SPECIFICATION FOR APPROVAL

Customer：_____

Part NO.：_____

Part No. Of JNC：Y107F1D102MB Long straight lead

Specs Of JNC：Y1-Y5V-102M 500VAC P=10MM

★ Environmental requirements：RoHS Corresponds ☑
REACH Corresponds☐ Halogen Corresponds ☐

Written	For Customer Approval
Huifang Luo	
Checked	
Lianfei Chen	
Approval	
Xiangang Fan	（For approval, Please also an）

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Change record table

NO.	Date	Edition	The reasons of change	Description
1	2015-5-10	V 1.0	/	/

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一、Scope of application

It is suitable for the noise suppression circuit of the power circuit of electronic equipment, and can also be used in the antenna coupling jumper and bypass circuit.

二、Reference standard

This document is based on standard GB/T2693-2001、GB/T6346.14-2015 IEC60384-14 standard。

三、Safety Approvals

County	Safety Organization	Standard No.	Recognized No.	Capacity range	Rated Voltage
U.S./ Canada	UL CUL	UL60384	E498213	10～4700pF	X1:400VAC Y1:400VAC Y1:440VAC Y1:500VAC
Korea	KTL	K60384-14	SU03107-18001	100～4700pF	
China	CQC	GB/T 6346.14-2015	CQC18001186332	10～4700pF	
Germany	VDE	En 60384-14	40047520	10～4700pF	
The European Union	ENEC	En 60384-14	DE1-5902	10～4700pF	
IEC	IEC-CB	IEC 60384-14	DE1-5902	10～4700pF	

四、Code description

4.1. Part number eighteen

JN	07	F	1	D	102	M	B
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

4.2. Coded representation meaning

（1）、Rated Voltage

Code	Rated Voltage
JN	Y1/500VAC
JY	Y2/300VAC

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（2）、Products diameter

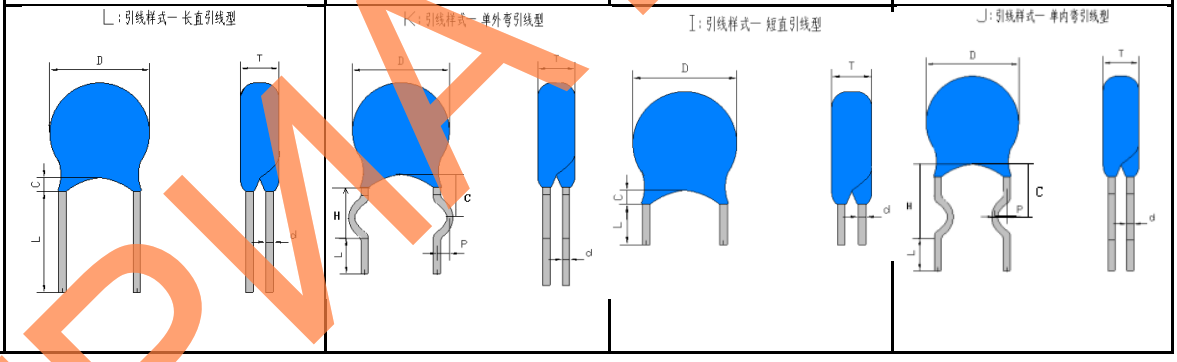
Code	04	05	06	07	08	09	10
Products diameter	4.0 mm	5.0mm	6.0 mm	7.0 mm	8.0 mm	9.0 mm	10.0 mm
Code	11	12	13	14	15	16	17
Products diameter	11.0 mm	12.0 mm	13.0 mm	14.0 mm	15.0mm	16.0 mm	……

Note: piece of diameter to themselves and regulations is named

（3）、Temperature characteristics

Code	S	B	E	F
Temperature coefficient	SL	Y5P	Y5U	Y5V

（4）、Lead foot molding

Code	1	2	3	4
	Long straight lead	Outside kink lead	Short straight lead	Kink lead
Schematic diagram of sample				

