

<b>POE INTERNATIONAL CORPORATION</b>		D04-00-E-06
Safety standards regulated, reinforced insulation type, AH series	Ver: 6	Page: 1

## SCOPE

THIS SPECIFICATION APPLIES TO CERAMIC INSULATED CAPACITORS DISK TYPE USED IN ELECTRONIC EQUIPMENT.

### 1. Applicable safety standard

This specification applies to the VDE, SEV, SEMKO, FIMKO, NEMKO, DEMKO, KEMA, KTL, UL, CSA approved ceramic capacitors disc type for antenna coupling, line-by-pass and across-the-line. X1, Y1 capacitor based on IEC384-14 2<sup>ND</sup> edition. "UL (AC250V), CSA recognized capacitor for across-the-line, line-by-pass" and antenna-isolation.

### 2. AC safety standard approval and recognized no.

Safety Standard	Standard No.	Subclass	w.v.	Recognized No.			
				Made in Guangzhou		Made in Kun Shan	
				X1	Y1	X1	Y1
UL	UL 1414	X,Y	250VAC	E146544		E146544	
CSA	C22.2 No.1-98	X,Y	250VAC	1363528(LR 92203-1)		1363528(LR 92203-1)	
VDE (ENEC)	IEC 60384-14: (ed2)1993	X1	400VAC	40001804		40003886	
		Y1	250VAC				
SEV	IEC 60384-14: (ed2)1993	X1	400VAC	04.0373		04.0373	
		Y1	250VAC				
SEMKO	IEC 60384-14: (ed2)1993	X1	400VAC	305179		305179	
		Y1	250VAC				
FIMKO	IEC 60384-14: (ed2)1993	X1	400VAC	NCS/FI 14549 A3		NCS/FI 14549 A3	
		Y1	250VAC				
NEMKO	IEC 60384-14: (ed2)1993	X1	400VAC	P04202247		P04202247	
		Y1	250VAC				
DEMKO	IEC 60384-14: (ed2)1993	X1	400VAC	311867-03		311867-03	
		Y1	250VAC				
KEMA	IEC 60384-14: (ed2)1993	X1	400VAC	2073743.02		2073743.02	
		Y1	250VAC				
CQC	GB/T 14472-1998	X1	400VAC	CQC03001003673		2002CAP0711CQC	
		Y1	250VAC				

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3. Part number for SAP system :

(Ex.) YV 0AH 472 M 150 B 20 C 0 B  
**①** **②** **③** **④** **⑤** **⑥** **⑦** **⑧** **⑨** **⑩**

**①** Temperature characteristic (identified code)

CODE	YP (Y5P)	YU (Y5U)	YV (Y5V)
Cap. change(%)	±10	+20 to -55	+30 to -80

**②** TYPE (identified by 3-figure code) : 0AH = AH TYPE

**③** Capacitance (identified by 3-figure code)

**④** Capacitance tolerance (identified by code)

**⑤** Nominal body diameter dimension (identified by 3-figure code)

**⑥** Kinked Lead Style - Please Check 4.0 Kinked Lead Type.

**⑦** Packing Mode and lead length (identified by 2-figure code)

Taping Code	Description
AF	Box and Pitch : 15.0 mm
AM	Box and Pitch : 25.4 mm
AT	Box and Pitch : 30.0 mm

Bulk Code	Description
3E	Lead length : 3.5mm
04	Lead length : 4.0mm
4E	Lead length : 4.5mm
20	Lead length : 20.0mm

**⑧** Length tolerance

Code	Description
A	±0.5 mm
B	±1.0 mm
C	MIN.
D	Taping special purpose

**⑨** Pitch

Code	Description
7	7.5±1 mm
0	10±1 mm

**⑩** Epoxy Resin Code

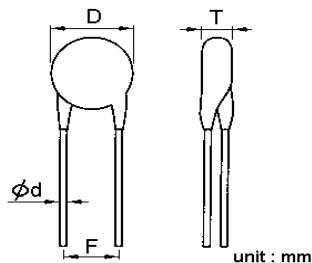
Code	Description
A	Epoxy Resin
B	Epoxy Resin →Pb free

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3-1 Part numbering :

