

MESSRS:

SPECIFICATION FOR APPROVAL

<p>CERAMIC CAPACITORS DISK TYPE</p> <p>CT8108bY5P102K2KVB</p> <p>High-voltage CERAMIC CAPACITOR</p>

CUSTOMER'S SIGNATURE:

<p>CHIEF OF SECTION</p>	<p>MANAGER</p>

Ceramic Disc Capacitor Specification		Page	1 / 5
Part Number	CT8108bY5P102K2KVB		

1. Applicable area

This specification is applied to Ceramic disc capacitors CT8108bY5P102K2KVB

2. Part number system

EX: CT81-----08-----b-----Y5P-----102-----K-----2KV-----B
 (1) (2) (3) (4) (5) (6) (7) (8)

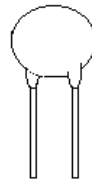
- (1) This code represents Class 2 ceramic capacitor type
- (2) This code represents diameter
- (3) This code represents lead style
- (4) This code represents temperature characteristics
- (5) This code represents capacitance
- (6) This code represents capacitance tolerance
- (7) This code represents rated voltage
- (8) This coder represents bulk or taping

B: Bulk

T: Taping

3. Lead style

Code	Lead style
b	straight crimp



4. Temperature characteristics

Temp.char.	Code	Cap.change rate	Oper.temp.range
B	Y5P	± 10%	-25~+85°C

5. Nominal capacitance

Capacitance value are represented in digits and expressed in pico-Farad (pF). The first two digits are significant. And the third is the number of zeros.

Example

Code	Nominal capacitance
102	1000pF

6. Capacitance tolerance

Code	capacitance tolerance
K	± 10%

7. Rated voltage

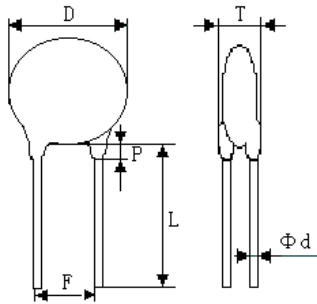
Code	Rated voltage
2KV	2000V DC

Part Number

CT8108bY5P102K2KVB

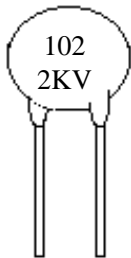
8. Packing method: epoxy resin

9. Dimensions



Dmax	9.0mm
Pmax	4.0mm
Tmax	5.0mm
$d \pm 0.05$	0.55mm
Lmin	25.0mm
$F \pm 1.0$	5.0mm

10. Marking



Ceramic Disc Capacitor Specification		Page	3 / 5
Part Number	CT8108bY5P102K2KVB		

11. Product of Country
China

No.	Item	Performance	Test Method										
1	1.Voltage proof 1.1.Between termination	No abnormality	Test voltage: x 1.5+500V Application time: 1-5 sec Charge and discharge current: 50 mA or less										
	1.2.Between termination and enclosure		Test voltage: x 1.5+500V Application time: 1-5 sec Charge and discharge current: 50 mA or less Small metallic ball method is used										
2	Insulation resistance (I.R) Between termination	$\geq 10000M \Omega$	Test voltage: 500VDC Application voltage: 1min \pm 5 sec										
3	Capacitance	$\pm 10\%$	Temp. 20 \pm 2 $^{\circ}$ C										
4	Tangent of loss angle (tan δ)	2.5%max	Measuring voltage: 1.0Vrms max Measuring frequency: 1KHz \pm 10%										
5	5.Temperature Characteristics of capacitance 5.1.Without voltage application	$\pm 10\%$	Test to be made as following steps. <table border="1"> <thead> <tr> <th>Step</th> <th>temperature($^{\circ}$C)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+20\pm2</td> </tr> <tr> <td>2</td> <td>Lower category temperature \pm2</td> </tr> <tr> <td>3</td> <td>+20\pm2</td> </tr> <tr> <td>4</td> <td>Upper category temperature \pm2</td> </tr> </tbody> </table>	Step	temperature($^{\circ}$ C)	1	+20 \pm 2	2	Lower category temperature \pm 2	3	+20 \pm 2	4	Upper category temperature \pm 2
	Step		temperature($^{\circ}$ C)										
1	+20 \pm 2												
2	Lower category temperature \pm 2												
3	+20 \pm 2												
4	Upper category temperature \pm 2												
5.2.Under voltage application	+10/-15%	In the test apply a dc. Voltage equal to the rated Voltage following to step 4 without voltage application. Carry out the measurements in the sequence of step 4.3.2.and 1 and obtain the changes relative to capacitance at step 3 without voltage applications.											

