SPECIFICATION FOR APPROVAL

File No.: Q/FRK 0.GS.E.C42-X02

Product Name	Box-type Metallized Polypropylene Film Interference Suppression Capacitor (Class X2)
Product Type	C42(MKP62 Series)
Product Code	
Customer	
Customer Code	
Issue Date	2009-05

Xiamen Faratronic Co. Ltd.
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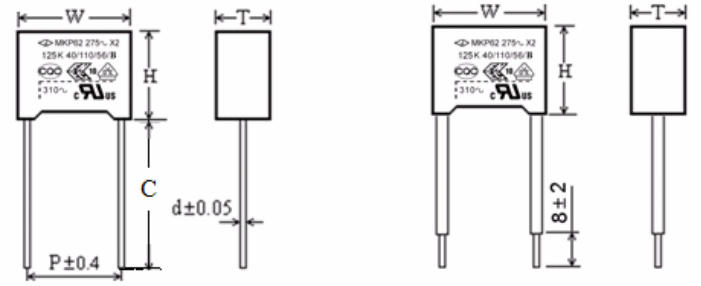
Metallized polypropylene film interference suppression capacitor (Class X2, 275Vac/305Vac)

■Outline Drawing



W±0.4mm, H±0.4mm, T±0.4mm

Lead Wire Insulated Lead Wire**(P≥10mm)**

Note: There are two kind of the insulated lead wire:

1. Insulated rigid leads;
2. Insulated flexible leads.

Lead Wire Dia.	0.6	0.8	1.0
Insulated Lead Wire Gauge	AWG22	AWG20	AWG18

■ Features

- metallized polypropylene structure
- Withstanding overvoltage stressing
- Plastic case (UL94 V-0), Epoxy resin sealing.
- Widely used in interference suppression circuit

■ Safety Approvals

●	CQC	CQC	GB/T 14472-1998, 275/305VAC,0.0010μF~10.0μF Certificate No.: CQC03001002875
●	ENEC 10 DVE	ENEC-VDE	EN 60384-14:2005, 275/305VAC,0.0010μF~10.0μF Certificate No.: 40000358
●	c RU us	UL-CUL	UL1414 CSA C22.2 No.1, 250 VAC, 0.001μF to 1.0μF Certificate No.: E186600
			UL1283 CSA C22.2 No.8, 310 VAC, 0.001μF to 10.0μF Certificate No.: E186662
●	**CB TEST CERTIFICATE**		IEC 60384-14:2005 X2, 275/305 VAC, 0.001μF~10.0μF, 40/110/56/B Certificate No.: DE1--12559/M2, DE1-40344

■ Specifications

Climatic Category/Passive Flammablility Class	40/110/56/B		
Operating teperature range	-40℃ ~ +110℃		
Class	Class X2		
Rated Voltage (U_R)	275/305Vac		
Capacitance Range	0.0010μF~10.0μF		
Capacitance Tolerance	±10%(K), ±20%(M)		
Voltage Proof	Between Terminals	2 000Vdc(2s) $C_R \leqslant 1.0\,\mu F$	
		1 800Vdc(2s) $C_R > 1.0\,\mu F$	
	Between Termianls To Case	2 110Vac (1min)	
Insulation Resistance	≥15 000MΩ , $C_R \leq 0.33\mu F$ ≥5 000s, $C_R > 0.33\mu F$	(20℃, 100V ,1min)	
Dissipation Factor	0.0010μF≤C_R≤0.47μF	≤10×10^{-4}(1kHz,20℃)	≤20×10^{-4}(10kHz,20℃)
	0.47μF<C_R≤1.0μF	≤20×10^{-4}(1kHz,20℃)	≤40×10^{-4}(10kHz,20℃)
	C_R>1.0μF	≤30×10^{-4}(1kHz,20℃)	

Part number system

The 18 digits part number is formed as follow:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
C	4	2															

Digit 1 to 3 Series code of film capacitor

C42=MKP62

Digit 4 to 5 A.C. rated voltage

P2=275V Q2=305V

Digit 6 to 8 Rated capcitance value

For example : 103=10×10^3 pF= 0.01μF

Digit 9 Capacitance tolerance

K=±10%, M=±20%

Digit 10 Pitch

3=7.5mm 4=10mm 6=15mm

9=22.5mm B=27.5mm F=37.5mm

Digit 11 Internal use

Digit 12 to 15 Lead dimensions and packaging code

Digit 16 to 18 Internal use

Table 1 lead dimensions and packaging code

Digit 12		Digit 13		Digit 14		Digit 15	
code	explanation	code	explanation	code	explanation	code	explanation
A	ammo-pack	3 4 6	F=7.5mm F=10.0mm F=15.0mm	0	straight	1 5	each cap. among two consecutive holes P3=12.7mm, H=18.5mm(For pitch=7.5mm) P3=25.4mm;H=18.5mm (For pitch=10/15mm) (Detail parameter refer to page 15 of catalog)
C	straight lead "C" in the figure above	code	explanation			0	Length tolerance ±0.5mm or standard length
		00 45	standard lead length (18mm~26mm) lead length 4.5mm				
D	Insulated flexible leads	00	lead length 150mm			1	Length tolerance ±5mm
E	Insulated rigid leads	C0	lead length 30mm			1	Length tolerance 0～＋5mm