Customer Part No.	POE Part. No.	T.C.	Capacitance (pF)	Tolerance (%)	Dimension (unit:mm)			
					D (max.)	T (max.)	F	d
	YP0AH101K080 *	YP (Y5P)	100 pF	±10%	9.0	6.0	10±1	0.62
	YP0AH151K080 *		150 pF	±10%	9.0	6.0	10±1	0.62
	YP0AH221K080 *		220 pF	±10%	9.0	6.0	10±1	0.62
	YP0AH331K080 *		330 pF	±10%	9.0	6.0	10±1	0.62
	YP0AH471K090 *		470 pF	±10%	10.0	6.0	10±1	0.62
	YP0AH561K100 *		560 pF	±10%	11.0	6.0	10±1	0.62
	YP0AH681K100 *		680 pF	±10%	11.0	6.0	10±1	0.62
	YU0AH102M080 *	YU (Y5U)	1000 pF	±20%	9.0	6.0	10±1	0.62
	YU0AH152M100 *		1500 pF	±20%	11.0	6.0	10±1	0.62
	YU0AH222M110 *		2200 pF	±20%	12.0	6.0	10±1	0.62
	YU0AH332M120 *		3300 pF	±20%	13.0	6.0	10±1	0.62
	YU0AH392M140 *		3900 pF	±20%	15.0	6.0	10±1	0.62
	YU0AH472M150 *		4700 pF	±20%	16.0	6.0	10±1	0.62

Graph (ex.)

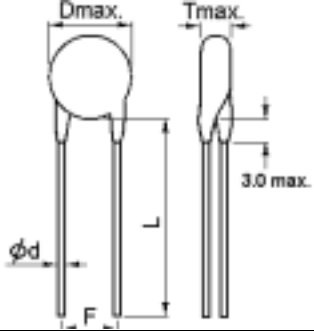
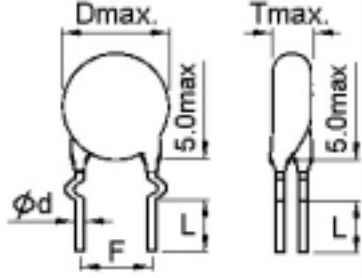
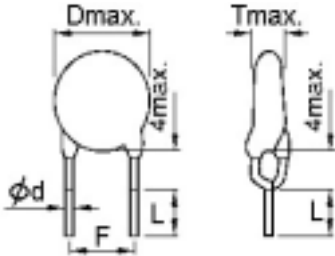


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4. Kinked Lead Type

4-1 Encapsulation: epoxy resin, flammability 94V-0

4-2 Disc size and lead style: (unit: mm)

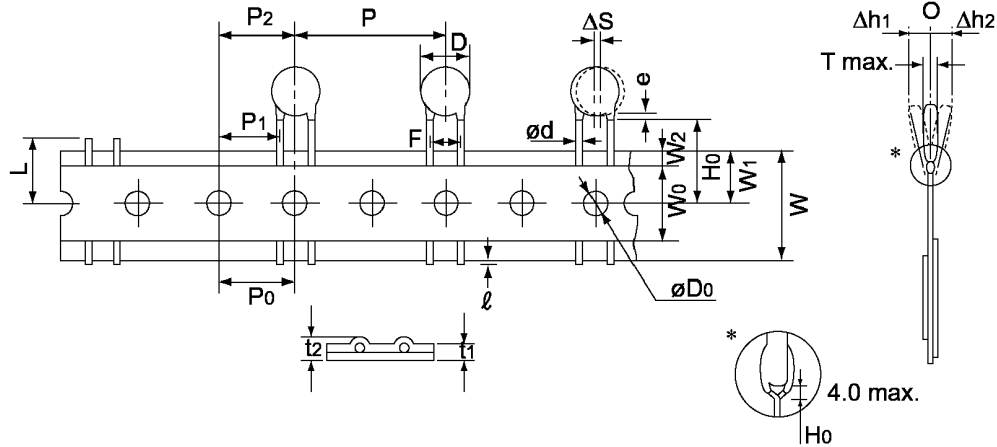
Lead type	Lead Code	Lead configuration	Lead type	Lead Code	Lead configuration
Style 1 Straight lead (Straight from coating lead)	B		Style 2 Outside kink lead	X	
Style 3 Vertical kink lead	D				

\* Lead diameter  $d: 0.6^{+0.06}/_{-0.05}$  (mm).

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### 5. Taping Format

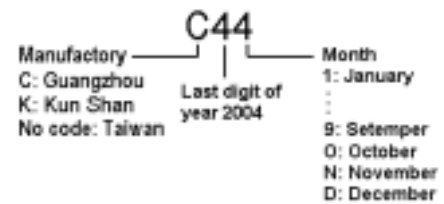
Part number:     **0AC**                                 **BATD B**













