

Metallized Film Capacitor

Interference Suppression Capacitors

Series/Type: X2-MPX/MKP

Ordering code: CX2*

Date: September 2024

Version: 01

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■ Features

- Metallized polypropylene structure
- Withstanding overvoltage stressing
- Excellent active and passive flame resistant abilities
- Used in across-the-line, interference suppression circuit

■ Reference Standards

- IEC60384-14
- AEC Q-200
- RoHS
- UL 810

■ Safety Approvals

●		CQC (CHINA)	IEC 60384-14:2023, X2,250V/275V/280V/310V, 0.001 μ F~15 μ F,40/110/56B Certificate No.:CQC21001303536
●		ENEC-VDE (EUROPEAN UNION)	IEC 60384-14:2013+AI:2016, X2,250V/275V/280V/310V, 0.001 μ F~15 μ F,40/110/56B Certificate No.:40052899
●		UL/CUL (USA/CANADA)	IEC 60384-14:2013+AI:2016, X2,250V/275V/280V/310V, 0.001 μ F~15 μ F,40/110/56B File No.:E315567
●		KC (KOREA)	IEC 60384-14:2015 KC 60384-14:2015 X2,330V, 0.0022 μ F~4.7 μ F,40/110/56B Certificate No.:SU03094-17001A; SU03094-17002A; SU03094-17003A; SU03094-22001; SU03094-22002

■ Specifications

- Capacitance range **0.001 μ F...15 μ F**
- Capacitance tolerance **$\pm 10\%$ (K), $\pm 20\%$ (M)**
- Rated RMS Voltage **250V.ac/275V.ac/280V.ac/310V.ac**
- Dielectric dissipation factor($\tan \delta_o$) **2×10^{-4}**
- Loss factor($\tan \delta$)at 1KHz **$\leq 3.0 \times 10^{-3}$**
- Operating temperature range **-40 $^{\circ}$ C...110 $^{\circ}$ C**
- Storage temperature Range **-40 $^{\circ}$ C...110 $^{\circ}$ C**

■ Test data

- Capacitance measurement **$C_R \pm 10\%$ (K); $C_R \pm 20\%$ (M)**
- Test voltage between terminals **4.3U_R @2S**
- Test voltage between terminals to case **1500+2U_R V.ac @60S**
- Insulation resistance **R $\geq 15,000M \Omega$, $C_R \leq 0.33\mu F(20^{\circ}C, 100V, 60S)$
R $\cdot C_R \geq 5,000S$, $C_R > 0.33\mu F(20^{\circ}C, 100V, 60S)$**
- Loss factor($\tan \delta$)at 1KHz **30×10^{-4}**

■ **Structure of ordering code**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
C	X	2	3	1	1	2	2	5	K	6	3	5	L	0	1	G	1
A			B			C			D	E	F		G	H	I	J	K

- A: Capacitor series
CX2=X2-MPX/MKP
- B: Rated voltage
如: 311=31*10¹=310V
- C: Rated capacitance
如: 225=22*10⁵=2200000pF=2.2μF
- D: Capacitance tolerance
K=±10%, M=±20%
- E: Pitch
2=5.0mm 3=7.5mm 4=10mm 5=12.5mm 6=15mm 9=22.5mm
B=27.5mm D=32.5mm F=37.5mm M=52.5mm
- F: Lead length
35=3.5mm E5=15mm N2=22mm S6=36mm
- G: Pin shape
L=Straight foot R=Right foot K=K foot N=Bend inward foot
W=Bend outside foot
- H: Product features
0=Ordinary 1=Double 85 2=Low noise 3=Low power
- I: Raw material
0=No halogen 1=halogen
- J: Product colour
Y=Yellow G=Grey B=Black U=Blue W=white R=Red E=Green
- H: Inner use

■ **Outline Drawing(Specific according to customer requirements)**

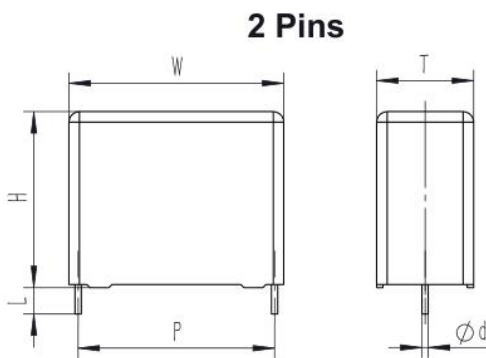


Fig 1

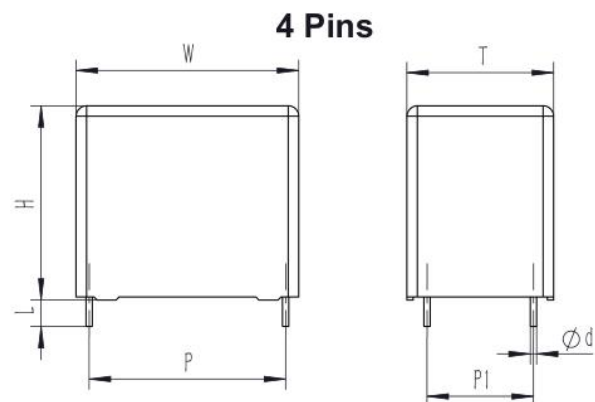


Fig 2

Dimensions(mm)

