

1. Application

This specification applied to capacitor for type MPP(Metallized Polyester Film Capacitor)

Reference Standard GB 10190 (IEC 60384-16)

2. Feature:

Metallized polypropylene film, flame retardation epoxy resin coating

Low loss at high frequency,small inherent temperature rise

Good capacitance stability

Widely used in high frequency,DC,AC and pulse circuits

3. Part Number System

$\frac{\square\square\square\square}{1}$ $\frac{\square}{2}$ $\frac{\square\square\square}{3}$ $\frac{\square}{4}$ $\frac{\square\square}{5}$ $\frac{\square}{6}$ $\frac{\square}{7}$ $\frac{\square\square}{8}$ $\frac{\square\square}{9}$
 (tape) (Internal use) (capacitance) (tolerance) (rated voltage) (Voltage) (lead forming) (lead pitch) (lead length)

3-1 tape :

Code	CMEF	CMPP
Tape	MEF	MPP

3-2 Internal use

3-3 Capacitance :

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

3-4 Tolerance :

Code	G	H	J	K	M
Tolerance	$\pm 2\%$	$\pm 3\%$	$\pm 5\%$	$\pm 10\%$	$\pm 20\%$

3-5 Rated Voltage :

Code	1H	1J	2A	2E	2G	2W	2J
Voltage	50	63	100	250	400	450	630

Issued-date: 2022-11-25

Name

Specification Sheet – MPP

Revision

B

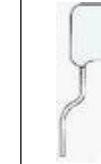
Page

1

STANDARD MANUAL

3-6 Voltage : D→DC A→AC

3-7 Lead forming :

Code	B	K	R	U	W	A	T
Lead Forming						Axial Lead 	Taping

3-8 Lead Pitch :

Code	07	10	15	20	27	31
Pitch(mm)	7.5mm	10mm	15mm	20mm	27.5mm	31mm

3-9 Lead length :

Code	04	08	10	13	23	30	40
Length(mm)	4mm	8mm	10mm	13mm	23mm	30mm	40mm

4. Specifications

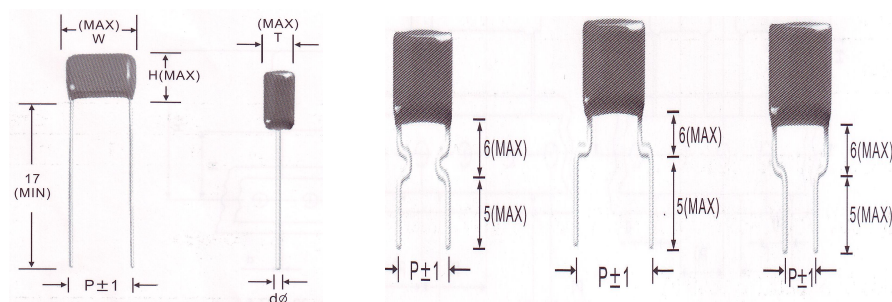
Rated Temperature Range	85℃							
Climatic Category	40/100/21							
Rated Temperature Range	-40℃~ 105℃ (+85℃ to +105℃ decreasing factor 1.5% per ℃ for VR(DC))							
Rated Voltage	100V 、250V 、400V 、630V							
Capacitance Range	0.010 μ F ~ 3.3 μ F							
Capacitance Tolerance	±3%(H) 、±5%(J) 、±10%(K)							
Voltage Proof	Terminal to Terminal:(at20±5℃) 1.6UR(5s) (cut off current 10mA)							
Dissipation Factor	KHz	C≤0.1 μ F	0.1 < C ≤1.0 μ F	1.0 < C ≤3.0 μ F	3.0 < C ≤5.0 μ F	5.0 < C ≤10 μ F		
	1	≤0.10%	≤0.10%	≤0.10%	≤0.10%	≤0.10%		
	100	≤0.40%	≤0.70%	≤1.20%	≤1.80%	≤2.80%		
Insulation Resistance	≥30000MΩ , CR≤0.33 μ F , ≥10000s, CR>0.33 μ F (20℃,100V,1min)							
Maximum Pulse Slope dv/dt (V/μs)	Pitch V.R	dv/dt (V/ μ s)						
		7.5mm	10.0mm	15.0mm	20.0mm	27.5mm	32.5mm	37.5mm
	100VDC	130	110	100	70	50	35	25
	250VDC	240	220	200	130	100	70	50
	400VDC	……	350	300	200	150	110	80
	630VDC	……	420	400	250	180	140	90

