
Code	35	04	45	10	15	20
Bulk and Cut Length(mm)	3.5mm	4mm	4.5mm	10mm	15mm	17mm Min.

Code	T1	T5	T7
Taping	Straight foot Taping P3=12.7mm (For pitch=5.0/7.5mm)	Straight foot Taping P3=25.4mm(For pitch=10/15mm)	Straight foot Taping P0=12.7mm(For pitch=22.5/27.5mm)

4. Specification

Reference Standard	GB/T 7332 (IEC 60384-2)
Climatic Category	55/105/21
Rated Temperature Range	-40℃~ 105℃ (+85℃ to +105℃ decreasing factor 1.25% per °C for Rated Voltage)
Rated Voltage	100VDC、250VDC、400VDC、630VDC
Capacitance Range	0.01μF ~ 10μF
Capacitance Tolerance	±3%(H)、±5%(J)、±10%(K)
Voltage Proof	Terminal to Terminal:(at20±5℃) 1.6UR(5s) (cut off current 10mA)
Dissipation Factor	1%(Max.) at 1KHz,20℃
Insulation Resistance	Terminal to Terminal: (at20℃± 5℃), Voltage charge time : 1 minute. Voltage charge : 100VDC. CR≤0.33μF,IR≥15000MΩ; CR>0.33μF,IR≥5000MΩ×μF

5. Specification Sheet



P/N	Rated voltage	Cap (μF)	Size Max(mm)				
			W	H	T	P±1	Φd±0.08
CMEFX103K2ADB0820	100VDC	0.010	10.5	9.0	5.5	7.5	0.60
CMEFX153K2ADB0820	100VDC	0.015	10.5	9.0	5.5	7.5	0.60
CMEFX223K2ADB0820	100VDC	0.022	10.5	9.0	5.5	7.5	0.60
CMEFX333K2ADB0820	100VDC	0.033	10.5	9.0	5.5	7.5	0.60
CMEFX473K2ADB0820	100VDC	0.047	10.5	9.0	5.5	7.5	0.60
CMEFX683K2ADB0820	100VDC	0.068	10.5	9.0	5.5	7.5	0.60
CMEFX104K2ADB0820	100VDC	0.10	10.5	9.5	6.0	7.5	0.60
CMEFX154K2ADB1020	100VDC	0.15	13.0	9.0	5.5	10	0.60
CMEFX224K2ADB1020	100VDC	0.22	13.0	9.5	5.5	10	0.60
CMEFX334K2ADB1020	100VDC	0.33	13.0	10.5	6.5	10	0.60
CMEFX474J2ADB1020	100VDC	0.47	13.0	11.5	6.5	10	0.60
CMEFX684K2ADB1020	100VDC	0.68	13.0	12.0	6.0	10	0.60
CMEFX474K2ADB1520	100VDC	0.47	18.0	10.0	6.0	15	0.60
CMEFX684K2ADB1520	100VDC	0.68	18.0	11.0	7.0	15	0.60
CMEFX105K2ADB1520	100VDC	1.0	18.0	12.5	8.0	15	0.80
CMEFX155K2ADB1520	100VDC	1.5	18.0	13.5	6.5	15	0.80
CMEFX225K2ADB2020	100VDC	2.2	23.0	16.0	9.5	20	0.80
CMEFX335K2ADB2020	100VDC	3.3	23.0	18.5	11.5	20	0.80
CMEFX475K2ADB2020	100VDC	4.7	23.0	21.0	13.5	20	0.80
CMEFX685K2ADB2720	100VDC	6.8	32.0	19.0	12.0	27.5	0.80
CMEFX106K2ADB2720	100VDC	10	32.0	21.5	14.0	27.5	0.80
CMEFX103K2EDB0820	250VDC	0.010	10.5	9.0	5.5	7.5	0.60
CMEFX153K2EDB0820	250VDC	0.015	10.5	9.0	5.5	7.5	0.60
CMEFX223K2EDB0820	250VDC	0.022	10.5	9.0	5.5	7.5	0.60
CMEFX333K2EDB0820	250VDC	0.033	10.5	9.0	5.5	7.5	0.60
CMEFX473K2EDB0820	250VDC	0.047	10.5	9.0	5.5	7.5	0.60