UR: 250V.ac / 275V.ac / 280V.ac / 310V.ac							UR: 250V.ac / 275V.ac / 280V.ac / 310V.ac						
Cr(μF)	W	H	T	d	P	Part number	Cr(μF)	W	H	T	d	P	Part number
0.0010	10	8	4	0.6	7.5		0.018	13	10	5	0.6	10	
0.0010	13	10	5	0.6	10		0.018	18	11	5	0.8	15	
0.0015	10	8	4	0.6	7.5		0.022	10	9	4	0.6	7.5	
0.0015	13	10	5	0.6	10		0.022	13	9	4	0.6	10	
0.0018	10	8	4	0.6	7.5		0.022	13	11	5	0.6	10	
0.0018	13	10	5	0.6	10		0.022	15	11.5	6	0.6	12.5	
0.0022	10	8	4	0.6	7.5		0.022	18	11	5	0.8	15	
0.0022	13	10	5	0.6	10		0.022	20	14	7	0.8	15	
0.0027	10	8	4	0.6	7.5		0.027	10	10	5	0.6	7.5	
0.0027	13	10	5	0.6	10		0.027	13	10	5	0.6	10	
0.0033	10	8	4	0.6	7.5		0.027	18	11	5	0.8	15	
0.0033	13	10	5	0.6	10		0.033	10	10	5	0.6	7.5	
0.0039	10	8	4	0.6	7.5		0.033	10	12	6	0.6	7.5	
0.0039	13	10	5	0.6	10		0.033	13	9	4	0.6	10	
0.0047	10	8	4	0.6	7.5		0.033	13	9	5	0.6	10	
0.0047	13	10	5	0.6	10		0.033	13	11	5	0.6	10	
0.0056	10	8	4	0.6	7.5		0.033	15	11.5	6	0.6	12.5	
0.0056	13	10	5	0.6	10		0.033	18	11	5	0.8	15	
0.0068	10	8	4	0.6	7.5		0.033	20	14	7	0.8	15	
0.0068	13	10	5	0.6	10		0.039	10	10	5	0.6	7.5	
0.0082	13	10	5	0.6	10		0.039	10	12	6	0.6	7.5	
0.010	10	8	4	0.6	7.5		0.039	13	9	5	0.6	10	
0.010	13	9	4	0.6	10		0.039	13	11	5	0.6	10	
0.010	13	10	5	0.6	10		0.039	13	12	6	0.6	10	
0.010	15	11.5	6	0.6	12.5		0.039	15	11.5	6	0.6	12.5	
0.010	18	11	5	0.8	15		0.039	18	11	5	0.8	15	
0.012	10	8	4	0.6	7.5		0.047	10	10	5	0.6	7.5	
0.012	13	10	5	0.6	10		0.047	10	12	6	0.6	7.5	
0.012	15	11.5	6	0.6	12.5		0.047	13	9	4	0.6	10	
0.012	18	11	5	0.8	15		0.047	13	11	5	0.6	10	
0.015	10	9	4	0.6	7.5		0.047	13	13	7	0.6	10	
0.015	13	10	5	0.6	10		0.047	15	11.5	6	0.6	12.5	
0.015	13	12	6	0.6	10		0.047	18	11	5	0.8	15	
0.015	18	11	5	0.8	15		0.047	20	14	7	0.8	15	
0.018	10	9	4	0.6	7.5		0.056	10	10	5	0.6	7.5	

Metallized Film Capacitor	CX2*
Interference Suppression Capacitors	X2-MPX/MKP

Dimensions(mm)