（5）、Pin spacing

Code	E	D	E
Pin spacing	7.5mm	10.0mm	10.0mm

（6）、Nominal capacity

Code	470	471	222	472	103
Nominal capacity	47pF	470pF	2200pF	4700pF	10000pF

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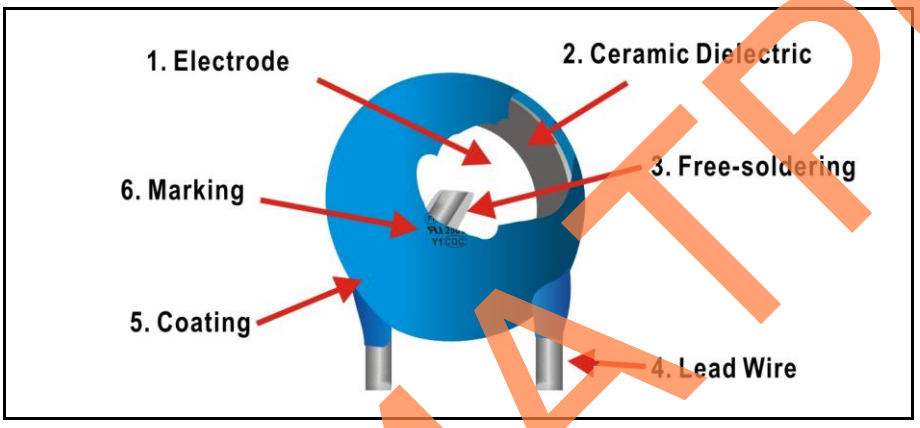
（7）、Tolerance

Code	K	M
Tolerance	±10%	±20%

（8）、Manner of packing

Code	Meaning
B	bulk
T	tape

五、Exterior structure



六、Marking



①、 Logogram	JNC	
②JN	Type（JN:Y1）	
③Nominal capacitance	102	
④Capacitance Tolerance	M （±20%）	
⑤Monogram safety recognized body	ENEC （The European Union）	
	VDE(Germany)	
	KTL(Korea)	250～
	CQC(China)	CQC
	UL （U.S./ Canada）	
⑥Rated Voltage	500V～(500VAC)	
⑦Sub-class of safety performance	X1 Y1	

In this section of the above mentioned are various code can be regarded as The company of the

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stipulated standard code for application!

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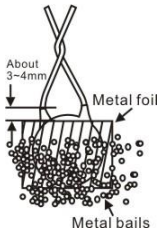
<table>
<tr><td>3</td><td colspan="2">Marking</td><td>To be easily legible</td><td>The capacitor should be visually inspected.</td></tr>
<tr><td>4</td><td colspan="2">Capacitance</td><td>Within specified tolerance</td><td rowspan="2">The capacitance and dissipation factor should be measured at 25° C with 1±0.1KHz and AC1.0V(r.m.s.).</td></tr>
<tr><td>5</td><td colspan="2">Dissipation Factor (D.F.)</td><td>B(Y5P), E(Y5U), F(Y5V):
D.F.≤2.5%</td></tr>
<tr><td>6</td><td colspan="2">Insulation Resistance (I.R.)</td><td>>10000MΩ</td><td>The insulation resistance should be measured with DC500V within 60±5 sec of charging.</td></tr>
<tr><td rowspan="2">7</td><td rowspan="2">Dielectric Strength</td><td>Between Lead Wires</td><td>No failure.</td><td>The capacitor should not be damaged when test voltages of Table 1 are applied between the lead wires for 60 sec. (Charge/Discharge current ≤50mA)
< Table 1>
<table><tr><th>Type</th><th>Test Voltage</th></tr><tr><td>X1Y1</td><td>AC4000V(r.m.s.)</td></tr><tr><td>X1Y2</td><td>AC2600V(r.m.s.)</td></tr></table></td></tr>
<tr><td>Body Insulation</td><td>No failure.</td><td>First, the terminals of the capacitor should be connected together. Then, as shown in figure at right, a metal foil should be closely wrapped around the body of the capacitor to the distance of about 3 to 4mm from each terminal.

Then, the capacitor should be inserted into a container filled with metal balls of about 1mm diameter. Finally, AC voltage of Table 2 is applied for 60 sec. between the capacitor lead wires and metal balls.
< Table 2>
<table><tr><th>Type</th><th>Test Voltage</th></tr><tr><td>X1Y1</td><td>AC4000V(r.m.s.)</td></tr><tr><td>X1Y2</td><td>AC2600V(r.m.s.)</td></tr></table></td></tr>
</table>

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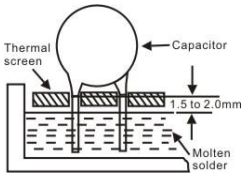
8.2 Reliability test (8 to 19)