■ Dimensions(mm)

Reduced sizes

275Vac						
C (μF)	W	H	T	P	d	Part number
0.033	13.0	9.0	4.0	10.0	0.6	C42P2333-4S****+++
0.039	13.0	9.0	4.0	10.0	0.6	C42P2393-4S****+++
0.047	13.0	9.0	4.0	10.0	0.6	C42P2473-4S****+++
0.056	13.0	11.0	5.0	10.0	0.6	C42P2563-4S****+++
0.068	13.0	11.0	5.0	10.0	0.6	C42P2683-4S****+++
0.082	13.0	11.0	5.0	10.0	0.6	C42P2823-4S****+++
0.10M	13.0	11.0	5.0	10.0	0.6	C42P2104M4S****+++
0.10K	13.0	12.0	6.0	10.0	0.6	C42P2104K4S****+++
0.12	13.0	13.0	7.0	10.0	0.6	C42P2124-4S****+++
0.15	13.0	13.0	7.0	10.0	0.6	C42P2154-4S****+++
0.18	13.0	14.0	8.0	10.0	0.6	C42P2184-4S****+++
0.22M	13.0	14.0	8.0	10.0	0.6	C42P2224M4S****+++
0.10M	17.5	9.5	5.0	15.0	0.6	C42P2104M6A****+++
0.10	17.5	11.0	5.0	15.0	0.6	C42P2104-6S****+++
0.12	17.5	11.0	5.0	15.0	0.6	C42P2124-6S****+++
0.15M	17.5	11.0	5.0	15.0	0.6	C42P2154M6S****+++
0.15K	17.5	12.0	6.0	15.0	0.6	C42P2154K6S****+++
0.18	17.5	12.0	6.0	15.0	0.6	C42P2184-6S****+++
0.22M	17.5	12.0	6.0	15.0	0.6	C42P2224M6S****+++
0.22K	17.5	13.5	7.5	15.0	0.6	C42P2224K6S****+++
0.22K	17.5	12.5	9.0	15.0	0.6	C42P2224K6A****+++
0.22K	17.5	13.5	6.0	15.0	0.6	C42P2224K6B****+++
0.27	17.5	13.5	7.5	15.0	0.6	C42P2274-6S****+++
0.33M	17.5	13.5	7.5	15.0	0.6	C42P2334M6S***+++
0.33K	17.5	14.0	8.0	15.0	0.6	C42P2334K6S****+++
0.33M	17.5	12.5	9.0	15.0	0.6	C42P2334M6A****+++
0.33M	17.5	17.5	6.0	15.0	0.6	C42P2334M6B****+++
0.33K	17.5	18.5	7.5	15.0	0.8	C42P2334K6A****+++
0.39	17.5	14.5	8.5	15.0	0.6	C42P2394-6S****+++
0.47M	17.5	14.5	8.5	15.0	0.6	C42P2474M6S****+++
0.47M	17.5	18.5	7.5	15.0	0.8	C42P2474M6A****+++
0.47K	17.5	16.0	10.0	15.0	0.8	C42P2474K6S****+++
0.56	17.5	19.0	11.0	15.0	0.8	C42P2564-6S****+++
0.60	17.5	19.0	11.0	15.0	0.8	C42P2604-6S****+++
0.68	17.5	19.0	11.0	15.0	0.8	C42P2684-6S****+++
0.82M	17.5	19.0	11.0	15.0	0.8	C42P2824M6S****+++

