Box-Type Metallized Polypropylene Film Interference Suppression Capacitor (Automotive Grade MPY/Y2)

SPECIFICATION FOR APPROVAL

1. Feature

- Wide capacitance range from 0.001uF to 1.2uF
- Meet AEC-Q200-Rev E quality standard.
- Operating temperature：-40℃～110℃
- Can be cycled through 1000 temperature cycles (-55 ℃ to+110 ℃)
- Compliant with IEC 60384-14
- Metallized polypropylene
- Storage temperature：15 ℃ ~ 35 ℃
- Capability of withstanding overvoltage
- Excellent flame retardant resin（UL94V-0）

2. Applications

- Widely used in power to ground line, bypass, antenna coupling and other anti-interference applications.

3. Applicable Standard

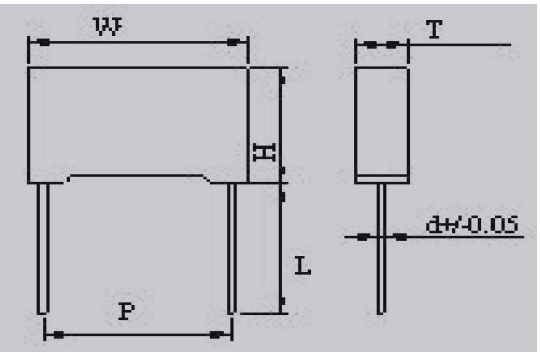
Country	Certification Body	Safety Standards	Certificate No.	Capacitance Range	Rated Voltage
USA Canada	UL/cUL	UL60384-14	E208107	0.001μF～1.2μF	250VAC 275VAC 300VAC 350VAC
Germany	VDE	EN60384-14:2014-10; EN60384-14:2023	40056386		
EU	ENEC	EN60384-14:2023	40056386		
China	CQC	IEC60384.14-2023	CQC23001379254		

Part numbering on request.

5. Electrical Characteristics

Climatic Category	40/110/56B
Rated Voltage	250VAC、275VAC、300VAC、350VAC
Rated DC Voltage	1500VDC（Operating Temperature 85℃） 1000VDC（Operating Temperature 105℃）
Dissipation Factor(tanδ)	≤0.15%
Tolerance	K (±10%)
Withstand Voltage	Between terminals to case: 2UR+1500VAC Minimum of 2000VAC
	Between terminals：1500VAC、1S，or 3500VDC、5S.
Insulation Resistance (I.R.)	CR≤0.33μF，IR≥15000MΩ CR＞0.33μF，IR≥5000S Note：T[s]=I.R[MΩ]*CN [μF]；20℃、100V、60S.
Pulse Voltage	Apply Voltage: CR≤1.0μF，5.0KVDC、CR＞1.0μF，5.0KVDC/$\sqrt{C_R}$ 。 Pulses: 24 times Duration: Charge 9S, Dischage 2S。
Spontaneous Combustion Test	U=UR,U1=5.0KV Each part shall withstand an energy storage capacitor 20 times, with an interval of 5S between each discharge.

6. Dimensions (mm)

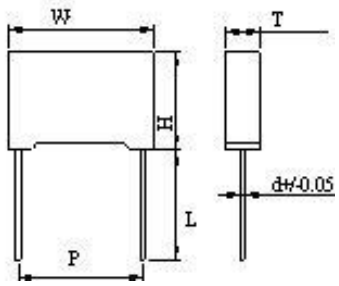
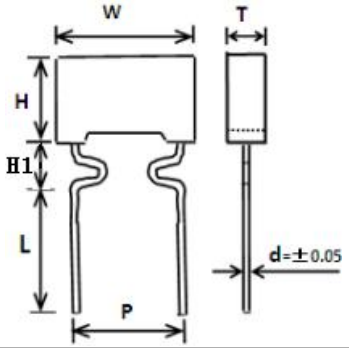


