

X Series

For Interference Suppression and Across-The-Line, Class X1

Introduction

CTX are non-inductively wound with a metallized polypropylene film dielectric/electrode, encapsulated in flame retardant (UL94, V-0) plastic case epoxy resin end seal.



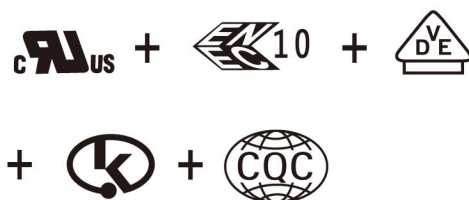
-CTX -S Tinned copper clad steel wire radial leads.
UL 1015 or UL 1017 AWG#20-22 solid
-P PVC insulation wire radial leads.

Applications

- Ideal for use in line bypass, antenna coupling, across-the-line and spark killer circuits.
- Available for EMI filter.
- Switching power supply applications.
- Business machines appliances, such as: typewriters, adding machines, computer displays and monitors.
- Household appliances, such as: mixers, fans, coffee grinders audio and TV circuits.
- Thyristor and triac appliances, such as: dimmers.

Features

- Provides interference suppression, all safety approval.
- Over voltage stress withstanding.
- Self-healing properties.
- Active and passive flame retardent.



Specifications

- climate category: In accordance with DIN40040 GMF
 - (a)G=Minimum Limit Temperature.....-40°C
 - (b)M=Maximum Limit Temperature.....+100°C
 - (c)F=Humidity Category...Average relative humidity
 - ≤75%, 95% for 30 days per year, continuously:
 - 85% for the remaining days, occasionally.
- Rater Voltage:.....250V/300V.AC, 50~60Hz
- Capacitance Range:.....0.0047~10uF
- Capacitance Tolerance:...J(±5%),K(±10%),M(±20%)

Withstand Voltage:

- (a)Between Terminals.....1200V.AC,60Hz or 2200v.DC 1s
- (b)Between Terminals and Case.....2200V.DC 60Hz 60s

Dissipation Factor:

- (a)≤0.1%at 1 KHz and 20°C
- (b)≤0.3%at 1 KHz and 20°C

Insulation Resistance:

- (a)Between Terminals.....≥3X10⁴MΩ for c≤0.33uF;
≥1X10⁴MΩ/uF for c>0.33uF
- (b)Between Terminals and Case.....≥3X10⁴MΩ
Measured at 100±15V.DC,60s20°C

X1 CTX CASE SIZE OF STANDARD PRODUCTS

All dimensions are in mm

High Quality Class X₁

Product No.	Capacitance uF	Rated-Voltage VAC	PVC Wire(W±0.75)Dimensions in mm				
			W±0.5	H±0.5	T±0.5	P±0.5	D±0.05
CTX472K300VP10	0.0047	300	13	11	5	10	0.6
CTX472K300VP15	0.0047	300	18	10	5	15	0.8
CTX103K300VP10	0.01	300	13	11	5	10	0.6
CTX103K300VP15	0.01	300	18	10	5	15	0.8
CTX153K300VP15	0.015	300	18	10	5	15	0.8
CTX223K300VP15	0.022	300	17	11	5.5	15	0.8
CTX333K300VP10	0.033	300	13	11	5	10	0.6
CTX333K300VP15	0.033	300	18	10	5	15	0.8
CTX473K300VP10	0.047	300	13	11	5	10	0.6
CTX473K300VP15	0.047	300	18	10	5	15	0.8
CTX683K300VP15	0.068	300	18	10	5	15	0.8
CTX823K300VP15	0.082	300	17	11	5.5	15	0.8
CTX104K300VP10	0.1	300	13	12	6	10	0.6
CTX104K300VP15	0.1	300	17	11	5.5	15	0.8
CTX154K300VP10	0.15	300	13	12	6	10	0.6
CTX154K300VP15	0.15	300	18	13.5	6	15	0.8
CTX224K300VP10	0.22	300	12	14	8	10	0.6
CTX224K300VP15	0.22	300	17	15.5	7.5	15	0.8
CTX224K300VP225	0.22	300	25	14.5	6	22.5	0.8
CTX334K300VP15	0.33	300	17	16.5	9.5	15	0.8
CTX334K300VP225	0.33	300	26.5	16.5	7	22.5	0.8
CTX474K300VP15	0.47	300	17	19	11	15	0.8
CTX474K300VP225	0.47	300	26.5	17	8.5	22.5	0.8
CTX474K300VP275	0.47	300	31.5	20	11	27.5	0.8
CTX564K300VP225	0.56	300	26.5	19	10	22.5	0.8
CTX684K300VP15	0.68	300	17	21	12	15	0.8
CTX684K300VP225	0.68	300	26.5	19	10	22.5	0.8
CTX684K300VP275	0.68	300	31.5	20	11	27.5	0.8
CTX824K300VP275	0.82	300	31.5	20	11	27.5	0.8

