



CAPACITOR PORTFOLIO

WÜRTH ELEKTRONIK MORE THAN YOU EXPECT

ALUMINUM ELECTROLYTIC CAPACITORS

*More than 1680 part numbers
available ex stock. **More part
numbers on request.**

Available Series:



WCAP-ATXX
Radial THT



WCAP-ASXX
V-Chip SMT



WCAP-AiXX
Snap-In



WCAP-AWXX
Screw

Characteristics:

Type	Series	Capacitance	Voltage (V _{DC})	D x L (mm)	Operating Temperature (°C)	Endurance (h)
Radial THT*	ATG8, ATG5, AT1H, ATET, ATLI, ATUL, ATLL	0.47 – 33,000 µF	10 – 450	5 x 11 – 25 x 51	-55 up to +125	1,000 – 10,000
V-Chip SMT*	ASLI, ASLL, ASLU, ASNP, AS5H	0.47 – 6,800 µF	6.3 – 450	3 x 5.5 – 16 x 17	-40 up to +105	1,000 – 5,000
Snap-In*	AIG8, AIE8, AIG5, AI3H	33 – 10,000 µF	63 – 450	22 x 25 – 40 x 52	-40 up to +105	2,000 – 4,000
Screw	AWG8, AWG5	470 µF – 1 F	16 – 630	35 x 50 – 100 x 240	-40 up to +105	2,000 – 8,000

Features:

- Higher capacitance values possible compared to Film Capacitors and MLCCs
- Higher voltage ratings compared to Aluminum Polymer Capacitors (up to 630 V_{DC} available upon request)
- Lower leakage current compared to Aluminum Polymer Capacitors
- Stable capacitance values in relation to the DC bias voltage

Example Applications:



Digital camera
(THT/SMT)



Forklift
(Snap-In/THT)



Computer
(THT/SMT)



Control Panel
(THT/SMT)



Elevator
(Screw)

Would you like to know more?
www.we-online.com/aluelco



ALUMINUM HYBRID POLYMER CAPACITORS

More than 80 part numbers
available ex stock. **More**
part numbers on request.

Available Series:



WCAP-HTG5
Radial THT

General Purpose 105°C



WCAP-HTAH
Radial THT

High Temperature 125°C



WCAP-HSG5
V-Chip SMT

General Purpose 105°C



WCAP-HSAH
V-Chip SMT

High Temperature 125°C

Characteristics:

Type	Series	Capacitance (μ F)	Voltage (V _{DC})	D x L (mm)	Operating Temperature (°C)	Endurance (h)
Radial THT, General Purpose	WCAP-HTG5	10 – 470	16 – 100	6.3 x 8 – 10 x 12.5	-55 up to +105	5,000 – 10,000
Radial THT, High Temperature	WCAP-HTAH	10 – 560	16 – 100	6.3 x 8 – 10 x 12.5	-55 up to +125	2,000 – 4,000
V-Chip SMT, General Purpose	WCAP-HSG5	10 – 560	16 – 100	5 x 5.8 – 10 x 12.4	-55 up to +105	10,000
V-Chip SMT, High Temperature	WCAP-HSAH	10 – 820	16 – 100	5 x 5.8 – 10 x 12.4	-55 up to +125	4,000

Features:

- Low ESR
- High ripple current characteristics
- High stability over the temperature range
- Low leakage current
- High lifetime performance

Example Applications:



Servo
Inverter



Air
Conditioner



Industrial
Power Supply



Security
Camera



Base
station

Would you like to know more?
www.we-online.com/aluhybrid



ALUMINUM POLYMER CAPACITORS

More than 300 part numbers available
ex stock. **More part numbers on request.**

Capacitance: max. 3,900 μF
Voltage: max. 100 V_{DC}

Available Series:



WCAP-PTXX
Radial THT



WCAP-PSXX
V-Chip SMT



WCAP-PHXX
H-Chip SMT

Characteristics:

Type	Series	Capacitance (μF)	Voltage (V_{DC})	Dimensions (mm)	Operating Temperature ($^{\circ}\text{C}$)	Endurance (h)
Radial THT	PTG5, PTHR, PTHT, PT5H	10 – 2,000	6.3 – 100	D x L: 6.3 x 5.2 – 10 x 12.5	-55 up to +125	2,000 – 5,000
V-Chip SMT	PSLC, PSLP, PSHP	4.7 – 2,000	6.3 – 100	D x L: 4 x 5.5 – 10 x 12.4	-55 up to +105	2,000 – 5,000
H-Chip SMT	PHGP, PHLE, PHSE	100 – 560	2 – 6.3	L x W x H: 7.3 x 4.3 x 1.9	-55 up to +105	2,000

Features:

- Low ESR over a high frequency range
- High permissible ripple current
- Higher expected lifetime compared to Aluminum Electrolytic Capacitors
- Stable capacitance values in relation to the DC bias voltage and ambient temperature

Example Applications:



Router



Graphic card



Industrial
computer



High power
USB charger

Would you like to know more?
www.we-online.com/alupoly



SUPERCAPACITORS

More than 5 part numbers
available ex stock.

Available Series:



**WCAP-STSC
Radial THT**
Standard Cylindrical



**WCAP-SISC
Snap-In**
Standard Cylindrical

Characteristics:

Type	Series	Capacitance (F)	Voltage (V _{DC})	D x L (mm)	Operating Temperature (°C)	Cycle Life (cycles)
Radial THT	WCAP-STSC	3 – 50	2.7	8 x 20 – 18 x 40	-40 up to +65 (+85)	500,000
Snap-In	WCAP-SISC	100 & 350		22 x 45 & 35 x 60		

Features:

- Electric Double Layer Capacitors (EDLCs)
- Very large capacitance
- Higher energy density compared to other capacitor technologies
- Ultra low equivalent series resistance (ESR)
- Significantly higher charge and discharge currents compared to batteries
- Cycle life is about 500 times and power output about 10 times higher compared to usual batteries

Example Applications:



UPS
systems



Storage device
for power-
offline periods



Smart metering
(e.g. water meters)



Solar
power



Hybrid
application
with battery

Would you like to know more?
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MULTILAYER CERAMIC CHIP

CAPACITORS

More than 1220 part numbers
available ex stock. **More part
numbers on request.**

Available Series:



WCAP-CSGP
General Purpose



WCAP-CSMH
Mid and High
Voltage



WCAP-CSRF
High Frequency



WCAP-CSST
Soft Termination



WCAP-CSSA
Safety Capacitors
(X1/Y2, X2)

Characteristics:

Type	Series	Capacitance	Voltage	Size	Operating Temperature (°C)
General Purpose	WCAP-CSGP	0.5 pF – 100 µF	6.3 – 100 V _{DC}	0201 – 2220	-55 up to +125
Mid and High Voltage	WCAP-CSMH	10 pF – 2.2 µF	200 – 3000 V _{DC}	0603 – 2220	
High Frequency	WCAP-CSRF	0.2 pF – 33 pF	25 & 50 V _{DC}	0201 & 0402	
Soft Termination	WCAP-CSST	220 pF – 2.2 µF	16 – 2000 V _{DC}	0603 – 1210	
Safety Capacitors	WCAP-CSSA	33 pF – 4.7 nF	250 V _{AC}	1808 – 2220	

Features:

- Wide voltage range and size range
- Low Impedance and ESR values
- WCAP-CSST: High absorption of mechanical stress
- WCAP-CSSA: Safety-certified with high reliability
- WCAP-CSRF: Tight capacitance tolerance

Example Applications:



Embedded
board



Drilling
machine



Power
Supply



EV
Charger



Antenna
matching

Would you like to know more?
www.we-online.com/mlcc



FILM CAPACITORS

More than 320 part numbers available
ex stock. **More part numbers on request.**

Available Series:



WCAP-FTBE
General Purpose
+85 °C



WCAP-FTBP
General Purpose
+105 °C



WCAP-FTDB
DC-Link



WCAP-FTX2
Interference
Suppression
Class X2,
275 V_{AC}



WCAP-FTXX
Interference
Suppression
Class X2,
310 V_{AC}



WCAP-FTXH
Interference
Suppression
THB* Class X2,
310 V_{AC}

Characteristics:

Type	Series	Capacitance	Voltage	Pitch (mm)	Operating Temperature (°C)
General Purpose	WCAP-FTBE, WCAP-FTBP	10 nF – 6.8 µF	100 – 1000 V _{DC}	7.5 – 37.5	-40 up to +105
DC-Link	WCAP-FTDB	1 µF – 75 µF	500 – 1200 V _{DC}	27.5 – 52.5	-40 up to +105
Interference Suppression					
Class X2	WCAP-FTX2, WCAP-FTXX	5.6 nF – 10 µF	275 & 310 V _{AC}	7.5 – 37.5	-40 up to +105
THB* Class X2	WCAP-FTXH	33 nF – 10 µF	310 V _{AC}	15 – 37.5	-40 up to +110

*THB = Temperature Humidity Bias

Features:

- Self-healing properties
- Stable frequency and temperature behavior
- No voltage “influence” of the capacitance
- WCAP-FTXX/FTX2/FTXH: Series for interference suppression with safety class X2
- WCAP-FTXH: Special process and materials for harsh environments (temperature, humidity)
- WCAP-FTDB: DC-Link Capacitors with high voltages and very high ripple current capabilities

Example Applications:



Audio
amplifier
(WCAP-FTBP)



AC mains filter
(WCAP-FTXX/
FTX2/FTXH)



Solar inverter
(WCAP-FTDB)



LCD TV
(WCAP-FTBE/
FTBP)



Harsh
environments
(WCAP-FTXH)

Would you like to know more?
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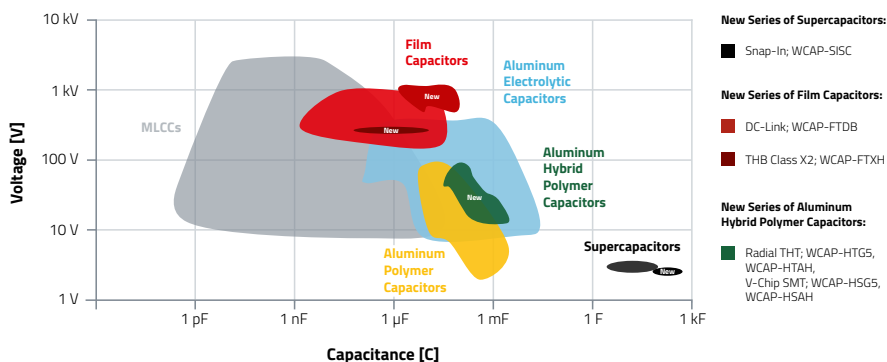
WÜRTH ELEKTRONIK

CAPACITORS

More than 3600 part numbers available
ex stock. **More part numbers on request.**

Big Portfolio Available Ex Stock!

Würth Elektronik has extended its capacitor range. Our current portfolio available ex stock is shown below. In this graph you will see the new series and also our new Aluminum Hybrid Polymer Capacitors product family. This new product family combines technologies from our Aluminum Electrolytic and our Aluminum Polymer Capacitors. The features of this new product family are an optimal combination of these two technologies. More details about each product family will follow on the next pages.



Special Services Available!



Lifetime calculator and real measurements on **REDEXPERT**



Customized and modified capacitors on request (electrical or mechanical parameters)



Design-In support, webinar and seminars with product and application specialists



Calculations for applications (balancing, etc.)



ABC of Capacitors
Trilogy of Capacitors (*Coming soon*)



Large portfolio of Design Kits



Design for manufacturing (e.g. cutting and bending)



Crossing service