275Vac						
C (μF)	W	H	T	P	d	Part number
0.22	26.5	15.0	6.0	22.5	0.8	C42P2224-9S****+++
0.27	26.5	15.0	6.0	22.5	0.8	C42P2274-9S****+++
0.33	26.5	15.0	6.0	22.5	0.8	C42P2334-9S****+++
0.39	26.5	15.0	6.0	22.5	0.8	C42P2394-9S****+++
0.47M	26.5	15.0	6.0	22.5	0.8	C42P2474M9S****+++
0.47K	26.5	16.0	7.0	22.5	0.8	C42P2474K9S****+++
0.56	26.5	16.0	7.0	22.5	0.8	C42P2564-9S****+++
0.60	26.5	17.0	8.5	22.5	0.8	C42P2604-9S****+++
0.68	26.5	17.0	8.5	22.5	0.8	C42P2684-9S****+++
0.82	26.5	18.5	10.0	22.5	0.8	C42P2824-9S****+++
1.0	26.5	18.5	10.0	22.5	0.8	C42P2105-9S****+++
1.2	26.5	20.0	11.0	22.5	0.8	C42P2125-9S****+++
1.5M	26.5	20.0	11.0	22.5	0.8	C42P2155M9S****+++
1.5K	26.5	22.0	12.0	22.5	0.8	C42P2155K9S****+++
1.8	26.5	24.5	15.5	22.5	0.8	C42P2185-9S****+++
2.2	26.5	24.5	15.5	22.5	0.8	C42P2225-9S****+++
0.82	32.0	18.0	9.0	27.5	0.8	C42P2824-BS****+++
1.0	32.0	18.0	9.0	27.5	0.8	C42P2105-BS****+++
1.2	32.0	20.0	11.0	27.5	0.8	C42P2125-BS****+++
1.5	32.0	20.0	11.0	27.5	0.8	C42P2155-BS****+++
1.8	32.0	22.0	13.0	27.5	0.8	C42P2185-BS****+++
2.2M	32.0	22.0	13.0	27.5	0.8	C42P2225MBS****+++
2.2K	32.0	25.0	13.0	27.5	0.8	C42P2225KBS****+++
2.7	32.0	28.0	14.0	27.5	0.8	C42P2275-BS****+++
3.3	32.0	33.0	18.0	27.5	0.8	C42P2335-BS****+++
3.9	32.0	33.0	18.0	27.5	0.8	C42P2395-BS****+++
4.7M	32.0	33.0	18.0	27.5	0.8	C42P2475MBS****+++
4.7K	32.0	37.0	22.0	27.5	0.8	C42P2475KBS****+++
5.6	32.0	37.0	22.0	27.5	0.8	C42P2565-BS****+++
6.8M	32.0	37.0	22.0	27.5	0.8	C42P2685MBS****+++
1.8	41.0	22.0	11.0	37.5	1.0	C42P2185-FS****+++
2.2	41.0	24.0	13.0	37.5	1.0	C42P2225-FS****+++
2.7	41.0	24.0	13.0	37.5	1.0	C42P2275-FS****+++
3.3	41.0	28.0	14.0	37.5	1.0	C42P2335-FS****+++
3.9	41.0	30.0	16.0	37.5	1.0	C42P2395-FS****+++
4.7	41.0	30.0	16.0	37.5	1.0	C42P2475-FS****+++
5.6	41.0	33.5	18.5	37.5	1.0	C42P2565-FS****+++
6.8	41.0	33.5	18.5	37.5	1.0	C42P2685-FS****+++
8.2	41.0	37.0	22.0	37.5	1.0	C42P2825-FS****+++
10.0M	41.0	37.0	22.0	37.5	1.0	C42P2106MFS****+++
10.0K	41.0	41.0	26.0	37.5	1.0	C42P2106KFS****+++

Note: 1. "-"=capacitance tolerance code, M=±20%,K=±10%

2. "****"=lead dimensions and packing mode code (refer to table 1)

Dimensions(mm)

