

A Dimensions: [mm]



D ±0.5	10.0
P ±0.5	5.0
L ±t	20.0
t	1.5
Pin Ø ±0.02	0.6
a	5.0
b	0.9

B Recommended hole pattern: [mm]



C Schematic:



				Projection	
1.0	2014-11-11	SSt	PSL		
REV	DATE	BY	CHECKED		

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D1 Electrical Properties:

Properties	Test conditions		Value	Unit	Tol.
Capacitance	0.25V; 120Hz	C	2200	µF	± 20%
Rated					



Component Marking:

Print	Description
1 st Line	Capacitance value: 2200 µF & Rated voltage: 10 V (DC)
2 nd Line	WCAP-ATG8 & max. operating temperature +85°C
3 rd Line	Datecode: YWW
4 th Line	VENT marking

D2 Multiplier for Ripple Current vs. Frequency:

C [µF]/ Frequency [Hz]	60 (50)	120	400	1000	10000	50000-100000
C ≤ 10	0.80	1.00	1.30	1.45	1.65	1.70
10 < C ≤ 100	0.90	1.00	1.23	1.36	1.48	1.53
100 < C ≤ 1000	0.10	1.00	1.16	1.25	1.35	1.38
1000 < C	0.11	1.00	1.11	1.17	1.25	1.28

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						Order.- No.		SIZE
						860010275020		A4
						Size: 10.0 x 20.0		
1.0	2							

H Soldering Specifications:



H4: Classification Wave Soldering Profile:



H5: Classification Wave Profile

Profile Feature	Pb-Free Assembly	Sn-Pb Assembly
Preheat - 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 - 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-ATG8** of Würth Elektronik eiSos GmbH & Co. KG:

1.1 Polarity

An Aluminum Electrolytic Capacitor has a polarity. In operation this polarity needs to be considered and adhered. Reverse voltage can damage or destroy an Aluminum Electrolytic Capacitor. This can finally lead to a malfunction. If the polarity in a circuit will be switched or possibly can be reversed, the usage of a non-polar capacitor shall be applied. The polarity of an Aluminum Electrolytic Capacitor is for THT radial types marked like following. The terminal with shorter lead wire marks the negative terminal. On the sleeve the negative terminal is marked with a color band and thereon are minus signs given. For further details see technical drawing on A1 dimensions in this datasheet.

1.2 Overvoltage

Avoid any overvoltage and do not apply a continuous overvoltage. If an overvoltage is applied to the capacitor, the leakage current can increase drastically. The applied working voltage is not allowed to exceed the rated working voltage of the specific capacitor.

1.3 Operating Temperature

The capacitor shall not be operated above the operating temperature, which is stated within this datasheet of the specific capacitor. The achievable lifetime of the capacitor is correlating to the applied temperature. In order to achieve the maximum lifetime, the capacitor should be operated by the lowest possible temperature conditions within the application.

1.4 Ripple Current

The applied ripple current shall not exceed the specified maximum ripple current of the capacitor. If a higher ripple current is applied as permitted, it can cause excessive heat generation and higher temperature inside the capacitor. This happens due to pole change effects, if ripple current is applied to the capacitor. This can result in damage or lifetime shortage of the capacitor and may cause deterioration. Electrolytic capacitors are regularly not designed for usage in AC applications and ripple current is applied / based due to parasitic effects on DC signal. Please see electrical specification within this datasheet for maximum allowed ripple current.

1.5 Charge and Discharge

Frequent and quick charge / discharge cycles may generate heat inside the capacitor. In worst case this can cause a decrease of capacitance, an increase of leakage current or breakdown. Applications with rapid charge and discharge cycles should be avoided. For assistance with your application please consult our technical support.



1.6 Vent

On most Aluminum Electrolytic Types types, a predetermined breaking point is given on the top of the component, which is the so called vent. The vent is there to assure a possible pressure relief and to avoid that the capacitor can explode due to internal pressure, which can occur by applying reverse voltage or a too high ripple current. A space of at least 3mm above the vent is recommended

I Cautions and Warnings (2):

The following conditions apply to all goods within the product series of **WCAP-ATG8** of Würth Elektronik eiSos GmbH & Co. KG:

1.10 Hand Soldering

Take care that the tip of solder iron will only contact pins or leadframe of the capacitor to avoid any possible damage of the capacitor.

1.11 Cleaning

Do not wash the assembled capacitors with the following cleaning agents:

- petroleum system solvents: may cause degeneration of the rubber seal material
- alkali system solvents: may cause corrosion and dissolve of the aluminum case
- halogenated solvents: may cause corrosion and failure of the capacitor
- acetone: component marking may be erased
- xylene: may cause deterioration of the rubber seal material

Verify the following points when washing is applied to capacitors:

- Please monitor conductivity, ph-value, specific gravity and the water content of cleaning agents. Contamination adversely affects these characteristics.
- Be sure to not expose the capacitors under solvent rich conditions or keep capacitors inside a closed container. In addition, please dry the solvents on the PCB and the capacitor sufficiently with an air knife (temperature should be less than the maximum rated category temperature of the capacitor) for 10 minutes.
- Capacitors can be characteristically and catastrophically damaged by halogen ions, particularly by chlorine ions. The degree of the damage mainly depends upon the characteristics of the electrolyte and rubber seal material. When halogen ions come into contact with the inside of the capacitors, the foil may corrode, when a voltage is applied. This corrosion causes an extremely high leakage current, which results in venting and an open circuit defect.

