



### Approved/Recognized Type

Related Standard		Certificate NO	APProved Monogram
CQC (China)	IEC 60384-14	CQC08001022317 CQC13001103540	
KC (Korea)	K60384	SU03044-9001	
UL(usa) CSA(Canada)	IEC UL 60384	E356696	
ENEC (EU)	EN 60384-14	ENEC-00656-A1 ENEC-00982	
VDE (Germany)	EN 60384-14	40038642	
IEC CB	IEC 60384-14	US-21902-A1-UL US-23938-UL	

### Specifications

Operating Temp.Range	-40°C to +85°C, -40°C to +125°C		
Applicable Standards	UL, CSA, CQC, ENEC, VDE	X1	Y1
		400VAC	400VAC
Dielectric Withstanding Voltage	Rted Voltage		Test Voltage
	400VAC		4000 VAC for 1 min.
Dissipation Factor (D.F)	Y5P,Y5U	TANδ(DF) ≅ 2.5 % ,measured at 1KHz±10 % ,1.0 - 5.0 Vrms,25°C	
	Y5V	TANδ(DF) ≅ 5.0 % ,measured at 1KHz±10 % ,1.0 - 5.0 Vrms,25°C	
Capacitance(C)	Range	10 pF to 4700 pF. measured at 1KHz±10 % , 1.0 - 5.0 Vrms, 25°C	
	Tolerance	±10%	Y5P
		±20%	Y5U,Y5V
InsulationResiatance(I R)	10000 MΩ , 1 min , 500 VDC		
Temperature Characteristics	Type Code	Temp. Coeff.	Temp. Range
	Y5P,Y5U	±10%, +22~-56%	-40°C to +85°C, -40°C to +125°C
	Y5V	+30%~-80%	-40°C to +85°C, -40°C to +125°C



Part Number Configuration:

JD 102 M 2G Y5V S T 10 L

(1) (2) (3) (4) (5) (6) (编带) (7) (8)

(1) AC capacitors, safety  
(F)Y5V, (E)Y5U

(5) Type code Temperature Characteristic: (B)Y5P,

(2) Rated capacitance

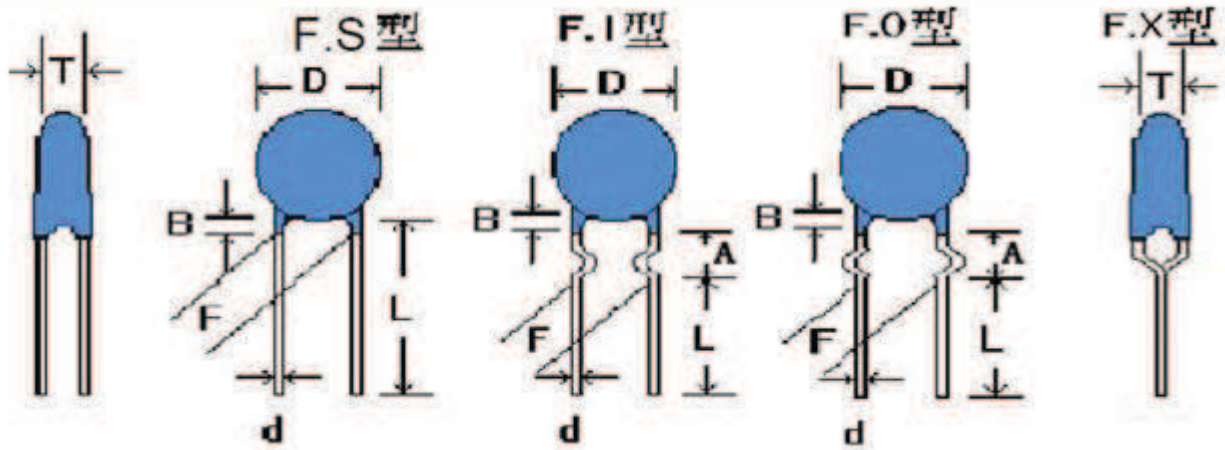
(6) Lead shape: S(直角), I(内弯), O(外弯), X(前后弯)