POE Part Number		<b>0AC</b>	<b>BATD0B</b>
Item	Symbol	Dimensions (mm)	
Pitch of component	P	30±2	
Pitch of sprocket	P0	15.0±0.3	
Lead spacing	F	10.0±1.0	
Length from hole center to component center	P2	15.0±1.5	
Length from hole center to lead	P1	10.0±1.0	
Body diameter	D	See the individual product specification	
Deviation along tape, left or right	S	0±2.0	
Carrier tape width	W	18.0 +1/-0.5	
Position of sprocket hole	W1	9.0±0.5	
Lead distance between reference and bottom planes	H	(16.0 or 20.0) ±1.5	
Protrusion length	l	1.0 max.	
Diameter of sprocket hole	D0	4.0±0.2	
Lead diameter	d	0.6 +0.06/-0.05	
Total tape thickness	t1	0.6±0.3	
Total thickness, tape and lead wire	t2	1.5 max.	
Deviation across tape	h1	2.0 max.	
	h2	2.0 max	
Portion to cut in case of defect	L	11.0 max.	
Hole-down tape width	W0	11 min.	
Hole-down tape distortion	W2	3 max.	
Coating extension on leads	e	3.0 max.	
Body thickness	T	See the individual product specification	

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6. Marking

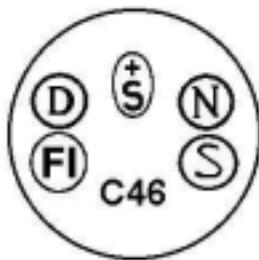
1.Type Designation	<b>AH</b>
2.Nominal Capacitance	3-digit-system
3.Capacitance Tolerance	K:±10%, M:±20%
4.Company Name Code	<b>UK</b>
5.Manufactured Date	Abbreviation ex.:  <div style="text-align: center;">  </div>

6.Approved Monogram			
(1) VDE approval mark		IEC 60384-14 2nd (1993). Class Code : X1 : 400V~ , Y2 : 250V~	
(2) UL approval mark		(7) FIMKO approval mark	
(3) CSA approval mark		(8) SEV approval mark	
(4) SEMKO approval mark		(9) KEMA approval mark	
(5) NEMKO approval mark		(10)CQC approval mark	
(6) DEMKO approval mark			

Ex.:

Two side :

One side:



\* Marking by the stamp or laser.

\* The marking can be printed on either one side or two side of coating body.

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### 7.Specification and test method

(1) Operating Temperature Range : -25 to +125°C (-25 to +85°C in case of the standard of UL / CSA)

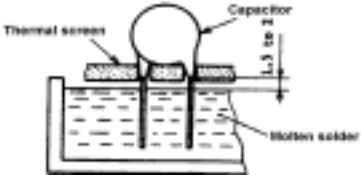
(2) Test condition:

Test and measurement shall be made at the standard condition. (temperature 15~35 , relative humidity 45~75% and atmospheric pressure 860~1060hpa). Unless otherwise specified herein.

If doubt occurred on the value of measurement, and measurement was requested by customer capacitors shall be measured at the reference condition. (temperature 20±2 , relative humidity 60~70% and atmospheric pressure 860~1060hpa.)

(3)Performance :

No	Items		Performance	Testing method																		
1	Appearance And dimension		The appearance and dimension shall be as given in section 3-2.	Visual check.																		
2	Marking		The marking shall be easily legible. (As given section 3-3)	Visual check.																		
3	Withstand voltage	Between terminals	No failure.	The capacitors shall not be damage when AC4000V(rms.) are applied between the lead wires for 60sec. (Charge/discharge current 50mA)																		
		Body Insulation	No failure.	First. The terminals of the capacitor shall be closely wrapped around the body of the capacitor distance of about 3 to 4mm from each terminal. Then, the capacitor shall be inserted into a container filled with metal balls of about 1mm diameter. Finally, AC4000V(rms.) is applied for 60sec between the capacitor lead wires and metal balls. (Charge/discharge current 50mA)																		
4	Insulation Resistance	Between terminals	10000M or more.	The insulation resistance shall be measured with DC500±50V within 60±5sec of charging.																		
5	Capacitance		Within specified tolerance.	The capacitance shall be measured at 20 with 1kHz±20% and 5V(rms.) or less.																		
6	Dissipation Factor(tan )		D.F. 2.5%	The dissipation shall be measured at 20 with 1kHz±20% and 5V(rms.) or less.																		
7	Temperature Characteristic		<table border="1"> <thead> <tr> <th>Char.</th> <th>Capacitance Change</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>Within ± 10%</td> </tr> <tr> <td>E</td> <td>Within ±<sub>5.5</sub><sup>2.0</sup>%</td> </tr> </tbody> </table>	Char.	Capacitance Change	B	Within ± 10%	E	Within ± <sub>5.5</sub> <sup>2.0</sup> %	<p>The capacitance measurement shall be made at each step specified in Table 1.</p> <p style="text-align: center;">Table 1</p> <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature ( )</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+20±2</td> </tr> <tr> <td>2</td> <td>-25±2</td> </tr> <tr> <td>3</td> <td>+20±2</td> </tr> <tr> <td>4</td> <td>+85±2</td> </tr> <tr> <td>5</td> <td>+20±2</td> </tr> </tbody> </table> <p>Pre-treatment: Capacitor shall be stored at 85±2 for 1hour, then placed at 1 room condition for 24±2hours before measurements.</p>	Step	Temperature ( )	1	+20±2	2	-25±2	3	+20±2	4	+85±2	5	+20±2
			Char.	Capacitance Change																		
B	Within ± 10%																					
E	Within ± <sub>5.5</sub> <sup>2.0</sup> %																					
Step	Temperature ( )																					
1	+20±2																					
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3	+20±2																					
4	+85±2																					
5	+20±2																					