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CMEFX683K2EDB0820	250VDC	0.068	10.5	9.0	5.5	7.5	0.60
CMEFX104K2EDB0820	250VDC	0.10	10.0	8.4	5.8	7.5	0.60
CMEFX154K2EDB0820	250VDC	0.15	10.0	10.0	5.8	7.5	0.60
CMEFX474K2EDB0820	250VDC	0.47	10.0	10.5	6.5	7.5	0.60
CMEFX683K2EDB1020	250VDC	0.068	13.0	13.0	5.5	10	0.60
CMEFX154K2EDB1020	250VDC	0.15	13.0	9.0	5.5	10	0.60
CMEFX224K2EDB1020	250VDC	0.22	13.0	9.5	5.5	10	0.60
CMEFX334K2EDB1020	250VDC	0.33	13.0	10.5	6.5	10	0.60
CMEFX684K2EDB1020	250VDC	0.68	13.0	12.5	7.7	10	0.60
CMEFX474K2EDB1520	250VDC	0.47	18.0	10.0	6.0	15	0.60
CMEFX564K2EDB1520	250VDC	0.56	18.5	13.0	5.5	15	0.60
CMEFX684K2EDB1520	250VDC	0.68	18.0	11.0	7.0	15	0.60
CMEFX105K2EDB1520	250VDC	1.0	18.0	12.5	8.0	15	0.80
CMEFF125K2EDB1520	250VDC	1.2	18.0	14.5	7.5	15	0.80
CMEFX155K2EDB1520	250VDC	1.5	18.0	14.5	9.5	15	0.80
CMEFX155M2EDB1520	250VDC	1.5	18.0	15.0	8.0	15	0.80
CMEFF155K2EDB1520	250VDC	1.5	18.5	16.3	9.3	15	0.80
CMEFX684K2EDB2020	250VDC	0.68	23.0	14.5	8.0	20	0.80
CMEFS684K2EDB2020	250VDC	0.68	23.0	12.5	7.0	20	0.80
CMEFX105K2EDB2020	250VDC	1.0	23.0	17.0	8.5	20	0.80
CMEFX185K2EAB2020	250VDC	1.8	22	15	6.5	20	0.8
CMEFX225K2EAB2020	250VDC	2.2	23.0	16.0	9.5	20	0.80
CMEFX335K2EDB2720	250VDC	3.3	32.0	18.0	11.0	27.5	0.80
CMEFX475K2EDB2720	250VDC	4.7	32.0	19.5	13.0	27.5	0.80
CMEFX685K2EDB2720	250VDC	6.8	32.0	23.5	14.5	27.5	0.80
CMEFX106K2EDB2720	250VDC	10	32.0	27.5	18.0	27.5	0.80
CMEFX103K2GDB0820	400VDC	0.010	10.5	9.0	5.5	7.5	0.60
CMEFX153K2GDB0820	400VDC	0.015	10.5	9.0	5.5	7.5	0.60
CMEFX223K2GDB0820	400VDC	0.022	10.5	9.0	5.5	7.5	0.60
CMEFX333K2GDB0820	400VDC	0.033	10.5	9.0	5.5	7.5	0.60
CMEFX473K2GDB0820	400VDC	0.047	10.5	9.0	5.5	7.5	0.60
CMEFX683K2GDB0820	400VDC	0.068	10.5	9.0	5.5	7.5	0.60
CMEFX104K2GDB0820	400VDC	0.10	10.5	9.5	6.0	7.5	0.60
CMEFX104K2GDB1020	400VDC	0.10	13.0	9.5	6.0	10	0.60
CMEFX154K2GDB1020	400VDC	0.15	13.0	10.5	6.0	10	0.60
CMEFX224K2GDB1020	400VDC	0.22	13.0	11.5	7.5	10	0.60
CMEFX334K2GDB1520	400VDC	0.33	18.0	12.0	7.5	15	0.60
CMEFX474K2GDB1520	400VDC	0.47	18.0	13.5	8.5	15	0.80
CMEFX684K2GDB1520	400VDC	0.68	18.0	14.0	9.0	15	0.80
CMEFX105K2GDB2020	400VDC	1.0	18.0	15.0	8.0	15	0.80
CMEFX105K2GDB2020	400VDC	1.0	23.0	16.0	9.5	20	0.80