4. Characteristics (IEC60384-1)

No	Test items	Performance	Test Method
5.1	Withstand voltage (Between Terminals)	Shall be no abnormality	100% Of Rated Voltage, 60sec.
	Between terminal and Enclosure	Shall be no abnormality	UR×200%+1000VDC, 60sec.
5-2	Capacitance	Within the tolerance specified	1KHz, 1Vrms Max. at 25℃
5-3	Tense Strength of Terminal	No wire breakage and No Damage of Capacitor	1. Load Force : 1.0 Kg 2. Holding Time : 10 ± 1sec
5-4	Bending Strength of Terminal	No wire breakage and No Damage of Capacitor	1. Load Force : 0.5 Kg 2. Bending Time : 4 x 90° in 5sec
5-5	Solder-ability	1. Appearance : No Visible Damage 2. Covering an area of > solder 95%	Soldering Peocess 1. Capacitor preheating temperature of T < 120 ℃ 2.Preheating time capacitor t< 5 min Single wave soldering 1.Solder temperature: 270±5℃ 2.Solder time: 2±0.5sec
5-6	Heat Shock test	Appearance : No Visible Damage Withstand Voltage : Normal Capacitance Change : ≤ ±3% of The Initial Value	The terminal of capacitor shall be immersed in the melting solder. a. Solder temperature: 270±5℃ b. Solder time: 3±0.5sec c. Test Voltage: 100% of The Rate Voltage For 1min.
5-7	Cold Resistance	Appearance : No Visible Damage Capacitance Change : ≤ 0~ -10%of The Initial Value	a. Test Temperature: -40℃ b. Test Times: 2Hrs
5.8	Dry Heat Resistance	Appearance : No Visible Damage Withstand Voltage : Normal Capacitance Change : ≤ +5~ -2% Of The Initial Value	a. Test Temperature: 85℃ ± 2℃ b. Test Times: 2Hrs

6 Dimensions(mm)

6.1 Outline Drawing



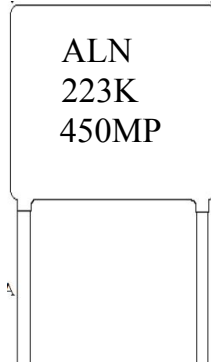
6.2 Case size:

μF	50/63/100VDC					250VDC				
	W Max	H Max	T Max	P ± 1	d ± 0.1	W Max	H Max	T Max	P ± 1	d ± 0.1
0.022						10.0	8.0	4.0	7.5	0.6
0.027						10.0	8.5	4.0	7.5	0.6
0.033						10.0	9.0	4.5	7.5	0.6
0.039						10.0	9.5	4.5	7.5	0.6
0.047	10.0	8.0	4.0	7.5	0.6	10.0	10.5	4.5	7.5	0.6
0.056	10.0	8.5	4.0	7.5	0.6	10.0	11.0	5.0	7.5	0.6
0.068	10.0	9.5	4.5	7.5	0.6	10.0	11.5	5.5	7.5	0.6
0.082	10.0	10.0	4.5	7.5	0.6	10.0	12.0	6.0	7.5	0.6
0.100	10.0	10.5	5.0	7.5	0.6	10.0	12.5	6.5	7.5	0.6
0.120	10.0	10.5	5.5	7.5	0.6	12.0	12.0	6.0	10.0	0.6
0.150	10.0	11.5	6.0	7.5	0.6	12.0	12.5	6.5	10.0	0.6
0.180	10.0	12.0	6.5	7.5	0.6	12.0	13.0	7.0	10.0	0.6
0.220	12.0	12.0	6.0	10.0	0.6	12.0	13.5	7.5	10.0	0.6
0.270	12.0	12.5	6.5	10.0	0.6	17.5	13.5	6.5	15.0	0.8
0.330	12.0	13.5	7.0	10.0	0.6	17.5	14.5	6.5	15.0	0.8
0.390	12.0	14.0	7.5	10.0	0.6	17.5	15.0	7.0	15.0	0.8
0.470	12.0	14.5	8.5	10.0	0.6	17.5	15.5	8.0	15.0	0.8
0.560	17.5	14.5	7.0	15.0	0.8	17.5	16.5	8.5	15.0	0.8
0.680	17.5	15.5	7.5	15.0	0.8	17.5	17.5	9.5	15.0	0.8
0.820	17.5	16.0	8.0	15.0	0.8	17.5	19.0	10.0	15.0	0.8
1.00	17.5	17.0	9.0	15.0	0.8	17.5	20.5	11.0	15.0	0.8
1.20	17.5	18.0	10.0	15.0	0.8	25	18.5	9.0	22.5	0.8
1.50	17.5	19.0	11.5	15.0	0.8	25	20.0	10.5	22.5	0.8
1.80	25	18.5	9.0	22.5	0.8	25	21.0	11.5	22.5	0.8
2.20	25	19.5	10.0	22.5	0.8	25	22.5	13.0	22.5	0.8
2.70	25	20.5	11.5	22.5	0.8	25	24.0	14.5	22.5	0.8
3.30	25	25.0	15.5	22.5	0.8	25	25.5	16.0	22.5	0.8