All other cleaning processes and cleaning agents are not approved by Würth Elektronik eiSos. All cleaning methods need to be tested and validated by the customer.

1.12 Adhesives and Coating Materials

The usage of any adhesive or coating material, which is containing halogenated solvents, is not allowed.

Before applying adhesives or coating materials, make sure that the following points are fulfilled:

- Take care that the surface and capacitor is dry and clean before applying adhesive or coating, to avoid any contamination with flux residues or cleaning solvents.
- Assure that no flux residue or spot is left between the rubber seal material of the capacitor and the PCB.
- Do not fully cover the entire rubber seal surface with adhesive, coating or molding materials. Otherwise the covering of the full rubber seal surface may restrain the natural diffusion of hydrogen gas. Block maximum 80% of the sealed section of a capacitor.
- If the used adhesive, coating or molding material is containing halogen ions in a large amount, the halogen ions can diffuse and creep into

the capacitor and can damage the capacitor. Both above explained circumstances can result in serious failures.

I Cautions and Warnings (3):

The following conditions apply to all goods within the product series of **WCAP-ATG8** of Würth Elektronik eiSos GmbH & Co. KG:

1.16 Emergency Case

In case of excessive pressure within the capacitor the vent may operate and release this pressure. In case of vent operation gas becomes visible, when the component is in operation. If so, directly turn off the application and disconnect it from the power source. If the application will not be turned off, a possible short circuit of capacitor or a short circuit due to bridging of liquefied gas can possibly damage the circuit and in worst case the application may be dramatically damaged.
Do not stay or position body or face above or in direction of the vent, because in the event of any vent operation, the releasing gas temperature may have over 100 °C.
In case of contact with the electrolyte on skin, wash the skin immediately with soap and water. If the eyes will get in contact with the releasing gas, immediately wash the eyes with water. Whether the gas was inhaled, directly use gargle.

1.17 Disposal

Please contact your local responsible or organization for proper disposal of capacitor.
Also take care to be compliant in order to your local governmental law and restrictions. In case incineration, it should be done with more than 800 °C. Lower temperatures at incineration can result in toxic gases (e.g. chlorine). To avoid any explosion of capacitor, punch holes into the can or crush the capacitor before incineration.



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						Order.- No.	COMPLIANT RoHS&REACH WÜRTH ELEKTRONIK	SIZE
						860010275020		A4
						Size: 10.0 x 20.0		
1.0	2014-11-11	SSt	PSL					

Important Notes:

The following conditions apply to all goods within the product range of Würth Elektronik eiSos GmbH & Co. KG:

1. General Customer Responsibility

Some goods within the product range of Würth Elektronik eiSos GmbH & Co. KG contain statements regarding general suitability for certain application areas. These statements about suitability are based on our knowledge and experience of typical requirements concerning the areas, serve as general guidance and cannot be estimated as binding statements about the suitability for a customer application. The responsibility for the applicability and use in a particular customer design is always solely within the authority of the customer. Due to this fact it is up to the customer to evaluate, where appropriate to investigate and decide whether the device with the specific product characteristics described in the product specification is valid and suitable for the respective customer application or not.

2. Customer Responsibility related to Specific, in particular Safety-Relevant Applications

It has to be clearly pointed out that the possibility of a malfunction of electronic components or failure before the end of the usual lifetime cannot be completely eliminated in the current state of the art, even if the products are operated within the range of the specifications.

In certain customer applications requiring a very high level of safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health it must be ensured by most advanced technological aid of suitable design of the customer application that no injury or damage is caused to third parties in the event of malfunction or failure of an electronic component.

Therefore, customer is cautioned to verify that data sheets are current before placing orders. The current data sheets can be downloaded at www.we-online.com.

3. Best Care and Attention

Any product-specific notes, cautions and warnings must be strictly observed. Any disregard will result in the loss of warranty.

4. Customer Support for Product Specifications

Some products within the product range may contain substances which are subject to restrictions in certain jurisdictions in order to serve specific technical requirements. Necessary information is available on request. In this case the field sales engineer or the internal sales person in charge should be contacted who will be happy to support in this matter.

5. Product R&D

Due to constant product improvement product specifications may change from time to time. As a standard reporting procedure of the Product Change Notification (PCN) according to the JEDEC-Standard inform about minor and major changes. In case of further queries regarding the PCN, the field sales engineer or the internal sales person in charge should be contacted. The basic responsibility of the customer as per Section 1 and 2 remains unaffected.

6. Product Life Cycle

Due to technical progress and economical evaluation we also reserve the right to discontinue production and delivery of products. As a standard reporting procedure of the Product Termination Notification (PTN) according to the JEDEC-Standard we will inform at an early stage about inevitable product discontinuance. According to this we cannot guarantee that all products within our product range will always be available. Therefore it needs to be verified with the field sales engineer or the internal sales person in charge about the current