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CMEFX155K2GDB2020	400VDC	1.5	23.0	18.0	10.5	20	0.80
CMEFX185K2GDB2020	400VDC	1.8	22.0	16	8.5	20	0.80
CMEFX225K2GDB2020	400VDC	2.2	23.0	20.0	13.0	20	0.80
CMEFX335K2GDB2720	400VDC	3.3	32.0	22.0	13.0	27.5	0.80
CMEFX475K2GDB2720	400VDC	4.7	32.0	24.0	15.0	27.5	0.80
CMEFX685K2GDB2720	400VDC	6.8	32.0	26.5	17.5	27.5	0.80
CMEFX224K2WDB0820	450VDC	0.22	10.5	11.5	7.0	7.5	0.60
CMEFX104J2WDB1020	450VDC	0.1	13.0	13.0	7.0	10	0.60
CMEFX105K2WDB1020	450VDC	1	13.0	18.4	9.1	10	0.60
CMEFX105J2WDB1520	450VDC	1	18.0	17.0	8.5	15	0.80
CMEFX225J2WDB1520	450VDC	2.2	18.0	20.5	12.5	15	0.80
CMEFX225J2WDB2220	450VDC	2.2	25.5	19.6	9.5	22	0.80
CMEFX475J2WDB2220	450VDC	4.7	25.0	25.0	15.0	22	0.80
CMEFX103K2JDB0820	630VDC	0.010	10.5	9.0	5.5	7.5	0.60
CMEFX153K2JDB0820	630VDC	0.015	10.5	9.0	5.5	7.5	0.60
CMEFX223K2JDB0820	630VDC	0.022	10.5	9.0	5.5	7.5	0.60
CMEFX333K2JDB1020	630VDC	0.033	13.0	10.5	6.5	10	0.60
CMEFX473K2JDB1020	630VDC	0.047	13.0	10.5	6.5	10	0.60
CMEFX683K2JDB1020	630VDC	0.068	13.0	11.5	7.0	10	0.60
CMEFX104K2JDB1020	630VDC	0.10	13.0	14.0	6.5	10	0.60
CMEFX104K2JDB1520	630VDC	0.10	18.0	11.0	7.0	15	0.60
CMEFX 15K2JDB1520	630VDC	0.15	18.0	12.0	7.5	15	0.60
CMEFX224K2JDB1520	630VDC	0.22	18.0	14.0	8.5	15	0.80
CMEFX334K2JDB1520	630VDC	0.33	18.0	16.0	10.0	15	0.80
CMEFX474K2JDB2020	630VDC	0.47	23.0	17.0	10.0	20	0.80
CMEFX684K2JDB2020	630VDC	0.68	23.0	18.5	11.5	20	0.80
CMEFX105K2JDB2720	630VDC	1.0	32.0	20.0	11.5	27.5	0.80
CMEFX155K2JDB2720	630VDC	1.5	32.0	24.0	15.0	27.5	0.80
CMEFX225K2JDB2720	630VDC	2.2	32.0	27.5	17.5	27.5	0.80
CMEFX473K1KDB1520	1000VDC	0.047	18.0	11.0	7.0	15	0.60

- 1) Specification are subject to change without notice should a safety or technical concern arise regarding the product , please be sure to contact our sales offices
- 2) The sizes in the above table are all general specifications. If you need other specifications, please contact us
- 3) All Part numbers are provided in bulk.

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6. Reliability Testing

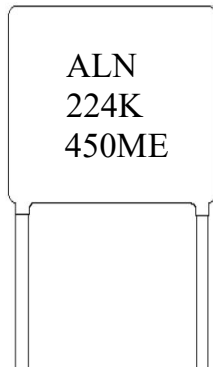
No	Test items	Performance	Test Method
6-1	Withstand voltage (Between Terminals)	Shall be no abnormality	160% Of Rated Voltage, 5sec.
6-2	Capacitance	Within the tolerance specified	1KHz, 1Vrms Max. at 25°C
6-3	Tense Strength of Terminal	No wire breakage and No Damage of Capacitor Capacitance Change : $\leq \pm 5\%$	1. Load Force : 1.0 Kg 2. Holding Time : 10 ± 1 sec
6-4	Bending Strength of Terminal	No wire breakage and No Damage of Capacitor	1. Load Force : 0.5 Kg 2. Bending Time : $4 \times 90^\circ$ in 5sec
6-5	Solder-ability	1. Appearance : No Visible Damage 2. Covering an area of > solder 95% 3. Capacitance Change : $\leq \pm 5\%$	Soldering preheating 1.Preheating temperature of $T < 120^\circ\text{C}$ 2.Preheating time capacitor $t < 5$ min Single wave soldering 1.Solder temperature: $235 \pm 5^\circ\text{C}$ 2.Solder time: 2 ± 0.5 sec
6-6	Heat Shock test	Appearance : No Visible Damage Withstand Voltage : Normal Capacitance Change : $\leq \pm 5\%$ of the initial value	The terminal of capacitor shall be immersed in the melting solder. a. Solder temperature: $270 \pm 5^\circ\text{C}$ b. Solder time: 3 ± 0.5 sec c. Test Voltage: 100% of The Rate Voltage For 1min.
6-7	Cold Resistance	Appearance : No Visible Damage Capacitance Change : $\leq \pm 5\%$ of the initial value	a. Test Temperature: -40°C b. Test Times: 2Hrs
6-8	Dry Heat Resistance	Appearance : No Visible Damage Withstand Voltage : Normal Capacitance Change : $\leq \pm 5\%$ of the initial value	a. Test Temperature: $85^\circ\text{C} \pm 2^\circ\text{C}$ b. Test Times: 2Hrs