Chip Type SMD
Miniature Type
General Purpose
High Frequency Low Impedance
High Voltage High Reliability
Non-polar Type
Large Size Snap-in
Large Size Screw
X Metallized Polypropylene Film Capacitors

X1 CTX CASE SIZE OF STANDARD PRODUCTS

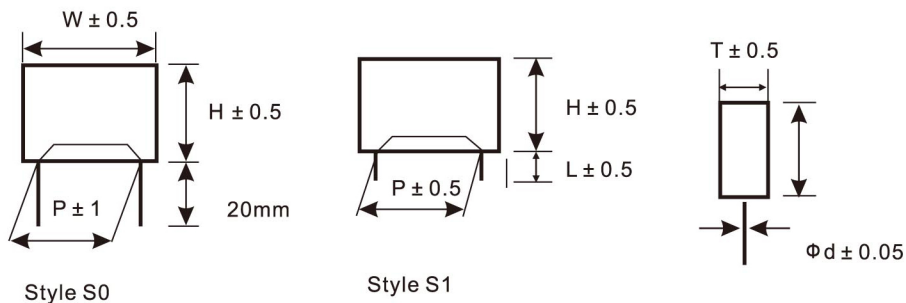
Product No.	Capacitance uF	Rated-Voltage VAC	PVC Wire(W±0.75)Dimensions in mm				
			W±0.5	H±0.5	T±0.5	P±0.5	D±0.5
CTX105K300VP225	1.0	300	25	23.5	14	22.5	0.8
CTX105K300VP275	1.0	300	30	21	11.5	27.5	0.8
CTX125K300VP275	1.2	300	31.5	25	14	27.5	0.8
CTX155K300VP275	1.5	300	31.5	25	14	27.5	0.8
CTX225K300VP275	2.2	300	32	26.5	18	27.5	0.8
CTX225K300VP325	2.2	300	37	26.5	16	32.5	0.8
CTX275K300VP325	2.7	300	37	28.5	18	32.5	0.8
CTX335K300VP325	3.3	300	37	34	22	32.5	0.8
CTX395K300VP475	3.9	300	51	27.5	17.5	47.5	0.8
CTX475K250VP475	4.7	300	51	30.5	20	47.5	0.8
CTX685K250VP475	6.8	250	51	34	22.5	47.5	0.8
CTX825K250VP475	8.2	250	51	37	24	47.5	0.8
CTX106K250VP475	10	250	51	43.5	29	47.5	0.8

X Serise X1 Metallized Polypropylene Film Capacitors

• Approval Data

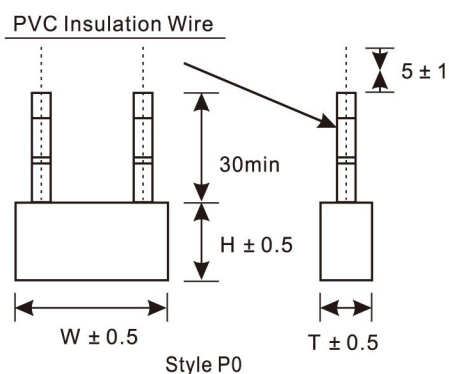
Country	File and Ref.No.	Capacitions
UL.CUL	E193049	0.0047uF~1.0uF 250V
UL.CUL	E211230	1.2uF~10uF 250V
VDE	40026382	0.0047uF~4.7uF 300V
ENEC	40026382	0.0047uF~4.7uF 300V
EK	HU03009-5003A	0.1uF 300V
EK	HU03009-5001A	0.15uF~0.33uF 300V
EK	HU03009-5002A	0.47uF~1.0uF 300V
CQC	CQC03001008997	0.0047uF~4.7uF 300V

• Diagram of Dimensions(Unit=mm)



• Pitch and Lead Dimensions(mm)