(3) Tolerance on rated capacitance

(7) Pin pitch : 7.5or9.5or10.0

(4) Rated Voltage

(8) Lead length: 3—25mm



Dimensions and Tolerance

B=3.0mm max for AA

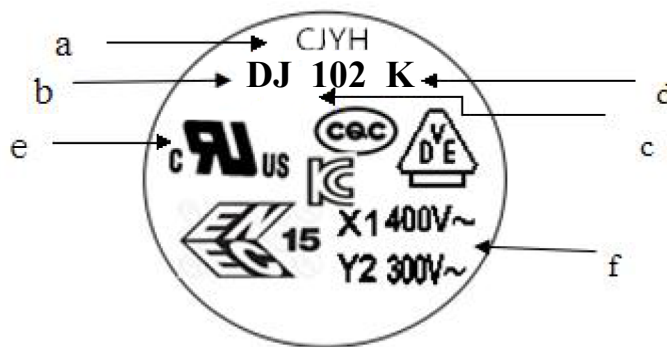
L=3-30mm

编带详细参数看 P11.



**Marking:**

- a. Company name code    CJYH
- b. Product Type            DJ Series
- c. Nominal Capacitance    102 = 1000pF,
- d. Tolerance                 K=  $\pm 10\%$ ,    M=  $\pm 20\%$
- e. Recognized Type         cUL, CQC, VDE, ENEC, KC
- f. Rated Voltage             X1=400Vac , Y2=300Vac



**Packing Quantity:**

Packing	Safety	High Voltage	<i>Ceramic</i>
	Capacitor	Capacitor(Y1, Y2)	<i>Capacitor DC</i>
Bulk	1000pcs	1000pcs	<i>1000pcs</i>
Tape Ammo	2000pcs	1500pcs	<i>2000pcs</i>

ROHS Compliance , SVHC



### Capacitance and Dimensions:

Part Number	T.C.	CAP.	TOL.	Dimension(mm)				
				D max	F	T max	Φ d(±0.05)	
DJ 10K2GY5P----	±10% (Y5P)	10pF	K ±10%	6.5	9.5 or 10 ±0.8	6	0.55	
To								
DJ 82K2GY5P----		82PF			9.5 or 10 ±0.8	6	0.55	
DJ 101K2GY5P----				100PF	6.8	9.5 or 10 ±0.8	6	0.55
DJ 151K2GY5P----				150PF	6.8	9.5 or 10 ±0.8	6	0.55
DJ 221K2GY5P----				220PF	6.8	9.5 or 10 ±0.8	6	0.55
DJ 331K2GY5P----				330PF	7.2	9.5 or 10 ±0.8	6	0.55
DJ 471K2GY5P----				470PF	8.8	9.5 or 10 ±0.8	6	0.55
DJ 561K2GY5P----				560PF	8.8	9.5 or 10 ±0.8	6	0.55
DJ 681K2GY5P----				680PF	9.8	9.5 or 10 ±0.8	6	0.55
DJ 102K2GY5P----				1000PF	10.0	9.5 or 10 ±0.8	6	0.55
DJ 102M2GY5V----	+30 ~-80% (Y5V)	1000PF	M± 20%	6.8	9.5 or 10 ±0.8	6	0.55	
DJ 152M2GY5V----		1500PF		7.8	9.5 or 10 ±0.8	6	0.55	
DJ 222M2GY5V----		2200PF		8.5	7.5 or 10 ±0.8	6	0.55	
DJ 332M2GY5V----		3300PF		10.2	9.5 or 10 ±0.8	6	0.55	
DJ 392M2GY5V----		3900PF		11.5	9.5 or 10 ±0.8	6	0.55	
DJ 472M2GY5V----		4700PF		11.5or12.5	9.5 or 10 ±0.8	6	0.55	
DJ 471K2GY5U----	+22 ~-56% (Y5U)	470PF	K ±10%	6.8	9.5 or 10 ±0.8	6	0.55	
DJ561K2GY5U----		560PF		7.8	9.5 or 10 ±0.8	6	0.55	
DJ681K2GY5U----		680PF		7.2	9.5 or 10 ±0.8	6	0.55	
DJ102M2GY5U----		1000PF	M± 20%	7.8	9.5 or 10 ±0.8	6	0.55	
DJ152M2GY5U----		1500PF		9.3	9.5 or 10 ±0.8	6	0.55	
DJ222M2GY5U----		2200PF		10.5	9.5 or 10 ±0.8	6	0.55	
DJ332M2GY5U----		3300PF		13.0	9.5 or 10 ±0.8	6	0.55	
DJ392M2GY5U----		3900PF		14.0	9.5 or 10 ±0.8	6	0.55	
DJ472M2GY5U----		4700PF		15.0	9.5 or 10 ±0.8	6	0.55	