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No	Test items	Performance	Test Method
6-9	Humidity Resistance	Appearance : No Visible Damage Withstand Voltage : Normal Capacitance Change : $\leq \pm 10\%$ of the initial value Insulation Resistance: $\geq 50\%$ of the rated value $DF (\tan \delta) \leq 1\%$	a. Test Temperature: $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ b. Relative Humidity: 90 ~ 95% c. Test Times: 500 HRS
6-10	Charge & Discharge	Appearance : No Visible Damage Capacitance Change : $\pm 10\%$ of the initial value Insulation Resistance: $\geq 50\%$ of the rated value $DF (\tan \delta) \leq 1\%$	a. Test Voltage : Rated Voltage Charge for 2sec. Discharge for 2 sec. Repeated for 1000 ± 100 cycles b. Test Temperature: $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$
6-11	Load Life Test	Appearance : No Visible Damage Capacitance Change : $\pm 10\%$ of the initial value Insulation Resistance: $\geq 50\%$ of the rated value $DF (\tan \delta) \leq 1\%$	a. Test Temperature: $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ b. Test Times: 1000 ± 24 Hrs c. Test Voltage: 125% of The Rated Voltage
6-12	Temperature Cycle Test	Appearance : No Visible Damage Capacitance Change : $\pm 5\%$ of the initial value Insulation Resistance: $\geq 50\%$ of the rated value $DF (\tan \delta) \leq 1\%$	$-40 \pm 3^{\circ}\text{C}$ for 30 minutes to $85 \pm 2^{\circ}\text{C}$ for 30 minutes, cycled five times in sequence

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7. Marking



ALN	Aillen
224	CAPACITANCE
K	CAPACITANCE TOLERANCE
450	RATED VOLTAGE
ME	METALLIZED POLYESTER FILM

8. Storage conditions and duration

Packaged capacitors should be kept in clean, ventilated, dry coffers, not near the heat source, not subject to direct sunlight, is strictly prohibited and chemical reagents, acid and harmful gas storage together.

Capacitor at a temperature within the range 20 ~ 25 °C, humidity less than 50% of the state of storage for one year.

9. Packing for tinned-wire capacitors

9-1 Outline Drawing

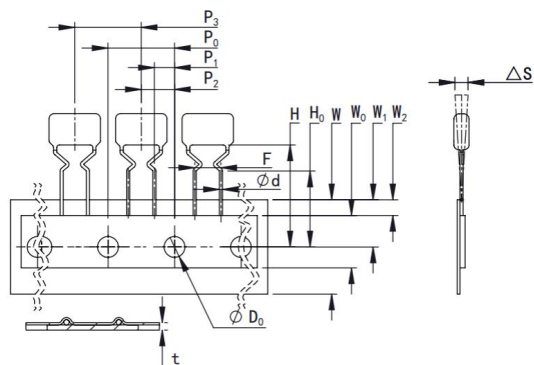


Fig.1

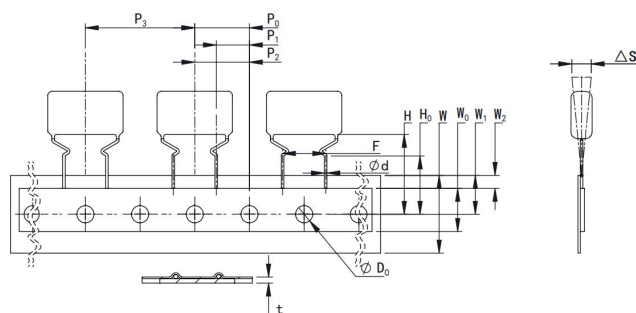
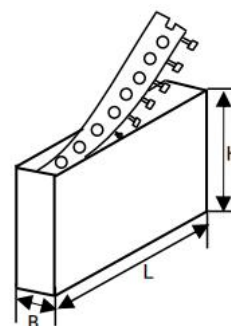