Capacitance (uF)	Voltage	Specifications (mm)				
		W±0.5	H±0.5	T±0.5	P±0.5	d±0.05
0.001	250VAC/275VAC	10	9	4	7.5	0.6
	300VAC/350VAC	10	11	5	7.5	0.6
0.0012	250VAC/275VAC	10	9	4	7.5	0.6
	300VAC/350VAC	10	11	5	7.5	0.6
0.0015	250VAC/275VAC	10	9	4	7.5	0.6
	300VAC/350VAC	10	11	5	7.5	0.6
0.0018	250VAC/275VAC	10	9	4	7.5	0.6
	300VAC/350VAC	10	11	5	7.5	0.6
0.0022	250VAC/275VAC	10	9	4	7.5	0.6
	300VAC/350VAC	10	11	5	7.5	0.6
0.0027	250VAC/275VAC	10	9	4	7.5	0.6
	300VAC/350VAC	10	11	5	7.5	0.6
0.0033	250VAC/275VAC	10	9	4	7.5	0.6
	300VAC/350VAC	10	11	5	7.5	0.6
0.0039	250VAC/275VAC 300VAC/350VAC	10	15	8	7.5	0.6
0.001	250VAC/275VAC	13	9	4	10	0.6
	300VAC/350VAC	13	11	5	10	0.6
0.0012	250VAC/275VAC	13	9	4	10	0.6
	300VAC/350VAC	13	11	5	10	0.6
0.0015	250VAC/275VAC	13	9	4	10	0.6
	300VAC/350VAC	13	11	5	10	0.6
0.0018	250VAC/275VAC	13	9	4	10	0.6
	300VAC/350VAC	13	11	5	10	0.6
0.0022	250VAC/275VAC	13	11	5	10	0.6
	300VAC/350VAC	13	12	6	10	0.6

Capacitance (uF)	Voltage	Specifications (mm)				
		W±0.5	H±0.5	T±0.5	P±0.5	d±0.05
0.0033	250VAC/275VAC	13	11	5	10	0.6
	300VAC/350VAC	13	12	6	10	0.6
0.0039	250VAC/275VAC	13	12	6	10	0.6
	300VAC/350VAC	13	13	7	10	0.6
0.0047	250VAC/275VAC	13	12	6	10	0.6
	300VAC/350VAC	13	13	7	10	0.6
0.0056	250VAC/275VAC	13	12	6	10	0.6
	300VAC/350VAC	13	13	7	10	0.6
0.0068	250VAC/275VAC	13	12	6	10	0.6
	300VAC/350VAC	13	14	7	10	0.6
0.0082	250VAC/275VAC	13	13	7	10	0.6
	300VAC/350VAC	13	15	7	10	0.6
0.01	250VAC/275VAC	13	13	7	10	0.6
	300VAC/350VAC	13	15	7	10	0.6
0.01	250VAC/275VAC	18	12	6	15	0.8
	300VAC/350VAC	18	13.5	7.5	15	0.8
0.012	250VAC/275VAC	18	12	6	15	0.8
	300VAC/350VAC	18	13.5	7.5	15	0.8
0.015	250VAC/275VAC 300VAC/350VAC	18	13.5	7.5	15	0.8
0.018	250VAC/275VAC 300VAC/350VAC	18	14.5	8.5	15	0.8
0.022	250VAC/275VAC	18	14.5	8.5	15	0.8
	300VAC/350VAC	18	16	10	15	0.8
0.027	250VAC/275VAC	18	14.5	8.5	15	0.8
	300VAC/350VAC	18	19	11	15	0.8
0.033	250VAC/275VAC	18	16	10	15	0.8
	300VAC/350VAC	18	21	12	15	0.8
0.039	250VAC/275VAC	18	16	10	15	0.8
	300VAC/350VAC	18	21	12	15	0.8
0.047	250VAC/275VAC	18	19	11	15	0.8
	300VAC/350VAC	18	21	12	15	0.8
0.047	250VAC/275VAC	26	17	8.5	22.5	0.8
	300VAC/350VAC	26	19	10	22.5	0.8

Capacitance (uF)	Voltage	Specifications (mm)				
		W±0.5	H±0.5	T±0.5	P±0.5	d±0.05
0.056	250VAC/275VAC	26	17	8.5	22.5	0.8
	300VAC/350VAC	26	19	10	22.5	0.8
0.068	250VAC/275VAC	26	19	10	22.5	0.8
	300VAC/350VAC	26	20	11	22.5	0.8
0.082	250VAC/275VAC	26	20	11	22.5	0.8
	300VAC/350VAC	26	21.5	12	22.5	0.8
0.1	250VAC/275VAC	26	21.5	12	22.5	0.8
	300VAC/350VAC	26	23	13	22.5	0.8
0.1	250VAC/275VAC	31.5	20	11	27.5	0.8
	300VAC/350VAC	31.5	22	13	27.5	0.8
0.12	250VAC/275VAC	31	20	11	27.5	0.8
	300VAC/350VAC	31	22	13	27.5	0.8
0.15	250VAC/275VAC 300VAC/350VAC	31	22	13	27.5	0.8
0.18	250VAC/275VAC	31	22	13	27.5	0.8
	300VAC/350VAC	31	25	15	27.5	0.8
0.22	250VAC/275VAC	31.5	22	13	27.5	0.8
	300VAC/350VAC	31.5	26	16	27.5	0.8
0.27	250VAC/275VAC	31.5	25	14	27.5	0.8
	300VAC/350VAC	31.5	28	18	27.5	0.8
0.33	250VAC/275VAC	31.5	25	14	27.5	0.8
	300VAC/350VAC	31.5	30.5	22	27.5	0.8
0.39	250VAC/275VAC	41.5	28	14	37.5	1.0
	300VAC/350VAC	41.5	30	17	37.5	1.0
0.47	250VAC/275VAC	41.5	28	14	37.5	1.0
	300VAC/350VAC	41.5	34	20.5	37.5	1.0
0.56	250VAC/275VAC 300VAC/350VAC	41.5	34	20.5	37.5	1.0
0.68	250VAC/275VAC 300VAC/350VAC	41.5	35.5	22.5	37.5	1.0
0.82	250VAC/275VAC 300VAC/350VAC	41.5	36	23	37.5	1.0
1	250VAC/275VAC 300VAC/350VAC	41.5	41	27.5	37.5	1.0
1.2	250VAC/275VAC 300VAC/350VAC	41.5	41	27.5	37.5	1.0