W	13.0(12)	17.0(18)	26.5(25)	31.5(30)	37	51
P	10	15	22.5	27.5	32.5	47.5
Φd	0.6	0.8	0.8	0.8	0.8(1.0)	0.8(1.0)



Wire Size: AWG#22 for $W \leq 18.0\text{mm}$ AWG#20 for $W \geq 25.0\text{mm}$



Chip Type SMD
Miniature Type
General Purpose
High Frequency Low Impedance
High Voltage High Reliability
Non-polar Type
Large Size Snap-in
Large Size Screw
X Metallized Polypropylene Film Capacitors

X Serie X1 Metallized Polypropylene Film Capaciyors

- Surge Voltage Test

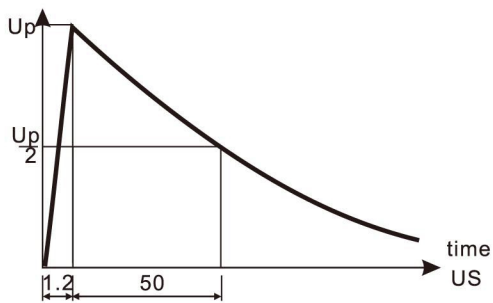
According to VDE 0565-1 and IEC 384-14:

$U_p = 4KV$ for $C \leq 1.0\mu F$

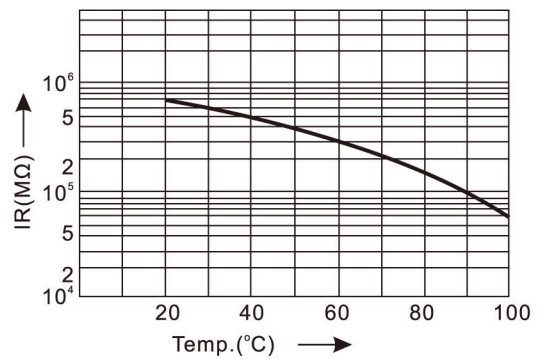
$U_p = 4KV[e^{(1.0-C)}]$ $C > 1.0\mu F$

According to SEV 1055:

$U_p = 3kv$

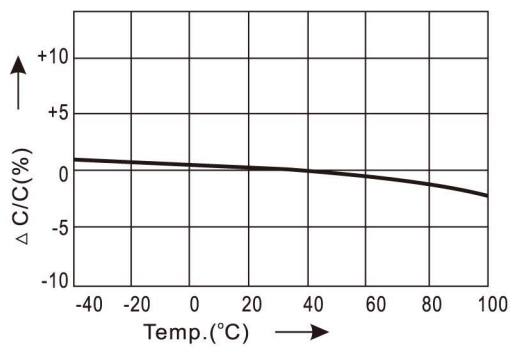


Insulation Resistance vs. Temperature(Typical Values)

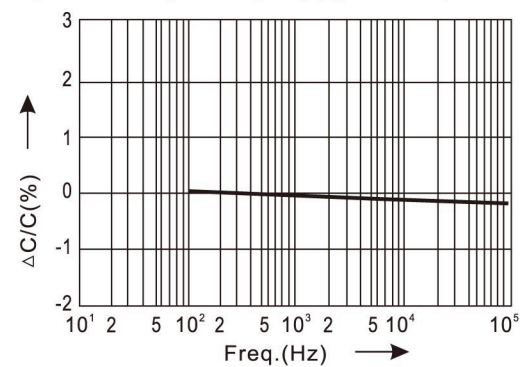


- Temperature and Frequency Characteristics

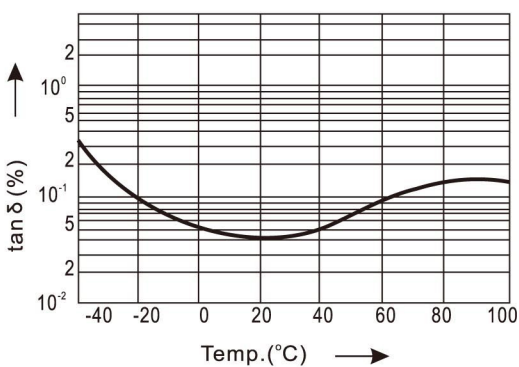
Capacitance Change vs. Temperature(Typical Values)



Capacitance Change vs. Frcquency (Typical Values)



Dissipation Factor vs. Temperature at 10 KHz (Typical Values)



Dissipation Factor vs. Frequency (Typical Values)