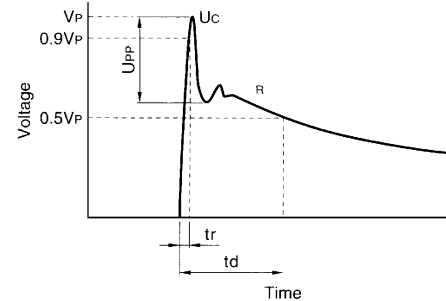
No	Items	Performance	Testing method
8	Robustness of Terminations	Tensile Lead wire shall not cut off. Capacitor shall not be broken.	With the termination in its normal position, the specimen is held by its body in such a manner that the axis of the termination is vertical; the tensile force of 10N shall be applied to the termination in the direction of its axis and acting in a direction away from the body of the specimen.
		Bending Lead wire shall not cut off. Capacitor shall not be broken.	With the termination in its normal position, the specimen is held by its body in such a manner that the axis of the termination is vertical; a mass applying a force of 5N is then suspended from the end of the termination. The body of the specimen is then inclined, within a period of 2 to 3sec, through an angle of approximately 90° in the vertical plane and then returned to its initial position over the same period of time; this operation constitutes one bend. One bend immediately followed by a second bend in the opposite direction.
9	Soldering Effect	Appearance No marked defect.	Solder temperature: 350±10 (or 260+5-0 ) Immersion time:3.5±0.5sec (In case of 260+5/-0 :5~10sec) The depth of immersion shall be a position 1.5~2.0mm from the seating plane, using a thermal insulation screen of 1.5±0.5mm thickness.  <p>When soldering capacitor with a soldering iron, it should be performed in following conditions.                      Temperature of iron-tip: 350~400                      Soldering iron wattage : 50W max.                      Soldering time : 3.5 sec. max.</p> Pre-treatment: Capacitor shall be stored at 85±2 for 1hour.then placed at room condition for 24±2hours before initial measurements. Post-treatment: Capacitor shall be stored for 1 to 2hours at room condition.
		I.R. 1000M min.	
		Dielectric Strength Per Item 3.	
		Capacitance B, E :Within ±10%	
10	Humidity (Under steady State)	Appearance No marked defect.	Set the capacitor for 500±12hours at 40±2 in 90 to 95% relative humidity. Then capacitor shall be stored for 1 to 2 hours at room condition.
		Capacitance B : Within ±10% E : Within ±15%	
		D.F. 5.0% max.	
		I.R. 3000M min.	
		Dielectric Strength Per Item 3.	

No	Items	Performance	Testing method
11	Humidity Loading	Appearance	No marked defect.
		Capacitance	B : Within $\pm 10\%$ E : Within $\pm 15\%$
		D.F.	5.0% max.
		I.R.	3000M min.
		Dielectric Strength	Per Item 3.
12	Life	Appearance	No marked defect.
		Capacitance	$\pm 20\%$ max.
		I.R.	3000M min.
		Dielectric Strength	Per Item 3.
		Discharge Test ( )	No failure.
13	Discharge Test ( )	Appearance	No marked defect.
		I.R.	1000M min.
		Dielectric Strength	Per Item 3.

Apply the rated voltage for  $500 \pm 12$  hours at  $40 \pm 2$  in 90 to 95% relative humidity and set it for 1 to 2 hours at 1 room condition.

**Impulse Voltage**  
Each individual capacitor shall be subjected to 8kV impulses for three times. After the capacitors are applied to life test.