7. Lead Type and Lead Length

Type	Showing	Leas length L(mm)	Height H1(mm)
Long Straight Lead		2.5≤L＜6.0：±0.5 6.0≤L≤10：±1.0	/
Inside Crimped Lead		2.5≤L＜6.0：±0.5 6.0≤L≤10：±1.0	Pitch P＞10mm：H1＜6.0mm Pitch P≤10mm：H1＜5.0mm

8. Taping and Dimensions (mm)

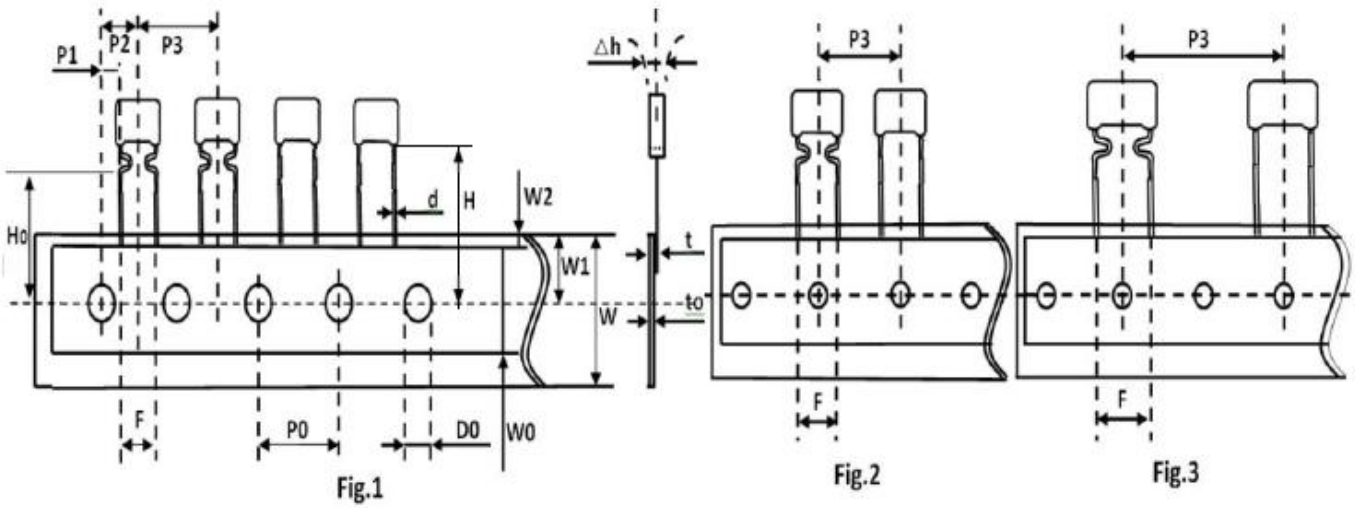
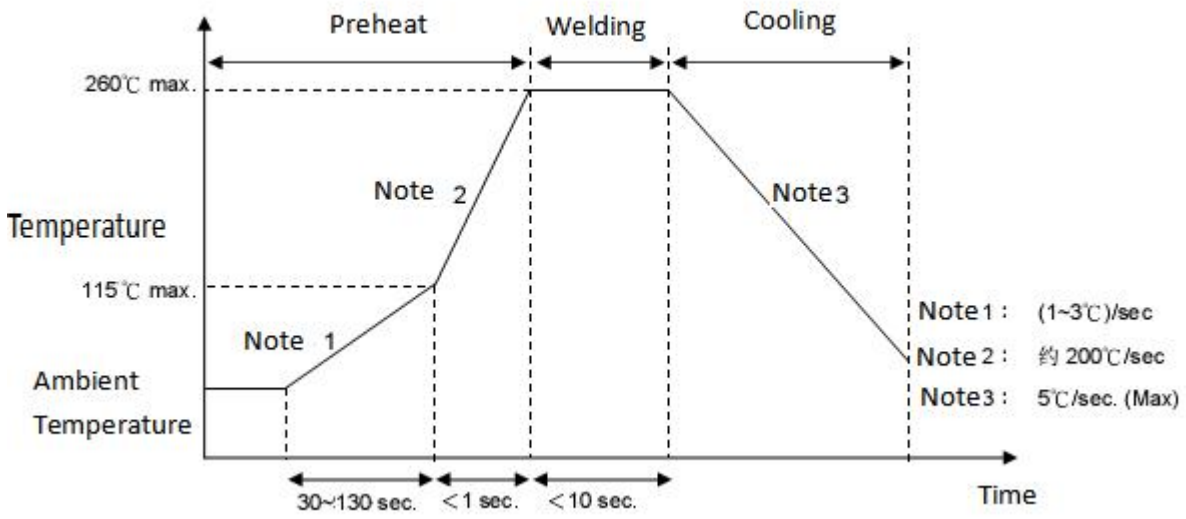