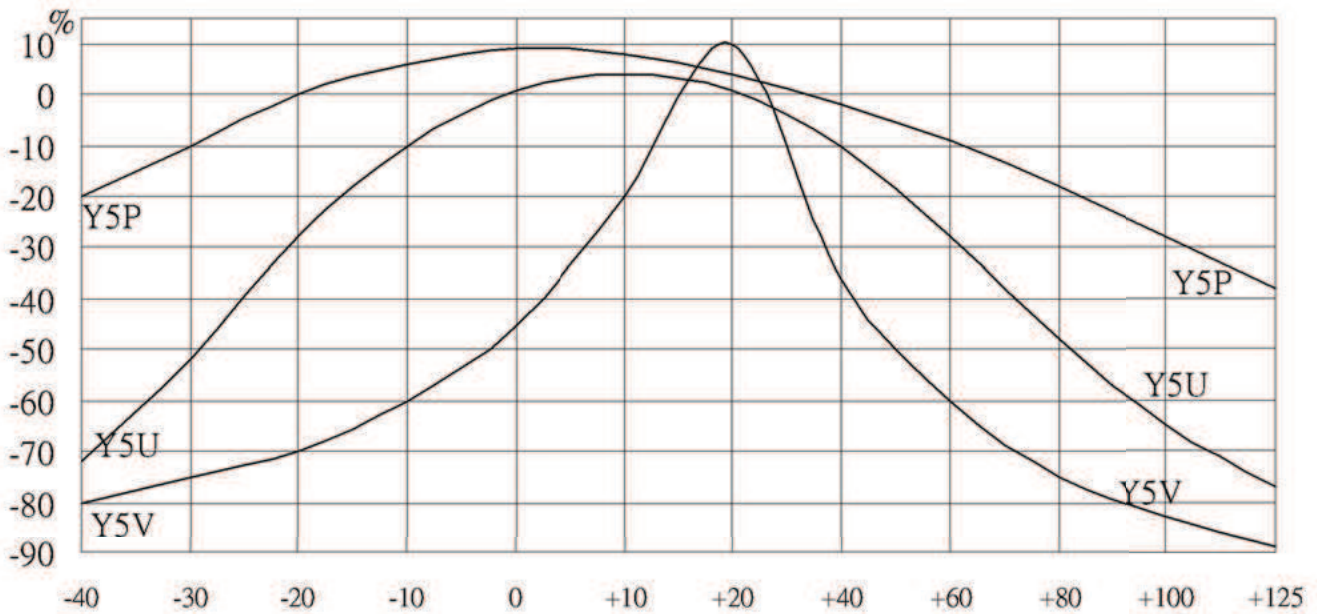
注：本规格仅作参考，在没有告知的情况下，有可能变更或改进，如有需求请咨询我司。



### EIA TEMPERATURE CHARACTERISTIC CHART

First Digit is low Temperature	Second Digit is High Temperature	Last Digit is Capacitance Change Over Temperature Range From +25 °C Reading	
X: -55°C Y: -25°C Z: +10°C	4: +65°C 5: +85°C 6: +105°C 7: +125°C 8: +150°C	A	± 1.0 %
		B	± 1.5 %
		C	± 2.2 %
		D	± 3.3 %
		E	± 4.7 %
		F	± 7.5 %
		P	± 10 %
		R	± 15 %
		S	± 22 %
		T	+ 22 % - 33 %
		U	+ 22 % - 56 %
		V	+ 22 % - 82 %