<table>
<tr><th>No.</th><th colspan="2">Item</th><th>Specification</th><th>Testing Method</th></tr>
<tr><td>8</td><td colspan="2">Temperature Characteristics</td><td>Char. | Capacitance Change
B(Y5P) | ±10%
E(Y5U) | +22/-56%
F(Y5V) | +30/-82%
Temp. range: -25 ～ +85℃</td><td>The capacitance measurement should be made at each step specified in Table 3.
〈 Table 3〉
Step | 1 | 2 | 3 | 4 | 5
Temperature(℃) | 25 ±2 | -25 ±2 | 25 ±2 | 85 ±2 | 25 ±2</td></tr>
<tr><td>9</td><td colspan="2">Solderability of Leads</td><td>Lead wire should be soldered with uniform coating on the axial direction over 3/4 of the circumferential direction.</td><td>The lead wire of a capacitor should be dipped into molten solder for 2±0.5 sec. The depth of immersion is up to about 1.5 to 2.0mm from the root of lead
Temp. of solder:
Lead Free Solder (Sn-2Ag-0.5Cu)
250±5° C.</td></tr>
<tr><td rowspan="4">10</td><td rowspan="4">Soldering Effect (Non-Preheat)</td><td>Appearance</td><td>No marked defect</td><td rowspan="4">As in figure (see Item 11), the lead wires should be immersed in solder of 260±5° C up to 1.5 to 2.0mm from the root of terminal for 3.5±0.5 sec.
Pre-treatment:
Capacitor should be stored at 85±2° C for 1 hr., and then placed at room condition for 24±2 hrs. before initial measurements.
Post-treatment:
Capacitor should be stored for 1 to 2 hrs. at room condition.</td></tr>
<tr><td>Capacitance Change</td><td>Within ±10%.</td></tr>
<tr><td>I.R.</td><td>≥1000MΩ。</td></tr>
<tr><td>Dielectric Strength</td><td>Per Item 7</td></tr>
<tr><td rowspan="4">11</td><td rowspan="4">olderineffect On Preheat</td><td>Appearance</td><td>No marked defect</td><td rowspan="4">First the capacitor should be stored at 120+0/-5° C for60+0/-5 sec. Then, as shown in figure, the lead wires should be immersed solder of 260+0/-5° C up to 1.5 to 2.0mm from the root of terminal for 7.5+0/-1 sec.
Pre-treatment and Post-treatment see Per Item 10.

</td></tr>
<tr><td>Capacitance Change</td><td>Within ±10%</td></tr>
<tr><td>I.R.</td><td>≥1000MΩ。</td></tr>
<tr><td>Dielectric Strength</td><td>Per Item 7</td></tr>
<tr><td>12</td><td>Vibrat</td><td>Appearance</td><td>No marked defect</td><td>The capacitor should be firmly soldered to the supporting lead wire and vibrated at</td></tr>
</table>

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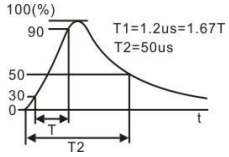
	ion Resistance	Capacitance	Within the specified tolerance	a frequency range of 10 to 55Hz, 1.5mm in total amplitude, with about a 1 minute rate of vibration change from 10Hz to 55Hz and back to 10Hz. Apply for a total of 6 hrs., 2 hrs each in 3 mutually perpendicular directions.
		D.F.	B(Y5P), E(Y5U),F(Y5V) : D.F.≤2.5%	
13	Humidity (Under Steady State)	Appearance	No marked defect	Set the capacitor for 500±12 hrs. at 40±2° C in 90 to 95% relative humidity. Post-treatment: Capacitor should be stored for 1 to 2 hrs. at room condition.
		Capacitance Change	B(Y5P), E(Y5U), F(Y5V): ≤±15%。	
		I.R.	>3000MΩ。	
		Dielectric Strength	Per Item 7	
14	Humidity Loading	Appearance	No marked defect	Apply the rated voltage for 500±12 hrs. at 40±2° C in 90 to 95% relative humidity. Post-treatment: Capacitor should be stored for 1 to 2 hrs. at room condition.
		Capacitance Change	B(Y5P), E(Y5U), F(Y5V): ≤±15%。	
		I.R.	>3000MΩ。	
		Dielectric Strength	Per Item 7	
15	Life Test	Appearance	No marked defect	Impulse Voltage: Each individual capacitor should be subjected to a 5kV (Type X1Y1: 8kVDC) impulses for three times. After the capacitors are applied to life test.  Apply a voltage of Table 4 for 1000 hrs. at 125+2/-0° C, and relative humidity of 50% max. Applied Voltage: 1.7*UR (r.m.s.), except that once each hour the voltage is increased to AC1000V(r.m.s.) for 0.1 sec. Post-treatment: Capacitor should be stored for 1 to 2 hrs. at *room condition.
		Capacitance Change	Within ±20%	
		I.R.	>3000MΩ。	
		Dielectric Strength	Per Item 7	

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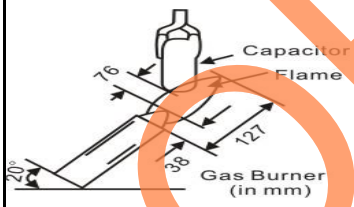
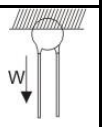
<table>
<tr><th>No.</th><th colspan="2">Item</th><th>Specification</th><th>Testing Method</th></tr>
<tr><td>16</td><td colspan="2">Flame Test</td><td>The capacitor flame discontinues as follows.
<table><tr><th>Cycle</th><th>Time (sec.)</th></tr><tr><td>1～4</td><td>30</td></tr><tr><td>5</td><td>60</td></tr></table></td><td>he capacitor should be subjected to applied flame for 15 sec. and then removed for 15 sec. until 5 cycles are completed.