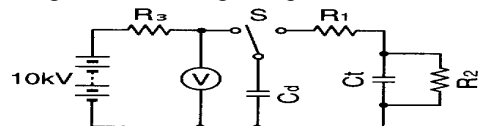
Fig. 2



Cx(μ)	tr(μsec.)	td(μsec.)
0.01	1.2	46
0.10	1.5	47

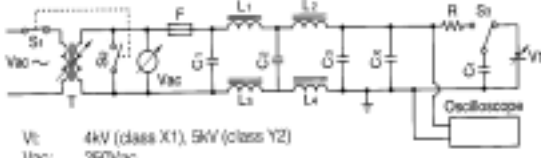
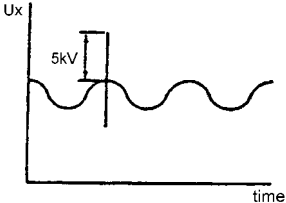
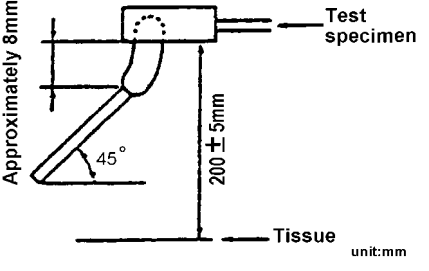
The specimen capacitors are placed in a circulating air oven for a period of 1000 hours. The air in the oven is maintained at a temperature of  $85 \pm 2$ . Throughout the test, the capacitors are subjected to an AC425V(rms.) alternating voltage of mains frequency, except that once each hour the voltage is increased to AC1000V(rms.) for 0.1 sec.

As in Fig. 3, discharge is made 50 times at 5 sec. intervals from the capacitor (Cd) charged at DC voltage of specified.



- Ct : Capacitor under test
- S : High-voltage switch
- Cd :  $0.001 \mu F$
- Vs : DC 10kV
- R1 :  $1000 \Omega$
- R2 :  $100M \Omega$
- R3 : Surge resistance

No	Items	Performance	Testing method						
14	Discharge Test ( )	The cheesecloth around capacitors shall not glow or flame.	<p>A single layer of cheesecloth is to be placed around the body of the test capacitor. Each sample is to be subjected to four discharges from a dump capacitor charged to a voltage that, when discharged, placed DC5kV across the capacitor under test. The interval between successive discharges is to be 5 sec AC240V(rms.), 60Hz potential is to be applied across the capacitor under test and is to be maintained for 30 sec after the fourth discharge, unless the circuit is opened in a shorter time by breakdown of the test capacitor.</p> <p>The direct current supply is to be adjusted to provide a potential in accordance with the following.</p> <p>Fig. 4</p> <p> <math>V_{dc} = 5000 \times (C_d + C_x) / C_d</math>                      Ct: Capacitor under test                      Cd: Dump capacitor                      Vdc: Direct-current source of supply                      S: High voltage switch                      L: Choke coil 3mH, 0.03Ω                      F: Plug fuse 30A, 125V                      Vac: Supply source 120V, 60Hz, 30A                 </p> <p>Capacitance value and D.F. are as follows.</p> <table border="1" data-bbox="911 1323 1334 1417"> <tr> <td>Cap. Value of Ct</td> <td>0~0.005 μ F</td> </tr> <tr> <td>Cap. Value of Cd</td> <td>0.005 μ F</td> </tr> <tr> <td>D.F. OF Cd</td> <td>0.5% max.</td> </tr> </table>	Cap. Value of Ct	0~0.005 μ F	Cap. Value of Cd	0.005 μ F	D.F. OF Cd	0.5% max.
Cap. Value of Ct	0~0.005 μ F								
Cap. Value of Cd	0.005 μ F								
D.F. OF Cd	0.5% max.								
15	Flame Test	<p>The capacitor flame discontinues as follows.</p> <table border="1" data-bbox="572 1704 842 1798"> <thead> <tr> <th>Cycle</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>1~4</td> <td>30sec max.</td> </tr> <tr> <td>5</td> <td>60sec max.</td> </tr> </tbody> </table>	Cycle	Time	1~4	30sec max.	5	60sec max.	<p>The capacitor shall be subjected to applied for 15 sec and then removed for 15 sec until 5 cycles.</p> <p>Fig. 5</p>
Cycle	Time								
1~4	30sec max.								
5	60sec max.								