Capacitance Temperature Characteristics





**Performance & Tests, draw up by IEC 60384-14:2005 and GB/T 14472**

"Note: (1) Is was defined according with IEC 60384-14:2005, when for qualification approval and periodic tests, the withstanding test must last to 1 minute, and it belong to destroyed test domain, therefore, after the test, capacitors should be scrap. Withstand voltage test should rise slowly at 150V/s, and test time is counted from when the voltage reaches to experiment requirement." (2) The test time is more than 1 second at production period, and the rated test voltage is applied.

Capacitors may cause to damage when withstand voltage test repeated."

NO.	Item	Characteristic	Test Method	
1	Appearance and Dimensions	Please refer to figures and tables on page 2, 3 and 4.	1~1 1~2	"Production line visual inspection must be done in full and remove the defective products." "Dimensions measurement by micrometer and Caliper
2	Marks	Must be clean and clear.	2~1	Label need to be able endure wiping with Isopropanol
3	Withstand voltage test ( I )	Between terminal	3~1	Rated voltage: 300VAC for Y2, test voltage 2000 VAC or 2600 VAC, time 60s, frequency: 50Hz/60Hz. <b>Rated voltage: 400VAC for Y1, test voltage 4000 VAC, Approval and period test: 60s, Lot inspection 100% and time 2s, discharge current must <math>\cong</math> 50 mA."</b>
	Between terminal and coating.	Can not have exceptions.	3~2	Use metal foil test method: use metal foil wrap around the capacitor body, each end extending at least 5mm, and keep 1mm/1kV distance minimum, between metal foil and terminals. for Y2, test voltage 2300VAC; for Y1, test voltage 4000VAC, test time 60s.
4	Withstand voltage test(III) (For safety symbol A2)	(1)Gauze shall not ignite. (2)Capacitors shall not in burned.	4~1	According to IEC 60384-14 and GB / T 14472 requirements.
5	Withstand voltage test (IV)(For safety symbol B2)	(3)Elements and coating must not scattered. (4)Terminals can not be moved away from the mounting position than 3mm.	5~1	According to IEC 60384-14 and GB / T 14472 requirements.
6	I	Between terminals	6~1	Measured voltage is $500 \pm 15V$ within 1 minute, and IR keeps within the specified value.
	R	Between terminals and coating.		
7	Capacitance	Within specified tolerance	7~1	The Capacitance shall be measured at 25°C, with $1 \pm 0.1kHz$ and 5Vrms max



8	Dissipation Factor(D.F)	B(Y5P) $\tan \delta \leq 2.5\%$ E(Y5U) $\tan \delta \leq 2.5\%$ F(Y5V) $\tan \delta \leq 5.0\%$	8~1	"The Dissipation Factor shall be measured at 25°C with 1±0.1kHz and 5Vrms max
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NO	Item	Characteristic		Test Method			
9	Temperature Characteristic	Temperature Coefficient (T.C. category applicable):		9~1	Temperature Coefficient (T.C. category applicable):		
		TYPE Temp.Range	SL + 350~ -1000pp m°C	YN - 800~ -5800 ppm°C	9~2	$\text{PPM}/^{\circ}\text{C} = \frac{\text{Ct2} - \text{Ct1}}{\text{Ct1} * (\text{t2} - \text{t1})}$ Ct2: the capacitance of t2 Ct1: the capacitance of t1 t2: 85°C±3°C t1: 20°C±2°C	
		Temperature characteristics: (High Dielectric applicable) Capacitance change rate within the range: Type B Within ±10% Type E Within +22% -56% Type F Within +30% -80%		9~3	Temperature phase 1) 20±2°C → 2) -25±2°C → 3) 20±2°C → 4) 85±2°C → 5) 20±2°C Capacitance change: (High Dielectric Category applicable) $C.C(\%) = \frac{\text{Ctx} - \text{Ct20}}{\text{Ct20}} * 100$ Ctx : Except Temp. phase 1、3、5, The capacitance of any temperature between phase 2 to phase 4. Ct20: The capacitance of phase 3 temp.		
10	Robustness of terminations	Tensile	Lead wires not be snapped	10~1	Diameter(mm)	Load(kgs)	Time(sec)
			Capacitors not be damaged	0.5Φ	0.5	10	
		Bending		Lead wires not be fractured Capacitors not be damaged	10~2	Fix the capacitor's body and apply a tensile weight gradually to each lead wire in the radial direction	
			10~3		Diameter(mm)	Load(kgs)	Bending angle is 90 more than twice.
		0.5Φ	0.25				
					0.6Φ~0.8Φ	0.5	
11	Vibration resistance	Appearance	No significant abnormal	11~1	Vibration frequency from 10Hz to 55Hz and back to 10Hz, amplitude 1.5mm, period time within 1 minute.		
		Cap. Change	Within specification				
		Q or DF	within initial specification				
12	Soldering	Appearance	No significant abnormal	12~1	Solder temperature 350±10°C Immersion time 3.0± 0.5sec		