UR: 250V.ac / 275V.ac / 280V.ac / 310V.ac							UR: 250V.ac / 275V.ac / 280V.ac / 310V.ac						
Cr(μF)	W	H	T	d	P	Part number	Cr(μF)	W	H	T	d	P	Part number
0.056	10	12	6	0.6	7.5		0.12	18	12	6	0.8	15	
0.056	13	11	5	0.6	10		0.12	26	14.5	6	0.8	22.5	
0.056	13	13	7	0.6	10		0.15	10	14	9.5	0.8	7.5	
0.056	15	11.5	6	0.6	12.5		0.15	10	17	7	0.6	7.5	
0.056	18	11	5	0.8	15		0.15	13	14	8	0.6	10	
0.068	10	13	7	0.6	7.5		0.15	15	11.5	6	0.6	12.5	
0.068	13	11	5	0.6	10		0.15	18	12	6	0.8	15	
0.068	13	13	7	0.6	10		0.15	18	11	5	0.8	15	
0.068	15	11.5	6	0.6	12.5		0.15	18	13.5	7.5	0.8	15	
0.068	18	11	5	0.8	15		0.15	26	11	5	0.8	22.5	
0.068	20	14	7	0.8	15		0.15	26	14.5	6	0.8	22.5	
0.082	10	13	7	0.6	7.5		0.15	26.5	17	10	0.8	22.5	
0.082	13	11	5	0.6	10		0.18	13	16	8	0.6	10	
0.082	13	12	6	0.6	10		0.18	18	12	6	0.8	15	
0.082	13	14	8	0.6	10		0.18	26	14.5	6	0.8	22.5	
0.082	15	11.5	6	0.6	12.5		0.22	10	17	7	0.6	7.5	
0.082	18	11	5	0.8	15		0.22	13	14	8	0.6	10	
0.082	18	12	6	0.8	15		0.22	13	16	8	0.6	10	
0.10	10	13	7	0.6	7.5		0.22	15	12.5	7.5	0.6	12.5	
0.10	10	14	9.5	0.6	7.5		0.22	17.5	9.8	5.5	0.8	15	
0.10	13	11	5	0.6	10		0.22	18	12	6	0.8	15	
0.10	13	12	6	0.6	10		0.22	18	13.5	6.5	0.8	15	
0.10	13	16	8	0.6	10		0.22	18	13	7	0.8	15	
0.10	15	11.5	6	0.6	12.5		0.22	18	14.5	8.5	0.8	15	
0.10	17.5	9.8	5.5	0.8	15		0.22	18	13.5	7.5	0.8	15	
0.10	18	11	5	0.8	15		0.22	18	15.5	9.6	0.8	15	
0.10	18	12	6	0.8	15		0.22	26	12	6	0.8	22.5	
0.10	18	13	6.3	0.8	15		0.22	26	14.5	6	0.8	22.5	
0.10	18.5	14.8	8.8	0.8	15		0.22	26.5	16.5	7	0.8	22.5	
0.10	26	11	5	0.8	22.5		0.22	26.5	17	8.5	0.8	22.5	
0.10	26	14.5	6	0.8	22.5		0.27	13	16	8	0.6	10	
0.10	26	16.5	7	0.8	22.5		0.27	18	14.5	7.5	0.8	15	
0.12	10	14	9.5	0.6	7.5		0.27	26.5	16.5	7	0.8	22.5	
0.12	13	14	8	0.6	10		0.33	12.5	16.5	10.5	0.6	10	
0.12	15	11.5	6	0.6	12.5		0.33	13	14	8	0.6	10	

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Dimensions(mm)

UR: 250V.ac / 275V.ac / 280V.ac / 310V.ac							UR: 250V.ac / 275V.ac / 280V.ac / 310V.ac						
CR(μF)	W	H	T	d	P	Part number	CR(μF)	W	H	T	d	P	Part number
0.33	13	16	8	0.6	10		0.56	26	16.5	7.5	0.8	22.5	
0.33	15	14	8.5	0.6	12.5		0.56	31	20	10	0.8	27.5	
0.33	17	16	8.5	0.8	15		0.68	13	22	11.8	0.6	10	
0.33	18	13.5	6	0.8	15		0.68	18	16	10	0.8	15	
0.33	18	13.5	7.5	0.8	15		0.68	18	19	11	0.8	15	
0.33	18	14.5	8.5	0.8	15		0.68	26	16.5	7.5	0.8	22.5	
0.33	18	19	10.8	0.8	15		0.68	26	17	8.5	0.8	22.5	
0.33	26	12	6	0.8	22.5		0.68	26	19	10	0.8	22.5	
0.33	26	16.5	7.5	0.8	22.5		0.68	26	21.5	12	0.8	22.5	
0.33	26	17	8.5	0.8	22.5		0.68	31	18	9	0.8	27.5	
0.33	26.5	17	8.5	0.8	22.5		0.68	31	20	10	0.8	27.5	
0.33	26.5	19	10	0.8	22.5		0.68	31.5	21.6	13	0.8	27.5	
0.39	12.5	16.5	10.5	0.6	10		0.82	18	19.2	11.2	0.8	15	
0.39	15	16	10	0.6	12.5		0.82	26	18	9	0.8	22.5	
0.39	18	19	11	0.8	15		0.82	31	20	11	0.8	27.5	
0.39	26	16.5	7.5	0.8	22.5		0.82	36	22	12	0.8	32.5	
0.47	12.5	16.5	10.5	0.6	10		1.0	18	19	11.2	0.8	15	
0.47	13	22	11.8	0.6	10		1.0	18	26	16.3	0.8	15	
0.47	15	16	10	0.6	12.5		1.0	26	17	8.5	0.8	22.5	
0.47	18	14	8	0.8	15		1.0	26	20	11	0.8	22.5	
0.47	18	16	10	0.8	15		1.0	26.5	23	14	0.8	22.5	
0.47	18	18	9	0.8	15		1.0	31	20	11	0.8	27.5	
0.47	18	19	11	0.8	15		1.0	36.5	26.3	15.4	0.8	32.5	
0.47	19.5	19.5	9.5	0.8	15		1.0	37	26.3	15.4	0.8	32.5	
0.47	26	14.5	6	0.8	22.5		1.2	18	26	16.3	0.8	15	
0.47	26	16.5	7.5	0.8	22.5		1.2	26	20	11.5	0.8	22.5	
0.47	26	17	8.5	0.8	22.5		1.2	31	18	9	0.8	27.5	
0.47	26	19	10	0.8	22.5		1.2	32	22	13	0.8	27.5	
0.47	26	21.5	12	0.8	22.5		1.2	38	26	16	0.8	32.5	
0.47	26.5	19	10	0.8	22.5		1.5	18	26	16.3	0.8	15	
0.47	30	21	11.8	0.8	27.5		1.5	26	22	12	0.8	22.5	
0.47	31	18	9	0.8	27.5		1.5	31	23.5	14	0.8	27.5	
0.56	15	17	11	0.6	12.5		1.5	31	25	14	0.8	27.5	
0.56	18	16	10	0.8	15		1.5	37	26.3	15.4	0.8	32.5	
0.56	18	19	11	0.8	15		1.5	38	28	18	0.8	32.5	