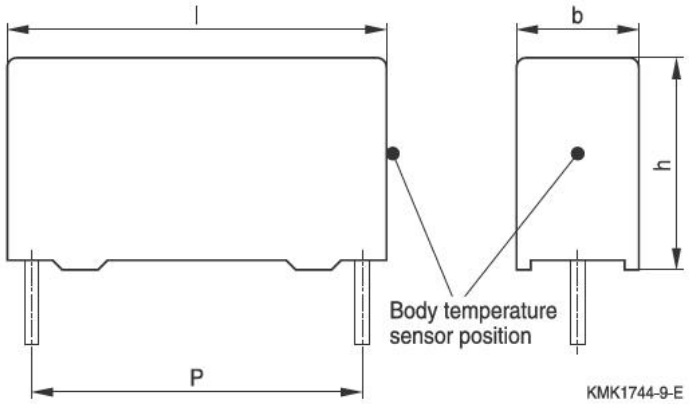
Fig.1 Fig.2 Fig.3

Code	Fig.1	Fig.2	Fig.2	Fig.3	Fig.3	Tolerence
	F=5.0	F=7.5	F=10	F=15	F=22.5	
P3	12.7	12.7	15.0	25.4	30.0	±1.0
P2	6.35	/	/	/	/	±1.3
P0	12.7	12.7	15.0	12.7	15.0	±0.3
P1	3.85	/	/	/	/	±0.7
F	5.0	7.5	10.0	15.0	20.0/22.5	±1.0
H	20.0	20.0	20.0	20.0	20.0	±1.0
H0	16.5	16.5	16.5	16.5	16.5	±0.5
Δh	0	0	0	0	0	±2.0
W	18.0	18.0	18.0	18.0	18.0	+1.0/-0.5
W0	10.5	10.5	10.5	10.5	10.5	max
W1	9.0	9.0	9.0	9.0	9.0	±0.5
W2	3.0	3.0	3.0	3.0	3.0	Max
D0	4.0	4.0	4.0	4.0	4.0	±0.3
d	0.5	0.6	0.6	0.8	0.8	±0.05
t	1.0	1.1	1.1	1.4	1.4	±0.2
t0	0.38	0.38	0.38	0.47	0.47	±0.04

9. Soldering Condition

Wave Soldering Graph





PP:
During pre-heating: Tp ≤110℃
During soldering: Ts ≤120℃, ts ≤15 s
PE:
During pre-heating: Tp ≤125℃
During soldering: Ts ≤160℃, ts ≤15 s

Note: Film capacitor is not suitable for reflow soldering, because it will cause thermal contraction and affect electrical performance.

Iron Soldering Condition

Item	Condition
Temperature of soldering copper bit	350℃（max.）
Soldering duration	3sec（max.）
Space between soldering position and coating layer	2mm（min.）

10. Storage Conditions

- When store under the atmosphere, the terminal may contact with the substance of hydrochloride, hydrosulfide, sulfuric acid, etc. in the atmosphere, which needs to be paid attention to the deterioration of the solderability of the terminal.
- Product could not be exposed to high humidity and high temperature environment. Please store under below condition with the original packing.

A. Temperature: ≤35℃

B. Himidity: ≤70%RH

C. Storage period: Max 12 months