		Dielectric Strength I	compliance with the characteristic as No.3	12~2	Placed at room condition for 4~24 hours, and then to measure.	
		Capacitance change rate	B: within $\pm 10\%$ E: within $\pm 15\%$ F: within $\pm 20\%$	12~3		
No	Item	Characteristic		Test Method		
13	Solder ability	The round surface of lead wires, there must be 3/4 area welding with the solder.		13~1 13~2	Solder temperature $275 \pm 10^\circ\text{C}$ Immersion time $2.0 \pm 0.5\text{sec}$	
14	Humidity (Under Steady State)	Appearance	No significant abnormal	14~1	Temperature: $40 \pm 2^\circ\text{C}$	
		Dielectric Strength I	Must meet the requirements of No.3	14~2	Humidity: 90~95%RH	
		I R	Between terminals	More than the 1/2 value of No.6 requirements.	14~3	Time: $500 \pm 12\text{Hrs}$
			Between terminal & coating		14~4	Remove & placed at room condition for 1~2 hours, and then to measure.
		Capacitance change rate	Type B within $\pm 15\%$ Type E within $\pm 20\%$ Type F within $\pm 30\%$			
		Dissipation Factor (D.F)	Type B & E, under 5%. Type F, under 7.5%			
15	Damp heat loading	Appearance	No significant abnormal	15~1	Temperature: $40 \pm 2^\circ\text{C}$	
		Dielectric Strength I	Must meet the requirements of No.3	15~2	Humidity: 90~95%RH	





		IR	Between terminals Between terminal & coating	More than the 1/2 value of No.6 requirements.	15~3	Time: 500±12 Hrs
					15~4	Voltage: AC 180Vrms
			Capacitance change rate	Type B within ±15% Type E within ±20% Type F within ±30%	15~5	Current: Less than 50mA
			Dissipation Factor (D.F)	Type B & E, under 5% Type F, under 7.5%.	15~6	Remove & placed at room condition for 1~2 hours, and then to measure.