275Vac/305Vac#						
C (μF)	W	H	T	P	d	Part number
0.0010	10.5	9.0	4.0	7.5	0.6	C42P2102-30****+++
0.0012	10.5	9.0	4.0	7.5	0.6	C42P2122-30****+++
0.0015	10.5	9.0	4.0	7.5	0.6	C42P2152-30****+++
0.0018	10.5	9.0	4.0	7.5	0.6	C42P2182-30****+++
0.0022	10.5	9.0	4.0	7.5	0.6	C42P2222-30****+++
0.0027	10.5	9.0	4.0	7.5	0.6	C42P2272-30****+++
0.0033	10.5	9.0	4.0	7.5	0.6	C42P2332-30****+++
0.0039	10.5	9.0	4.0	7.5	0.6	C42P2392-30****+++
0.0047	10.5	9.0	4.0	7.5	0.6	C42P2472-30****+++
0.0056	10.5	9.0	4.0	7.5	0.6	C42P2562-30****+++
0.0068	10.5	9.0	4.0	7.5	0.6	C42P2682-30****+++
0.0082	10.5	9.0	4.0	7.5	0.6	C42P2822-30****+++
0.010	10.5	9.0	4.0	7.5	0.6	C42P2103-30****+++
0.012	10.5	9.0	4.0	7.5	0.6	C42P2123-30****+++
0.015	10.5	9.0	4.0	7.5	0.6	C42P2153-30****+++
0.018	10.5	9.0	4.0	7.5	0.6	C42P2183-30****+++
0.022	10.5	9.0	4.0	7.5	0.6	C42P2223-30****+++
0.027	10.5	11.0	5.0	7.5	0.6	C42P2273-30****+++
0.033	10.5	11.0	5.0	7.5	0.6	C42P2333-30****+++
0.039	10.5	12.0	6.0	7.5	0.6	C42P2393-30****+++
0.047	10.5	12.0	6.0	7.5	0.6	C42P2473-30****+++
0.0047	13.0	9.0	4.0	10.0	0.6	C42P2472-40****+++
0.0056	13.0	9.0	4.0	10.0	0.6	C42P2562-40****+++
0.0068	13.0	9.0	4.0	10.0	0.6	C42P2682-40****+++
0.0082	13.0	9.0	4.0	10.0	0.6	C42P2822-40****+++
0.010	13.0	9.0	4.0	10.0	0.6	C42P2103-40****+++
0.012	13.0	9.0	4.0	10.0	0.6	C42P2123-40****+++
0.015	13.0	9.0	4.0	10.0	0.6	C42P2153-40****+++
0.018	13.0	9.0	4.0	10.0	0.6	C42P2183-40****+++
0.022	13.0	9.0	4.0	10.0	0.6	C42P2223-40****+++
0.027	13.0	9.0	4.0	10.0	0.6	C42P2273-40****+++
0.033	13.0	11.0	5.0	10.0	0.6	C42P2333-40****+++
0.039	13.0	11.0	5.0	10.0	0.6	C42P2393-40****+++
0.047	13.0	11.0	5.0	10.0	0.6	C42P2473-40****+++
0.056	13.0	11.0	5.0	10.0	0.6	C42P2563-40****+++
0.068	13.0	12.0	6.0	10.0	0.6	C42P2683-40****+++
0.082	13.0	12.0	6.0	10.0	0.6	C42P2823-40****+++
0.10	13.0	12.0	6.0	10.0	0.6	C42P2104-40****+++
0.12	13.0	14.0	8.0	10.0	0.6	C42P2124-40****+++
0.15	13.0	14.0	8.0	10.0	0.6	C42P2154-40****+++

275Vac/305Vac#						
C (μF)	W	H	T	P	d	Part number
0.010	17.5	9.5	5.0	15.0	**0.6**	C42P2103-6A****+++
0.012	17.5	9.5	5.0	15.0	**0.6**	C42P2123-6A****+++
0.015	17.5	9.5	5.0	15.0	**0.6**	C42P2153-6A****+++
0.018	17.5	9.5	5.0	15.0	**0.6**	C42P2183-6A****+++
0.022	17.5	9.5	5.0	15.0	**0.6**	C42P2223-6A****+++
0.027	17.5	9.5	5.0	15.0	**0.6**	C42P2273-6A****+++
0.033	17.5	9.5	5.0	15.0	**0.6**	C42P2333-6A****+++
0.039	17.5	9.5	5.0	15.0	**0.6**	C42P2393-6A****+++
0.047	17.5	9.5	5.0	15.0	**0.6**	C42P2473-6A****+++
0.056	17.5	9.5	5.0	15.0	**0.6**	C42P2563-6A****+++
0.068	17.5	9.5	5.0	15.0	**0.6**	C42P2683-6A****+++
0.082	17.5	9.5	5.0	15.0	**0.6**	C42P2823-6A****+++
0.010	17.5	11.0	5.0	15.0	0.8	C42P2103-60****+++
0.012	17.5	11.0	5.0	15.0	0.8	C42P2123-60****+++
0.015	17.5	11.0	5.0	15.0	0.8	C42P2153-60****+++
0.018	17.5	11.0	5.0	15.0	0.8	C42P2183-60****+++
0.022	17.5	11.0	5.0	15.0	0.8	C42P2223-60****+++
0.027	17.5	11.0	5.0	15.0	0.8	C42P2273-60****+++
0.033	17.5	11.0	5.0	15.0	0.8	C42P2333-60****+++
0.039	17.5	11.0	5.0	15.0	0.8	C42P2393-60****+++
0.047	17.5	11.0	5.0	15.0	0.8	C42P2473-60****+++
0.056	17.5	11.0	5.0	15.0	0.8	C42P2563-60****+++
0.068	17.5	11.0	5.0	15.0	0.8	C42P2683-60****+++
0.082	17.5	11.0	5.0	15.0	0.8	C42P2823-60****+++
0.10	17.5	11.0	5.0	15.0	0.8	C42P2104-60****+++
0.12	17.5	12.0	6.0	15.0	0.8	C42P2124-60****+++
0.15	17.5	12.0	6.0	15.0	0.8	C42P2154-60****+++
0.18	17.5	13.5	7.5	15.0	0.8	C42P2184-60****+++
0.22	17.5	13.5	7.5	15.0	0.8	C42P2224-60****+++
0.27	17.5	14.5	8.5	15.0	0.8	C42P2274-60****+++
0.33	17.5	16.0	10.0	15.0	0.8	C42P2334-60****+++
0.39	17.5	19.0	11.0	15.0	0.8	C42P2394-60****+++
0.47	17.5	19.0	11.0	15.0	0.8	C42P2474-60****+++

Note: 1. "-"=capacitance tolerance code, M=±20%,K=±10%

2. "****"=lead dimensions and packing mode code (refer to table 1)

3. "#"when the rated voltage is 305VAC,the digit 4~5 is Q2.

