

A Dimensions: [mm]

P ±0.5	12.5
L ±0.5	15.0
H ±0.5	16.0
W ±0.5	10.0
PL min.	4.0
Pin Ø ±0.05	0.6
d1	0.9

B Recommended hole pattern: [mm]**C Schematic:****D1 Electrical Properties:**

Properties	Test conditions		Value	Unit	Tol.
Capacitance	1 V/ 1 kHz ± 0.2 kHz	C	0.4700	µF	± 10%
Rated voltage		U _R	310	V (AC)	
Isolation Resistance	1 min @ 100V (DC)	R _{ISO}	> 10000	MΩ	min.
Dissipation factor	@ 1 kHz	DF	< 0.10	%	max.
Dissipation factor	@ 10 kHz	DF	< 0.20	%	max.
Dissipation factor	@ 100 kHz	DF	< 2.0	%	max.
Rate of Voltage Rise		dV/ dt	280	V/ µs	max.
Dielectric strength Pin to Pin	1 minute		1333	V (DC)	
Dielectric strength Pin to Case	1 minute		2000	V (AC)	

E General information:

X2-Safety Class Capacitor

Storage Conditions: 35°C, <45% RH

Operating Temperature: -40°C to +105°C

Climate category: 40/ 105/ 56/ B

Maximum Selfheating (rated): 7°C

Test conditions of Electrical Properties: 20°C, 33% RH

if not specified differently

FIT according to separate documentation

				Projection 		DESCRIPTION
						WCAP-FTXX Foil Capacitors
						Order.- No.
						890334024005CS
						Size: Pitch 12.5 mm - PL 4
						COMPLIANT RoHS&REACH WÜRTH ELEKTRONIK
						SIZE
						A4



Component Marking:

Print	Description
1st Line right	Matchcode: FTXx
2nd Line right	Rated Voltage: 310 V~
3rd Line right	Climate Category: 40/105/56/B
1st Line left	Capacitance & Tolerance Code: 474K (Basis pF)
Bottom line	Certificates: ENEC, cULUS, CQC & Internal Marking
Top Cover Marking P < 15	Date Code: YWW
Top Cover Marking P ≥ 15	Date Code & Capacitance & Tolerance Code

D2 Approvals:

Properties	Standard	File
ENEC10 by VDE	IEC 60384 - 14	40038405
cULus	UL 60384 - 14 / CAN/CSA - E60384 - 14	E345659
CQC	IEC 60384 - 14	13001104050

D3 Mechanical Properties:

Properties	Test Conditions		Lead diameter [mm]	Force [N]	condition
Termination Robustness	IEC 600668 - 2 - 21	Pull Test	0.5 to ≤ 0.8	10	min. 10 sec.
			0.9 to ≤ 1.25	20	min. 10 sec.
		Bend Test	0.5 to ≤ 0.8	5	min. 2 cycles
			0.9 to ≤ 1.25	10	min. 2 cycles

D4 Environmental Tests:

Properties	Standard	
Active Flammability	IEC 60384-14	max. 24 surge pulses @ 2.5 kV (one pulse every 5 seconds)
Passive Flammability	IEC 60384-14	in combination with IEC 60381 - 1 & IEC 60695 - 11 - 5
Vibration	IEC 60068 - 2 - 6	all 3 directions, 2 hours each @ 10 - 55 - 10 Hz, amplitude 0.75 mm or 10 g
Damp Heat	IEC 60068 - 2 - 78	40°C, 95% RH, 56 days
Temperature Cycles	IEC 60068 - 2 - 14	5 cycles, upper and lower temperature 30 min. each, 30 sec. transfer time
Charge/ Discharge Test	IEC 60384 - 14	√2 x U _R @ 100 V/μs
Surge Test	IEC 60384 - 14	2.5 kV Surge impulses

				Projection 		DESCRIPTION
						WCAP-FTXX Foil Capacitors
						Order.- No.
						890334024005CS
						Size: Pitch 12.5 mm - PL 4
						SIZE
						A4



F1 Capacitance Change over Frequency:



Test Equipment: E4991A or equivalent

F2 Dissipation Factor over Frequency:



Test Equipment: E4991A or equivalent

				Projection		DESCRIPTION	
				Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com		WCAP-FTXX Foil Capacitors	
						Order.- No.	
1.1	2014-08-14	SSt	PSL			890334024005CS	
1.0	2014-05-14	SSt	PSL			COMPLIANT RoHS&REACH WÜRTH ELEKTRONIK	
REV	DATE	BY	CHECKED			Size: Pitch 12.5 mm - PL 4	
						SIZE	
						A4	

This electronic component has been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment where a higher safety standard and reliability standard is especially required or where a failure of the product is reasonably expected to cause severe personal injury or death, unless the parties have executed an agreement specifically governing such use. Moreover Würth Elektronik eiSos GmbH & Co KG products are neither designed nor intended for use in areas such as military, aerospace, aviation, nuclear control, submarine, transportation (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network etc.. Würth Elektronik eiSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability evaluation checks for safety must be performed on every electronic component which is used in electrical circuits that require high safety and reliability functions or performance.



F3 Capacitance Change vs. Temperature:





Test Equipment: E4991A or equivalent

F4 Dissipation Factor vs. Temperature:



Test Equipment: E4991A or equivalent

					<div>Projection</div> 		<div>DESCRIPTION</div> <div>WCAP-FTXX Foil Capacitors</div>		
					<div>Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com</div>		<div>Order.- No.</div> <div>890334024005CS</div>	<div>COMPLIANT RoHS&REACH WÜRTH ELEKTRONIK</div>	<div>SIZE</div>
1.1	2014-08-14	SSt	PSL				A4		
1.0	2014-05-14	SSt	PSL						
REV	DATE	BY	CHECKED						<div>Size: Pitch 12.5 mm - PL 4</div>

This electronic component has been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment where a higher safety standard and reliability standard is especially required or where a failure of the product is reasonably expected to cause severe personal injury or death, unless the parties have executed an agreement specifically governing such use. Moreover Würth Elektronik eiSos GmbH & Co KG products are neither designed nor intended for use in areas such as military, aerospace, aviation, nuclear control, submarine, transportation (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network etc.. Würth Elektronik eiSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability evaluation checks for safety must be performed on every electronic component which is used in electrical circuits that require high safety and reliability functions or performance.

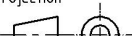

G Packaging Specification - Bulk and Carton [mm]:



	Packaging Type	Material of Bulk	Packaging Unit /Bulk	A	B
Pitch (mm)			pcs.	mm	mm
7,5	Bulk	PET	500	200	200
10	Bulk	PET	500	200	200
12,5	Bulk	PET	500	200	200
15	Bulk	PET	500	250	300
22,5	Bulk	PET	200	250	300
27,5	Bulk	PET	100	300	300
37,5	Bulk	PET	50	300	300



	Inner Carton	A1	B1	C1	Master Carton	A2	B2	C2
size	no.	mm	mm	mm	no.	mm	mm	mm
FTXX	2	275,0	200,0	350,0	1	580,0	220,0	370,0
FTX2	2	275,0	200,0	350,0	1	580,0	220,0	370,0

				Projection		DESCRIPTION		
						WCAP-FTXX Foil Capacitors		
				Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com		Order.- No.		SIZE
1.1	2014-08-14	SSt	PSL			890334024005CS		A4
1.0	2014-05-14	SSt	PSL					
REV	DATE	BY	CHECKED			Size: Pitch 12.5 mm - PL 4		



This electronic component has been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment where a higher safety standard and reliability standard is especially required or where a failure of the product is reasonably expected to cause severe personal injury or death, unless the parties have executed an agreement specifically governing such use. Moreover Würth Elektronik eiSos GmbH & Co KG products are neither designed nor intended for use in areas such as military, aerospace, aviation, nuclear control, submarine, transportation (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network etc.. Würth Elektronik eiSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability evaluation checks for safety must be performed on every electronic component which is used in electrical circuits that require high safety and reliability functions or performance.