Fig.2

9-2 Taping & Box Dimensions(mm)

Mark	Taping Dimensions(mm)				
	P=5.0	P=7.5	P=10.0	P=15.0	Tolerate
Type	Fig.1	Fig.1	Fig. 2	Fig. 2	/
P3	12.7	12.7	25.4	25.4	±1.0
P0	12.7	12.7	12.7	12.7	±0.3
P1	3.85	2.6	7.7	5.2	±0.7
P2	6.35	6.35	12.7	12.7	±1.3
F	5	7.5	10	15	+0.8/-0.2
ΔS	0	0	0	0	±2.0
H	20	20	20	20	±1.0
H0	16	16	16	16	±0.5
W	18	18	18	18	+1/-0.5
W0	10min	10min	10min	10min	/
W1	9	9	9	9	+0.75/-0.5
W2	3max	3max	3max	3max	/
D0	4	4	4	4	±0.3
t	0.7	0.7	0.7	0.7	±0.2

Note: If you need other taping, please contact us.



L=335±3mm
B=55/50±3mm
H=265/350±3mm

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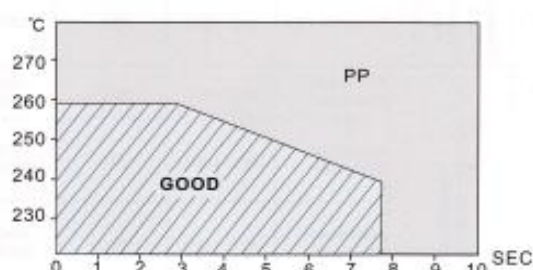
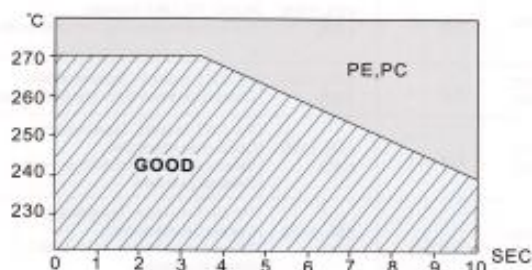
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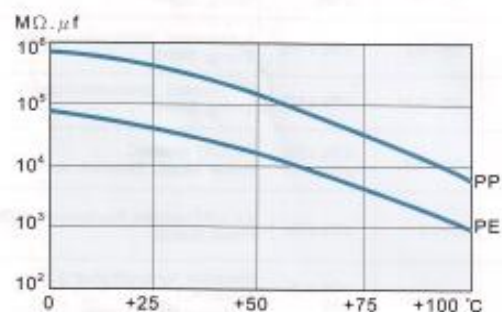
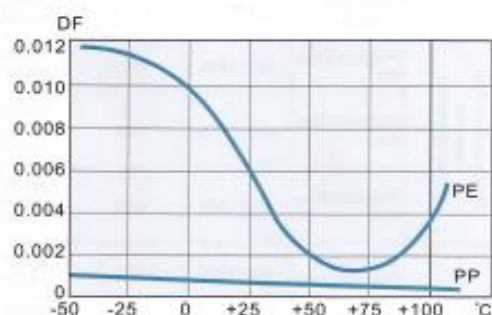
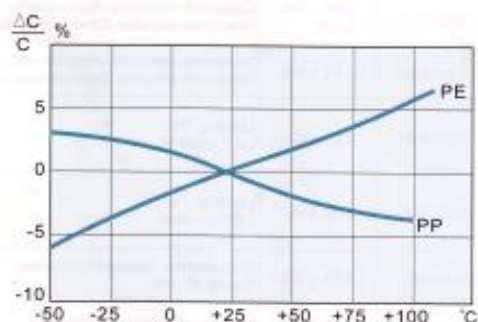
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10. Typical graphs

Soldering Temperature VS Time



Temperature Characteristics



PP: 聚丙烯薄膜 (Polypropylene Film)

PE: 聚酯薄膜 (Polyester Film)

PP: 聚丙烯薄膜 (Polypropylene Film)

PE: 聚酯薄膜 (Polyester Film)

Frequency Characteristics