■ Dimensions(mm)

275Vac/305Vac#						
C (μF)	W	H	T	P	d	Part number
0.15	26.5	15.0	6.0	22.5	0.8	C42P2154-90****+++
0.18	26.5	15.0	6.0	22.5	0.8	C42P2184-90****+++
0.22	26.5	15.0	6.0	22.5	0.8	C42P2224-90****+++
0.27	26.5	16.0	7.0	22.5	0.8	C42P2274-90****+++
0.33	26.5	16.0	7.0	22.5	0.8	C42P2334-90****+++
0.39	26.5	17.0	8.5	22.5	0.8	C42P2394-90****+++
0.47	26.5	17.0	8.5	22.5	0.8	C42P2474-90****+++
0.56	26.5	18.5	10.0	22.5	0.8	C42P2564-90****+++
0.68	26.5	18.5	10.0	22.5	0.8	C42P2684-90****+++
0.82	26.5	22.0	12.0	22.5	0.8	C42P2824-90****+++
1.0	26.5	22.0	12.0	22.5	0.8	C42P2105-90****+++
1.2	26.5	24.5	15.5	22.5	0.8	C42P2125-90****+++
1.5	26.5	24.5	15.5	22.5	0.8	C42P2155-90****+++

275Vac/305Vac#						
C (μF)	W	H	T	P	d	Part number
0.47	32.0	18.0	9.0	27.5	0.8	C42P2474-B0****+++
0.56	32.0	18.0	9.0	27.5	0.8	C42P2564-B0****+++
0.68	32.0	18.0	9.0	27.5	0.8	C42P2684-B0****+++
0.82	32.0	20.0	11.0	27.5	0.8	C42P2824-B0****+++
1.0	32.0	20.0	11.0	27.5	0.8	C42P2105-B0****+++
1.2	32.0	22.0	13.0	27.5	0.8	C42P2125-B0****+++
1.5	32.0	22.0	13.0	27.5	0.8	C42P2155-B0****+++
1.8	32.0	24.5	15.0	27.5	0.8	C42P2185-B0****+++
2.2	32.0	28.0	14.0	27.5	0.8	C42P2225-B0****+++
2.7	32.0	33.0	18.0	27.5	0.8	C42P2275-B0****+++
3.3	32.0	33.0	18.0	27.5	0.8	C42P2335-B0**** +++
3.9	32.0	37.0	22.0	27.5	0.8	C42P2395-B0****+++
4.7	32.0	37.0	22.0	27.5	0.8	C42P2475-B0****+++
1.8	41.0	26.0	12.0	37.5	1.0	C42P2185-F0****+++
2.2M	41.0	26.0	12.0	37.5	1.0	C42P2225-F0****+++
2.2K	41.0	28.0	14.0	37.5	1.0	C42P2225-F0****+++
2.7	41.0	28.0	14.0	37.5	1.0	C42P2275-F0****+++
3.3	41.0	30.0	16.0	37.5	1.0	C42P2335-F0****+++
3.9	41.0	32.0	17.0	37.5	1.0	C42P2395-F0****+++
4.7	41.0	33.5	18.5	37.5	1.0	C42P2475-F0****+++
5.6	41.0	37.0	22.0	37.5	1.0	C42P2565-F0****+++
6.8	41.0	37.0	22.0	37.5	1.0	C42P2685-F0****+++
8.2	41.0	41.0	26.0	37.5	1.0	C42P2825-F0****+++
10.0	41.0	43.0	28.0	37.5	1.0	C42P2106-F0****+++

Note: 1. "-"=capacitance tolerance code, M=±20%,K=±10%

2. "****"=lead dimensions and packing mode code (refer to table 1)

3. "#"when the rated voltage is 305VAC,the digit 4~5 is Q2.

Maximum permissible voltage change per unit of time

Rated Voltage （Vac）	dv/dt(V/us)					
	P=7.5mm	P=10mm	P=15mm	P=22.5mm	P=27.5mm	P=37.5mm
275/305	500	500	400	200	150	100

Note:

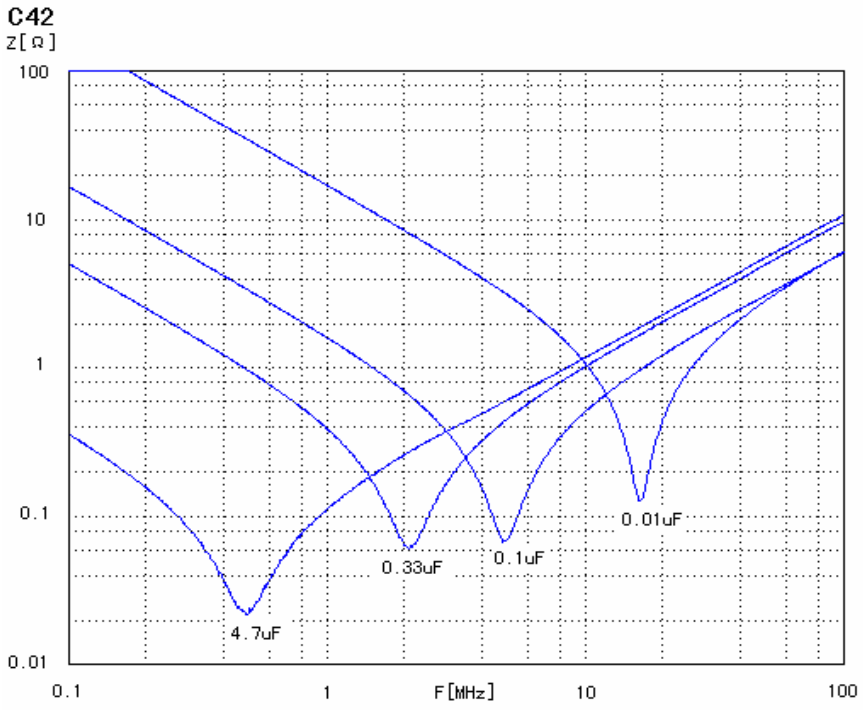
1、 Rated voltage pulse slope $(dv/dt)_R$ at rated voltage.

2、 If the working voltage(U) is lower than the rated voltage(U_R),the capacitor can be worked at a higher dv/dt. In this case, the maximum allowed dv/dt is obtain by multiplying the right value with U_R/U.

Impedance Vs. Frequency

TYPICAL GRAPHS

Z=f(f) Typical values



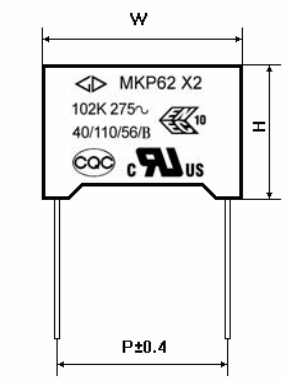
2 Test Method And Performance

No.	Item		Performance	Test Method (IEC 60384-14)
1	Solderability		Good quality of tinning	Solder temperature: 245˚C ±5˚C Immersion time: 2.0s±0.5s
2	Terminal strength		There shall be no visible damage	Tense: 0.50<d≤0.80, 10N 0.80<d≤1.25, 20N Bend: 0.50<d≤0.80, 5N 0.80<d≤1.25, 10N The terminals shall be bent 2 times in each direction
3	Resistance to solder heat		There shall be no visible damage ΔC/C ≤±5%(relative to the initial value)	Solder temperature:260˚C±5˚C Immersion time: 10s±1s
4	Solvent resistance of the marking		The marking shall be legible	Solvent: Industrial isopropanol. Solvent temperature:23˚C±5˚C Dipping time: 5min±0.5min Condition:scrub Scrub material:absorbent cotton Reverting time:No
5	Initial measurement		Capacitance、Tgδ	
	Rapid change of temperature		There shall be no evidence of deterioration.	θ_A=-40˚C, θ_B =+110˚C 5 cycles Duration: t=30min
	Vibration		There shall be no evidence of deterioration.	Amplitude 0.75mm or acceleration 100m/s^2 (whichever is the smaller severity), f: 10Hz to 500Hz.Three directions, 2h foreach direction, total 6h.
	Bump		There shall be no evidence of deterioration.	4 000 times, Acceleration: 400m/s^2, Pulse duration, 6ms
	Final measurement		There shall be no visible damage ΔC/C ≤±5%(relative to the initial value)	
6	climate sequence	Initial measurement		
		Dry heat		+110℃, 16h
		Damp heat,Cyclic		Test Db, Severity: b, the first cycle
		Cold		-40℃, 2h
		Damp heat, cyclic other		Test Db, Severity b, the other cycles,
		Final measurement	There shall be no visible damage, legible marking ΔC/C ≤±5%(relative to the initial value) Increase of tgδ: C_R≤1μF: ≤0.008 (10kHz) C_R>1μF: ≤0.005 (1kHz) Dielectric strength : there shall be no permanent breakdown or flashover I.R.: ≥ 50% of the rated value	