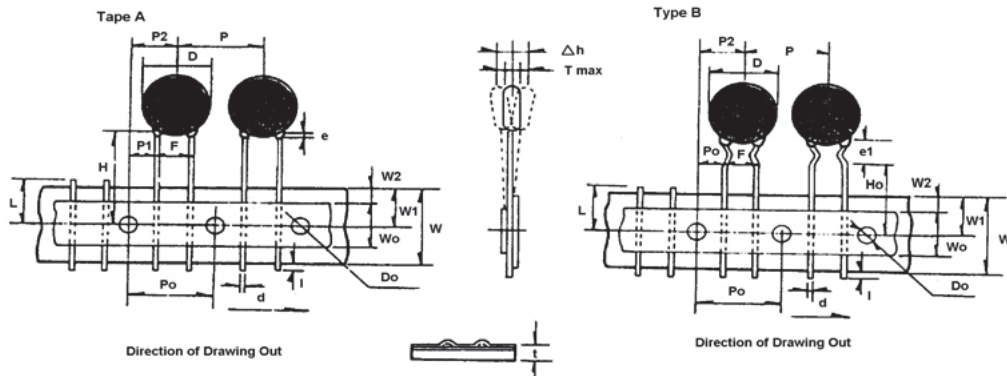


No	Item	Characteristic		Test Method		
16	Endurance	Appearance		No significant abnormal	16~1	Temperature: 85±3°C; 125±5°C Time: 1000±12 Hrs Voltage: rated voltage of 1.7UR Current: less than 50mA Remove & placed at room condition for 1~2 hours, and then to measure.
		Dielectric Strength I		"Must meet the requirements of No.3	16~2	
		I R	Between terminals	More than the 1/2 value of No.6 requirements.	16~3	
			Between terminal&coating		16~4	
		Capacitance change rate		Type B within ±15% Type E within ±20% Type F within ±30%	16~5	
		Dissipation Factor (D.F)		Type B & E, under 5% Type F, under 7.5%		
17	Flame Test	Applicable safety symbols A2, B2.		The capacitor should be subjected to applied flame for 15 sec, and then removed for 15 sec, until 3 cycles are completed. And then continued to flame a minute and never to explode.		
18	Solvent Resistance (Body)	After the test must meet the standards of its electrical properties		The capacitor should be immersed into a isopropyl alcohol for 5±0.5 minutes, then removed and placed for 48 hrs. at room condition before post measurements.		
19	Solvent Resistance (Mark)	Marks should be legible		Use cotton yarn dips isopropyl alcohol, by force 5±0.5 N/1 cm <sup>2</sup> , 1 second round trip twice to wipe mark on the body, and run 5 cycles.		



# TAPING SPECIFICATIONS

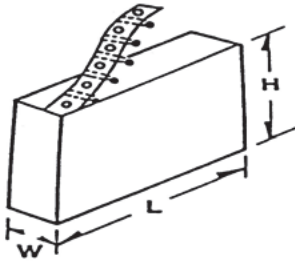
Taping (Radial)--Lead Spacing F=7.5±0.8 or 10.0±0.8



Item	Code	Dimensions (mm)	Item	Code	Dimensions (mm)
Taping Pitch	P	12.7±1.0	Lead Protrusion	l	+0.5~1.0
Guide Pitch	Po	12.7±1.0	Diameter of Feed Hole	Do	4.0±0.3
Lead Spacing	F	5.0±0.8 7.5±0.8 9.5±0.8	Diameter of Lead	d	0.55+0.06 -0.05
Feed Hole Position Capacitor Body	P2	6.35±1.3	Total Thickness of Tape	t	0.7±0.2
Feed Hole Position Capacitor Lead	P1	3.85±0.7	Thickness of Capacitor Body	T	Differ in each product
Diameter Of ISO	D	See table of each series	Alignment to FR. Direction	Δ h	0±2.0
			Length of snapped Lead	L	11.0 +0 -1.0
Width Of Base Tape	W	18.0±0.5	Width of Hold-down Tape	W0	12.5
Feed Hole Vertical Position	W1	9.0 +0.75 -0.05	Hold-down Tape Position	W2	1.5±1.5
Taping Height	For Straight	Ho	Coating Extension	e	3.0 以下
	For Crimp	H		e1	up to center of crimp

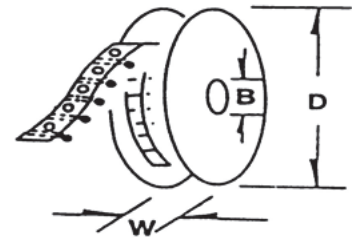
AMMO PACK

REE



$H = 241 \pm 5 \text{ mm}$   
 $L = 332 \pm 5 \text{ mm}$   
 $W = 42 \pm 3 \text{ mm}$

$D \cong 354(13.93)$   
 $B \cong 21(.83)$  but  
 $\cong 30(1.18)$   
 $W \cong 55(2.16)$



Acceptable to standard radial type cartridge with a few accessories.  
Acceptable to standard axial type cartridge with a few accessories.

Acceptable to standard radial type cartridge.  
extra accessories. Reeled axials are also standard axial type cartridge with a few