Ceramic Disc Capacitor Specification		Page	4 / 5
Part Number	CT8108bY5P102K2KVB		

No.	Item	Performance	Test Method						
6	6. Robustness of termination	No abnormalities such as breaking or loosening of termination	Apply the tension gradually in the direction of emergency of termination						
	6.1.Tensile strength		<table border="1"> <tr> <td>Nominal wire dia (mm)</td> <td>Tensile force (N)</td> <td>Duration (S)</td> </tr> <tr> <td>0.6</td> <td>10(1.0kgf)</td> <td>10±1</td> </tr> </table>	Nominal wire dia (mm)	Tensile force (N)	Duration (S)	0.6	10(1.0kgf)	10±1
	Nominal wire dia (mm)		Tensile force (N)	Duration (S)					
	0.6		10(1.0kgf)	10±1					
6.2.Bending strength	The weight corresponding to the bending fore specified in the table shall be suspended from the end of the termination. The body of specimen is inclined through an angle 90 degree. Then the body is returned to the original position. This operation is carried out for 2s to 3s and counted as once. Next, the body is bend 90 degrees for inverse direction with the same speed, and returned to original position. This is counted as twice. The number of testing times shall be twice								
	<table border="1"> <tr> <td>Nominal wire dia (mm)</td> <td>Bending force (N)</td> </tr> <tr> <td>0.6</td> <td>5.0(0.51kgf)</td> </tr> </table>	Nominal wire dia (mm)	Bending force (N)	0.6	5.0(0.51kgf)				
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0.6	5.0(0.51kgf)								
7	Solder ability	At least 3/4 of peripheral surface is covered with new solder to the point immersed	<p>Pre-conditioning: testing specimen is held above boiling distilled water for 1h. Kind of solder: H60A or H63A Flux: Ethanol solution of Resin(25wt%) Temperature of solder :235±5℃</p> <p>Duration of immersion into solder: 2±0.5 sec</p> <p>Depth of immersion: 1.5 to 2mm from root of termination</p> <p>Speed of immersion: 25±2.5mm/sec</p>						
8	8.Resistance to soldering heat	No abnormality and marking shall be easily legible	Pre-conditioning: refer to NOTE						
	8.1.Appearance		Kind of solder: H60A or H63A Flux: Ethanol solution of Rosin (25wt%)						
	8.2.Voltage proof (Between terminations)	To satisfy Number 1.	Temperature of solder :270±10℃						
	8.3.Relative capacitance change	±10% max	<p>Duration of immersion into solder: 3.0±0.5sec</p> <p>Depth of immersion: 1.5 to 2mm from root of termination</p> <p>Speed of immersion: 25±2.5mm/sec</p> <p>Recovery: Expose the specimen to the standard conditions for 4 to 24h.</p>						

Ceramic Disc Capacitor Specification		Page	5 / 5
Part Number	CT8108bY5P102K2KVB		

No.	Item	Performance	Test Method
9	9.Loading under damp heat	No remarkable abnormality and marking shall be easily legible	Test temperature : 40±2℃ Relative humidity: 90-95% Test duration: 500+24, -0h Recovery: take out the specimen from the chamber and allow it to stand under the standard conditions for 1 to 2h.
	9.1.Appearance	legible	
	9.2.Insulation resistance	≥1000M Ω	
	9.3.Relative capacitance change	±10% max	
	9.4Tangent of loss angle (tan δ)	≤4%	
10	10 Loading at elevated temperature	No remarkable abnormality and marking shall be easily legible	Pre-condition: refer to NOTE Test temperature: 85±2℃ Electric loading condition: apply rated voltage×1.5 Test duration: 1000+48-0h Charge and discharge current: ≤50mA Recovery: take out the specimen from the Chamber and allow it to stand under the standard conditions for 1 to 2h
	10.1 Voltage proof (between terminations)	To satisfy Number 1	
	10.2Insulation resistance	More than 2000M Ω (min)	
	10.3Relative capacitance change	±20% max	
	10.4 Tangent of loss angle (tan δ)	≤4%	

NOTE: The capacitor under test is allowed to stand at the upper category temperature ±2℃ for about 1h.Then under the standard conditions for 24±2h,and then the initial measurement is carried out