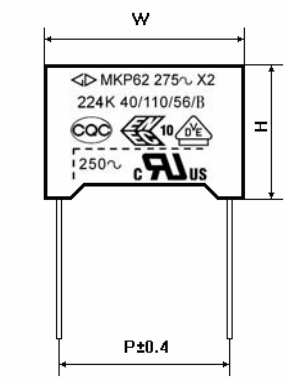
No.	Item	Performance	Test Method (IEC 60384-14)
7	Damp heat steady state	There shall be no visible damage, legible marking ΔC/C ≤±5%(relative to the initial value) Increase of tgδ: C_R≤1μF: ≤0.008 (10kHz) C_R>1μF: ≤0.005 (1kHz) Dielectric strength : there shall be no permanent breakdown or flashover I.R.: ≥ 50% of the rated valueIR: ≥50% of the rated value	Temperature:40˚C ±2˚C Humidity: 93^{+2}_{-3} %RH Duration: 56 days
8	Impulse voltage	There are three or more waveforms which indicate that no self-heating breakdown have occurred when it is monitored by the monitor	Each individual capacitor shall be subjected to 24 impulses of the same polarity (when any three successive impulses are shown by the monitor to have a wave form indicating that no self-healing breakdown have taken place the impulses can be stopped), the time between impulses shall not be less than 10S, and the peak value of the voltage impulse: 2.5kV(suitable for CR≤1μF; When CR>1μF, the capacitor can endure pulse voltage value is $2.5/\sqrt{C_R}$ kV)
9	Endurance	There shall be no visible damage, legible marking ΔC/C≤±10%(relative to the initial value) Increase of tgδ: C_R≤1μF: ≤0.008 (10kHz) C_R>1μF: ≤0.005 (1kHz) Dielectric strength : There shall be no breakdown or flashover I.R. : ≥ 50% of the rated value	+110˚C, 1.25U_RVa.c., 1 000h The voltage shall be subjected to 1000Vrms for 0.1s every one hour during test.
10	Charging and discharging	ΔC/C ≤±10%(relative to the initial value) Increase of tgδ: C_R≤1μF: ≤0.008 (10kHz) C_R>1μF: ≤0.005 (1kHz) I.R.: ≥ 50% of the rated value	Times: 10 000 Duration of charging: 0.5s Duration of discharging: 0.5s Charging voltage: $\sqrt{2}U_R$ Vd.c. Charging resistance: 220/C_R(Ω) or the current ≤1.0A (whichever is the minor) Discharging resistance: $R=\frac{\sqrt{2}U_R}{C_R\times\frac{dU}{dt}}(\Omega)$ C_R: Capacitance (μF) dU/dt(V/us) : 100V/μs

No.	Item	Performance	Test Method (IEC 60384-14)
11	Passive flammability	The flaming time of each capacitor shall not go beyond 10s after it is taken apart from the flame. Drop of each capacitor caused by flame shall not fire the tissue below.	Ref.item 4.17 Needle flame test The category of flammability: B Expose time: 1 time Capacitor Volume Exposing time 250<V(mm^3)≤500 20s 500<V(mm^3)≤1750 30s V(mm^3)>1750 60s
12	Active flammability	The cheese cloth around the capacitor shall not burn with a flame.	The specimens shall be individually wrapped in at least 1,but not more than 2,complete layers of cheesecloth,the cheesecloth shall be untreated pure cotton cloth. Each sample shall be subjected to 20 discharged,the interval between successive discharges shall be 5s. Ui=2.5kV $^{+7}_{0}$ % U_R be applied and be maintained for 2 min after the last discharge.

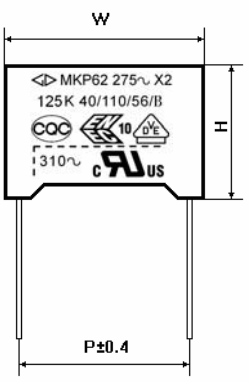
3 Marking



P=7.5 or 10.0mm



P≥15.0mm and C_R≤1.0μF



C_R＞1.0μF

Marking Introduction

Sign	explain	Sign	explain
◁▷	Brand		ENEC-VDE Approval
MKP62	Type		CQC Approval
275~	Rated voltage		UL,CUL Approval
X2	Class	250~/310~	Rated voltage (UL, UCL)
102/224/125K	Rated capacitance and tolerance	40/110/56/B	Climate category / Passive Flammability Class