No	Items	Performance	Testing method
16	Active Flammability	The cheesecloth shall not be on fire.	<p>The specimens shall be individually wrapped in at least one but more than two complete layers of cheesecloth. The specimens shall be subjected to 20 discharges. The interval between successive discharges shall be 5 sec. The UAC shall be maintained for 2 min after the last discharge. Fig. 6</p>  <p>             Vt: 4kV (class X1), 5kV (class Y2)              Vac: 250Vac              C, C<sub>1</sub>: Filter capacitor 1μF±10%              L<sub>1</sub> to L<sub>4</sub>: Rod core choke 1.5mH±20%, 16A              C<sub>2</sub>: Capacitor 0.033μF±5%/10kV              C<sub>3</sub>: Capacitor under test              C<sub>4</sub>: Tank capacitor C=3μF±5%/10kV              R: 100Ω±2%              F: Fuse, rated 16A         </p> 
17	Passive Flammability	The burning time shall not be exceeded the time 30 sec. The tissue paper shall not ignite.	<p>The capacitor under test shall be held in the position which best promotes burning. Each specimen shall only be exposed once to flame. Time of exposure to flame: 30sec. Fig. 7</p>  <p>             Length of flame : 12 ±1mm              Gas burner : Length 35mm min              Inside Dia. : 0.5 ± 0.1mm              Outside Dia. : 0.9mm max.              Gas : Butane gas Purity 95% min.         </p>

1 "room condition" Temperature:15~35, Relative humidity:45~75%, Atmospheric pressure:86~106kPa

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8.Packing Baggage :

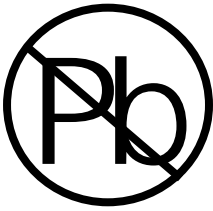
Bulk :

When dimension 13 , Bulk Packaging is 500pcs/bag.

When dimension > 13 , Bulk Packaging is 200pcs/bag.

Taping : 500pcs/box

9.Pb free showing :



The Mark is showing to all label.

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**CAUTION**

**1. Caution(Rating)**

(1). Operating Voltage

When DC-rated capacitors are to be used in AC or ripple current circuits, be sure to maintain the  $V_{p-p}$  value of the applied voltage or the  $V_{o-p}$  which contains DC bias within the rated voltage range.

When the voltage is started to apply to the circuit or it is stopped applying, the irregular voltage may be generated for a transit period because of resonance or switching. Be sure to use a capacitor within rated voltage containing this irregular voltage.

Voltage	DC Voltage	DC+AC Voltage	AC Voltage	Pulse Voltage (1)	Pulse Voltage (2)
Positional Measurement					

(2). Operating Temperature and Self-generated Heat

Keep the surface temperature of a capacitor below the upper limit of its rated operating temperature range. Be sure to take into account the heat generated by the capacitor itself. When the capacitor is used in a high-frequency current, pulse current or the like, it may have the self-generated heat due to dielectric-loss.

Applied voltage should be the load such as self-generated heat is within 20% on the condition of atmosphere temperature 25°C. When measuring, use a thermocouple of small thermal capacity-K of 0.1mm and be in the condition where capacitor is not affected by radiant heat of other components and wind of surroundings. Excessive heat may lead to deterioration of the capacitor's characteristics and reliability.

(3). Test condition for withstanding Voltage

*1. Test Equipment*

Test equipment for AC withstanding voltage shall be used with the performance of the wave similar to 50/60 Hz sine waves.

If the distorted sine wave or over load exceeding the specified voltage value is applied, the defective may be caused.

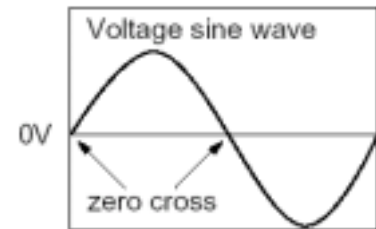
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## *II. Voltage Applied Method*

When the withstanding voltage is applied, capacitor's lead or terminal shall be firmly connected to the output of the withstanding voltage test equipment, and then the voltage shall be raised from near zero to the test voltage.

If the test voltage without the raise from near zero voltage would be applied directly to capacitor, test voltage should be applied with the \*zero cross. At the end of the test time, the test voltage shall be reduced to near zero, and then capacitor's lead or terminal shall be taken off the output of the withstanding voltage test equipment.

If the test voltage without the raise from near zero voltage would be applied directly to capacitor, the surge voltage may arise, and therefore, the defective may be caused.



ZERO CROSS is the point where voltage sine wave pass 0V.- See the right figure.

### (4). Fail-Safe

When capacitor would be broken, failure may result in a short circuit. Be sure to provide an appropriate fail-safe function like a fuse on your product if failure would follow an electric shock, fire or fume.

**Failure to follow the above cautions may result, worst case, in a short circuit and cause fuming or partial dispersion when the product is used.**

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## **2.Caution(Storage and operating condition)**

Operating and storage environment

The insulating coating of capacitors does not form a perfect seal; therefore, do not use or store capacitors in a corrosive atmosphere, especially where chloride gas, sulfide gas, acid, alkali, salt or the like are present. And avoid exposure to moisture. Before cleaning, bonding, or molding this product, verify that these processes do not affect product quality by testing the performance of a cleaned, bonded or molded product in the intended equipment. Store the capacitors where the temperature and relative humidity do not exceed -10 to 40 degrees centigrade and 15 to 85 %.