[illegible]

Note: Capacitors of Special Specification are made according to customer's need

7. Marking:



ALN	Aillen
223	CAPACITANCE
K	CAPACITANCE TOLERANCE
450	RATED VOLTAGE
MP	METALLIZED POLYPROPYLENE FILM

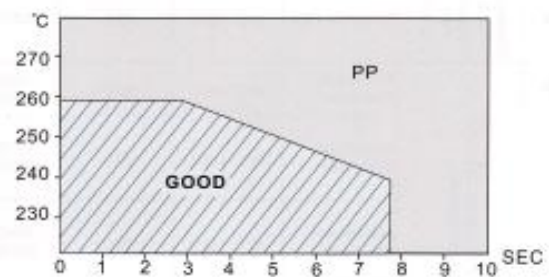
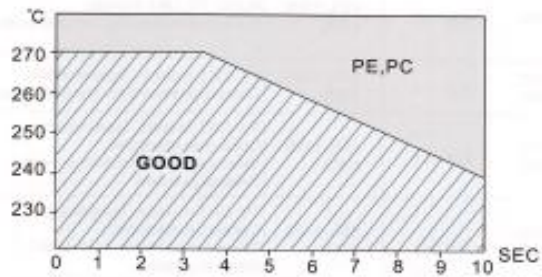
8. Storage conditions and duration

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.

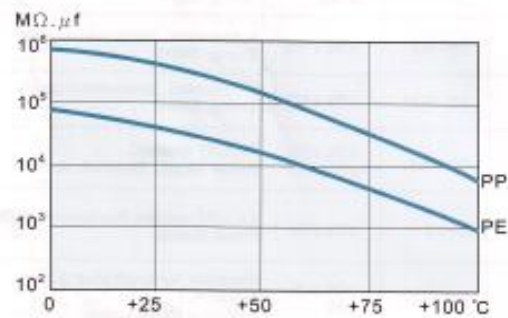
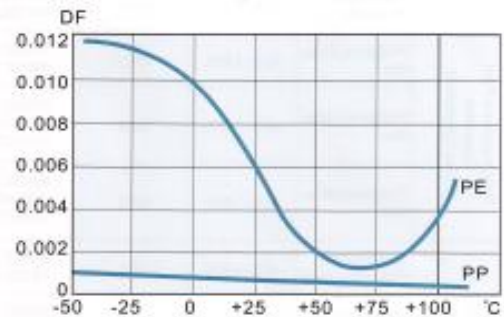
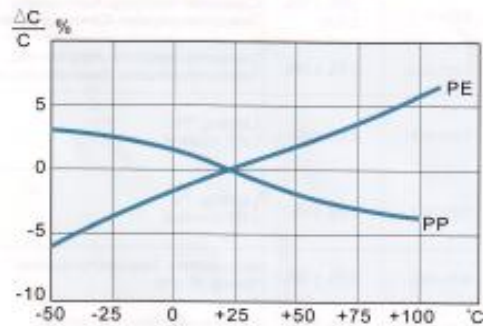
Capacitor at a temperature within the range 20 ~ 25 °C, humidity less than 50% of the state of storage for one year.

9. Typical graphs

Soldering Temperature VS Time



Temperature Characteristics



..
..
..

PP: 聚丙烯薄膜 (Polypropylene Film)

PE: 聚酯薄膜 (Polyester Film)

Frequency Characteristics