4 Taping specification for box-type capacitor

■Outline Drawing

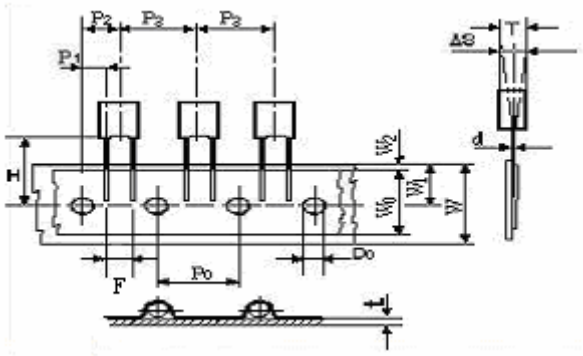


Fig.1 P=5.0、7.5mm

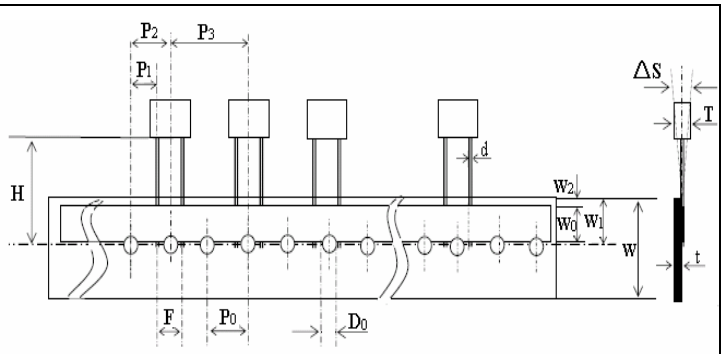


Fig.2 P=10.0、15.0mm

■ Taping Dimensions(mm)

Technology index title	Code	Dimensions				
		P=5.0	P=7.5	P=10.0	P=15.0	Tolerance
Taping type	—	Fig 1	Fig 1	Fig2	Fig 2	——
Part number Digit12-15	Ammo-pack	A201	A301	A405	A605	
Taping pitch	P_3	12.7	12.7	25.4	25.4	±1.0
Feed hole pitch	P_0	12.7	12.7	12.7	12.7	±0.2
Center of wire	P_1	3.85	2.6	7.7	5.2	±0.7
Center of body	P_2	6.35	6.35	12.7	12.7	±1.3
Pitch of taping wire	F**	5.0	7.5	10.0	15.0	+0.6 -0.1
Component alignment	△S	0	0	0	0	±2.0
Height of component from tape center	H***	18.5	18.5	18.5	18.5	±0.5
Carrier tape width	W	18.0	18.0	18.0	18.0	+1.0 -0.5
Hold down tape width	W_0	6min	12min	12min	12min	——
Hole position	W_1	9.0	9.0	9.0	9.0	±0.5
Hold down tape sition	W_2	1.5max	1.5max	1.5max	1.5max	——
Feed hole dia.	D_0	4.0	4.0	4.0	4.0	±0.2
Tape thickness	t	0.7	0.7	0.7	0.9	±0.2

■ Packing Quantity

Pitch (mm)	Box thinkness T(mm)	Ammo-pack (pcs/box)	
		Domestic	Export
5.0	3.5	1 700	1 500
	4.5	1 400	1 300
	5.0	1 200	1 000
	6.0	1 000	800
7.5	3.5	1 700	1 500
	4.0	1 500	1 300
	5.0	1 200	1 000
	6.0	1 000	800
10.0/ 15.0	4.0	750	650
	5.0	600	500
	6.0	500	450
15.0	7.5	400	350
	8.5	350	300
	10.0	300	250
	11.0	250	200

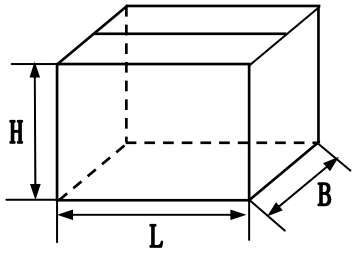
Note: * P_0=15mm is also available;

**F can be other lead spacing;

***H=16.5mm is available;

5 Packing in bulk

5. 1Out packing box for bulk



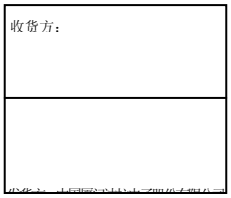
L:375mm

B:375mm

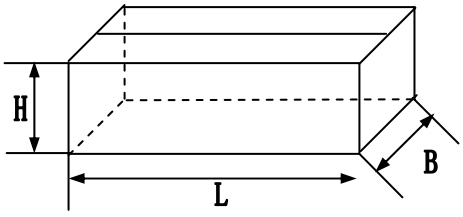
H:265mm

Plane drawing

Overlooking Drawing



5. 2 Inner packing box for bulk

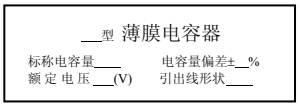


L:355mm

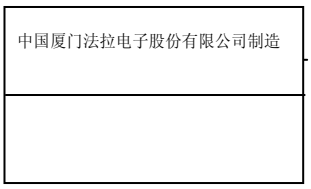
B:175mm

H:118mm

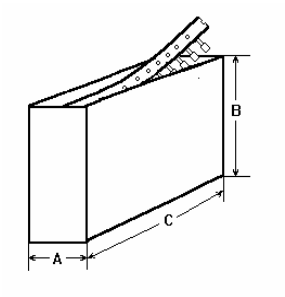
Plane drawing



Overlooking Drawing



5.3 Box size forAmmo-pack



A=48±3; B=260±3; C=330±3