Use capacitors within 6 months.

"Failure to follow the above cautions may result, worst case, in a short circuit and cause fuming or partial dispersion when the product is used."

## **3. Caution (Soldering and Mounting)**

### (1).Vibration and impact

Do not expose a capacitor or its leads to excessive shock or vibration during use.

### (2).Soldering

When soldering this product to a PCB/PWB, do not exceed the solder heat resistance specification of the capacitor. Subjecting this product to excessive heating could melt the internal junction solder and may result in thermal shocks that can crack the ceramic element.

"Failure to follow the above cautions may result, worst case, in a short circuit and cause fuming or partial dispersion when the product is used."

## **4.Caution (Handling)**

Vibration and impact

Do not expose a capacitor or its leads to excessive shock or vibration during use.

"Failure to follow the above cautions may result, worst case, in a short circuit and cause fuming or partial dispersion when the product is used."

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*Notice*

**1. Notice (Soldering and Mounting)**

Cleaning (ultrasonic cleaning)

To perform ultrasonic cleaning, observe the following conditions.

Rinse bath capacity : Output of 20 watts per liter or less.

Rinsing time : 5 min maximum.

Do not vibrate the PCB/PWB directly.

Excessive ultrasonic cleaning may lead to fatigue destruction of the lead wires.

**2. Notice (Rating)**

(1). Class 1 capacitors

Capacitance might change a little depending on a surrounding temperature or an applied voltage.

Please contact us if you use for the strict time constant circuit.

(2). Class 2 and 3 capacitors

Class 2 and 3 capacitors like temperature characteristic B, E and F have an aging characteristic, whereby the capacitor continually decreases its capacitance slightly if the capacitor leaves for a long time. Moreover, capacitance might change greatly depending on a surrounding temperature or an applied voltage. So, it is not likely to be able to use for the time constant circuit. Please contact us if you need a detail information.

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Appendix 1 :

1. Old part number:

(EX.)   AH     15     E     472     M     L     0     T    
          TYPE (1)       (2)       (3)       (4)       (5)       (6)       (7)

(1) Nominal body diameter dimension

(2) Temperature characteristic — B(Y5P):±10%, E(Y5U):-55% ~ +20%

(3) Rated capacitance (identified by 3-figure code)

(4) Rated capacitance tolerance — K:±10%, M:±20%

(5) Lead style (configuration) (identified by code) —

L: straight long lead

S: straight short lead

D: vertical kink lead

X: outside kink lead

B: inside kink lead

(6) The distance between leads(PITCH) — 0: PITCH 10mm

(7) Taping type or other code:

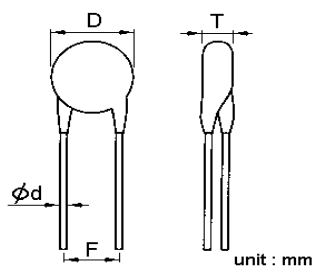
Code	Pitch component	Lead spacing
T	30.0 mm	10 ± 1.0 mm
No code	BULK	

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## 2.Old Part numbering

Customer Part No.	POE Part. No.	T.C.	Capacitance (pF)	Tolerance (%)	Dimension (unit:mm)			
					D max.)	T(max.)	F	d
	AH08B101K *	B (Y5P)	100 pF	±10%	9.0	6.0	10±1	0.62
	AH08B151K *		150 pF	±10%	9.0	6.0	10±1	0.62
	AH08B221K *		220 pF	±10%	9.0	6.0	10±1	0.62
	AH08B331K *		330 pF	±10%	9.0	6.0	10±1	0.62
	AH09B471K *		470 pF	±10%	10.0	6.0	10±1	0.62
	AH10B561K *		560 pF	±10%	11.0	6.0	10±1	0.62
	AH10B681K *		680 pF	±10%	11.0	6.0	10±1	0.62
	AH08E102M *	E (Y5U)	1000 pF	±20%	9.0	6.0	10±1	0.62
	AH10E152M *		1500 pF	±20%	11.0	6.0	10±1	0.62
	AH11E222M *		2200 pF	±20%	12.0	6.0	10±1	0.62
	AH12E332M *		3300 pF	±20%	13.0	6.0	10±1	0.62
	AH14E392M *		3900 pF	±20%	15.0	6.0	10±1	0.62
	AH15E472M *		4700 pF	±20%	16.0	6.0	10±1	0.62

Graph (ex.)