Metallized Film Capacitor	CX2*
Interference Suppression Capacitors	X2-MPX/MKP

Dimensions(mm)

UR: 250V.ac / 275V.ac / 280V.ac / 310V.ac							UR: 250V.ac / 275V.ac / 280V.ac / 310V.ac						
CR(μF)	W	H	T	d	P	Part number	CR(μF)	W	H	T	d	P	Part number
1.8	26	24	14	0.8	22.5		3.3	31.5	25	14	0.8	27.5	
1.8	31.5	21.6	13	0.8	27.5		3.3	31.5	31	22	0.8	27.5	
1.8	32	28	17	0.8	27.5		3.3	31	29	15.5	0.8	27.5	
1.8	37	26.3	15.4	0.8	32.5		3.3	32	26	18	0.8	27.5	
1.8	38	30	19	0.8	32.5		3.3	37	26.3	15.4	0.8	32.5	
2.0	26	25	15	0.8	22.5		3.3	41.5	26	14.5	1.0	37.5	
2.0	31.5	21.6	13	0.8	27.5		3.5	31	28	16	0.8	27.5	
2.0	32	28	17	0.8	27.5		3.5	38	28	18	0.8	32.5	
2.0	37	26.3	15.4	0.8	32.5		3.5	41.5	27.5	16	1.0	37.5	
2.0	38	31.3	21.7	0.8	32.5		3.9	31	28	19	0.8	27.5	
2.2	26	25	15	0.8	22.5		3.9	38	28	18	0.8	32.5	
2.2	31	26	18	0.8	27.5		4.7	31	32.5	19	0.8	27.5	
2.2	31.5	21.6	13	0.8	27.5		4.7	38	32	20	0.8	32.5	
2.2	31.5	25	14	0.8	27.5		4.7	41.5	30	17	1.0	37.5	
2.2	32	28	17	0.8	27.5		5.0	31	34.5	21	0.8	27.5	
2.2	37	26.3	15.4	0.8	32.5		5.0	38	32	20	0.8	32.5	
2.2	38	31.3	21.7	0.8	32.5		5.0	41.5	31.5	18.5	1.0	37.5	
2.5	31	26	18	0.8	27.5		5.6	31	34.5	21	0.8	27.5	
2.5	31.5	25	14	0.8	27.5		5.6	41.5	31.5	18.5	1.0	37.5	
2.5	37	26.3	15.4	0.8	32.5		6.8	41.5	35.5	22.5	1.0	37.5	
2.7	31	26	18	0.8	27.5		8.2	41.5	38	25	1.0	37.5	
2.7	37	26.3	15.4	0.8	32.5		10	41.5	41	27.5	1.0	37.5	
3.0	31.5	25	14	0.8	27.5		12	41.5	48	33	1.0	37.5	
3.0	32	26	18	0.8	27.5		15	42.5	53.5	38	1.0	37.5	
3.0	37	26.3	15.4	0.8	32.5								