H Soldering Specifications:



H4: Classification Wave Soldering Profile:



H5: Classification Wave Profile

Profile Feature	Pb-Free Assembly	Sn-Pb Assembly
Preheat <ul style="list-style-type: none">- Temperature Min (T_{smin})- Temperature Typical ($T_{stypical}$)- Temperature Max (T_{smax})- Time (t_s) from (T_{smin} to T_{smax})	100°C 120°C 130°C 70 seconds	100°C 120°C 130°C 70 seconds
Δ preheat to max Temperature	150°C max.	150°C max.
Peak temperature (T_p)	250°C - 260°C	235°C - 260°C
Time of actual peak temperature (t_p)	max. 10 seconds max. 5 second each wave	max. 10 seconds max. 5 second each wave
Ramp-down rate <ul style="list-style-type: none">- Min- Typical- Max	~ 2 K/s ~ 3.5 K/s ~ 5 K/s	~ 2 K/s ~ 3.5 K/s ~ 5 K/s
Time 25°C to 25°C	4 minutes	4 minutes

refer to EN 61760-1:2006

I Cautions and Warnings:

The following conditions apply to all goods within the product series of **WCAP-FTXX** of Würth Elektronik eiSos GmbH & Co. KG:

General:
The capacitor is engineered, designed and manufactured to be used within the data sheet specified values.
Do not use the capacitor neither short term nor long term outside the specified values, which are given in the data sheet.

- Product specific:**
Follow all instructions mentioned in the data sheet, especially:
- The soldering profile has to be complied with according to the technical reflow soldering specification, otherwise this will void the warranty.
 - Wave soldering is only allowed after evaluation and approval.
 - Do not exceed the lower and/ or upper specified temperature!
 - Do not use the capacitor with other than specified voltage!
 - Prevent any kind of mechanical stress to the capacitor terminals!
 - Do not use the soldered capacitor on a PCB for any movement or transportation to avoid any tensile force to the capacitor!
 - Do not apply any kind of flexural or compressive force onto soldered or unsoldered component!
 - Prevent the capacitor surface from any damage or scratches with sharp edges (e.g. chassis, screwdrivers, pincers)
 - The capacitor must be placed on a PCB while using the recommended drill hole pattern without changing of the specific lead pitch!
 - Avoid any other than specified temperature and / or time conditions during soldering!
 - Avoid any overload or conditions that are not specified in the capacitors datasheet!
 - Avoid any water or heavy dust on capacitors surface which may cause electrical leakage, damage, overheating or corrosion!

Storage conditions:
These film capacitors must be stored in stable climatic conditions, which are listed within the general information on front of data sheet.

Storage duration:
All products shall be used before the end of the period of 12 months based on the product date code, if not a 100% solderability can't be guaranteed.

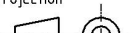

Flammability:
Avoid any external energy or open fire (passive flammability).



Vibration resistance:
Do not exceed the vibration limits given by IEC60068-2-6.

Cleaning:
Do not use any other cleaning solvents for box-typed capacitors except: ethanol, isopropanol, n-propanol - water mixtures. After cleaning a drying process with temperatures not exceeding 65°C and not longer than 4 hours is mandatory to prevent any kind of electrical damage.

Full covered or embedded capacitors in final applications:
If final assemblies will be placed completely in any plastic resin, physical, chemical and thermal influences must be considered. If any specific evaluation or test is necessary please contact the related Würth Elektronik Capacitor Business Division.

					<div>Projection</div> 		DESCRIPTION		
							WCAP-FTXX Foil Capacitors		
					<div>Würth Elektronik eiSos GmbH & Co. KG</div> <div>EMC & Inductive Solutions</div> <div>Max-Eyth-Str. 1</div> <div>74638 Waldenburg</div> <div>Germany</div> <div>Tel. +49 (0) 79 42 945 - 0</div> <div>www.we-online.com</div> <div>eiSos@we-online.com</div>		Order.- No.		SIZE
1.1	2014-08-14	SSt	PSL	890334024005CS		A4			
1.0	2014-05-14	SSt	PSL	Size: Pitch 12.5 mm - PL 4					
REV	DATE	BY	CHECKED						

This electronic component has been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment where a higher safety standard and reliability standard is especially required or where a failure of the product is reasonably expected to cause severe personal injury or death, unless the parties have executed an agreement specifically governing such use. Moreover Würth Elektronik eiSos GmbH & Co KG products are neither designed nor intended for use in areas such as military, aerospace, aviation, nuclear control, submarine, transportation (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network etc.. Würth Elektronik eiSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability evaluation checks for safety must be performed on every electronic component which is used in electrical circuits that require high safety and reliability functions or performance.

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: ocean@oceanchips.ru

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А