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### 3.Mechanical

Encapsulation : epoxy resin, flammability 94V-0

Disc size and lead style : (unit : mm)

Lead type	Lead Code	PITCH (F)	Lead length(L)	Lead configuration
Type 1 Straight long lead	L7	7.5±1 mm	25 mm min.	lead style : L 
	L0	10.0±1 mm	25 mm min.	
Type 2 Straight short lead	S7	7.5±1 mm	4.5±1.0 mm	lead style : S 
	S7A	7.5±1 mm	3.0±1.0 mm	
	S7P	7.5±1 mm	10±1.0 mm	
	S0	10.0±1 mm	4.5±1.0 mm	
	S0A	10.0±1 mm	3.0±1.0 mm	
	S0P	10.0±1 mm	10±1.0 mm	
Type 3 Vertical kink short lead	D7	7.5±1 mm	4.0±0.5 mm	lead style : D 
	D0	10.0±1 mm	4.0±0.5 mm	
Type 4 Outside kink lead	X7	7.5±1 mm	4.0±0.5 mm	lead style : X 
Type 5 Inside kink lead	B7	7.5±1 mm	4.0±0.5 mm	lead style : B 
	B0	10.0±1 mm	4.0±0.5 mm	

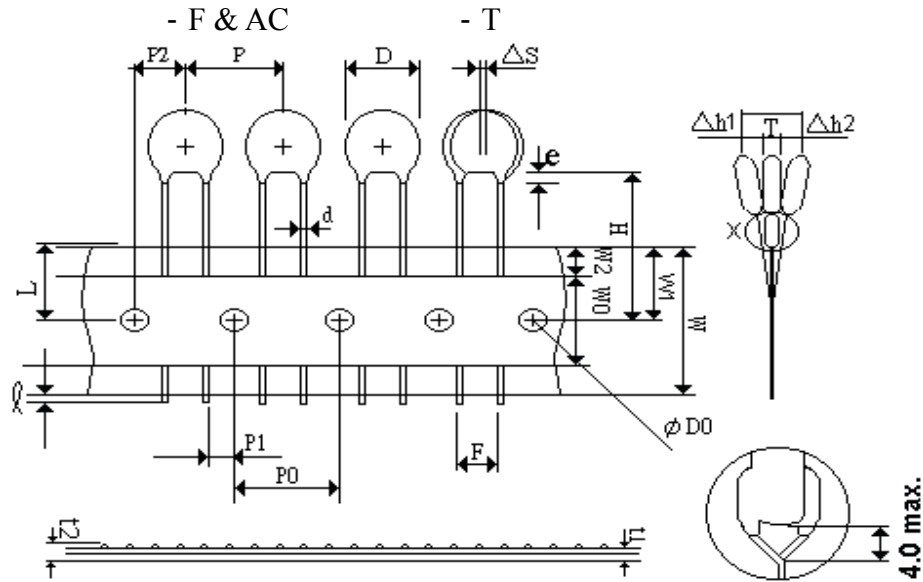
Lead diameter d: 0.6<sup>+0.06</sup>/<sub>-0.05</sub> (mm) .

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Appendix 2.

Taping Format

Part number: AC



POE Part Number		AC	-F	AC	-T
Item	Symbol	Dimensions (mm)		Dimensions(mm)	
Pitch of component	P	15±2		30±2	
Pitch of sprocket	P0	15.0±0.3		15.0±0.3	
Lead spacing	F	7.5±1.0		10.0±1.0	
Length from hole center to component center	P2	7.5±1.5		15.0±1.5	
Length from hole center to lead	P1	3.75±1.0		10.0±1.0	
Body diameter	D	See the individual product specification			
Deviation along tape, life or right	S	0±2.0		0±2.0	
Carrier tape width	W	18.0 +1/-0.5		18.0 +1/-0.5	
Position of sprocket hole	W1	9.0±0.5		9.0±0.5	
Lead distance between reference and bottom planes	H	( 16.0 or 20.0 ) ±1.5			
Protrusion length	l	1.0 max.		1.0 max.	
Diameter of sprocket hole	D0	4.0±0.2		4.0±0.2	
Lead diameter	d	0.6 +0.06/-0.05		0.6 +0.06/-0.05	
Total tape thickness	t1	0.6±0.3		0.6±0.3	
Total thickness, tape and lead wire	t2	1.5 max.		1.5 max.	
Deviation across tape	h1	2.0 max.		2.0 max.	
	h2				
Portion to cut in case of defect	L	11.0 max.		11.0 max.	
Hole-down tape width	W0	11 min.		11 min.	
Hole-down tape distortion	W2	3 max.		3 max.	
Coating extension on leads	e	3.0 max.		3.0 max.	
Body thickness	T	See the individual product specification			