</td></tr>
<tr><td rowspan="2">17</td><td rowspan="2">Robustness of Terminations</td><td>Tensile</td><td rowspan="2">Lead wire should not be cut off. Capacitor should not be broken.</td><td>

As shown in the figure at right, fix the body of the capacitor and apply a tensile weight gradually to each lead wire in the radial direction of the capacitor up to 10N and keep it for 10±1 sec.</td></tr>
<tr><td>Bending</td><td>Each lead wire should be subjected to 5N weight and then a 90° bend, at the point of egress, in one direction, return to original position, and then apply a 90° bend in the opposite direction at the rate of one bend in 2 to 3 sec.</td></tr>
<tr><td rowspan="5">18</td><td rowspan="5">Temperature rapid change
Temperature rapid change</td><td>Appearance</td><td>No marked defect</td><td rowspan="5">he capacitor should be subjected to 5 temperature cycles, then consecutively to 2 immersion cycles.
Temperature Cycle
<table><tr><th>Step</th><th>Temperature (℃)</th><th>Time (min)</th></tr><tr><td>1</td><td>-40+0/-3</td><td>30</td></tr><tr><td>2</td><td>125+3/-0</td><td>30</td></tr></table>[Pre-treatment]:
Capacitor should be stored at 85±2° C for 1 hr., then placed at room condition for 24±2 hrs.
[Post-treatment]:
Capacitor should be stored for 24±2 hrs. at room condition.</td></tr>
<tr><td>Capacitance Change</td><td>B(Y5P), E(Y5U): ±20%
F(Y5V): ±30%。</td></tr>
<tr><td>D.F.</td><td>B(Y5P), E(Y5U): D.F.≤5.0%
F(Y5V): D.F.≤7.5%。</td></tr>
<tr><td>I.R.</td><td>>3000MΩ。</td></tr>
<tr><td>Appearance</td><td>No marked defect</td></tr>
</table>

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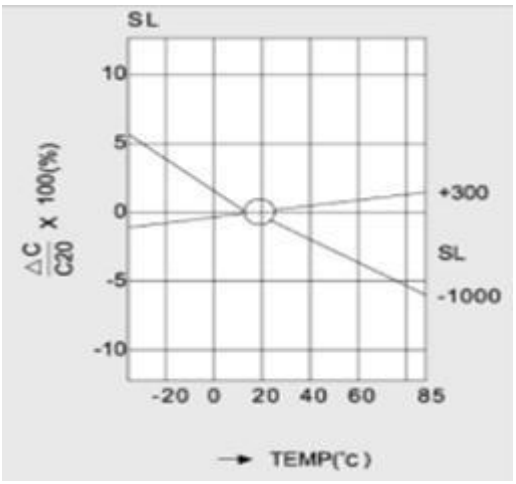
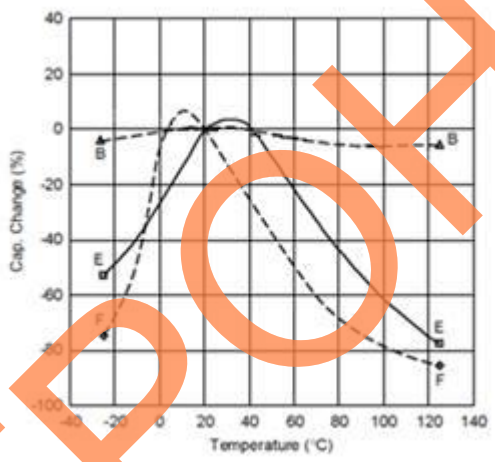
九、Temperature Characteristic Curves





十、Package Drawing

Packing quantity：

Part No.	Number（PCS/bag）
P=10 (Short straight lead) Φ14 following	1000
P=10 (Long straight lead) Φ14 following	500
P=10 (Short straight lead) Φ14 above (包含 14)	500
P=10 (Long straight lead) Φ14 above (包含 14)	250

Note: the above number of packages for reference only。

十一、Environmental management control material

NO.	Types of hazardous substances	The name of the hazardous substances	Limited level
1	Heavy metals	Cadmium (Cd)/Cadmium Compounds	＜100ppm
		Lead (Pb)/Lead Compounds	＜1000ppm
		Mercury (Hg)/Mercury Compounds	＜1000ppm
		Hexavalent-Chromiun (Cr^{6+}) Compounds	＜1000ppm
2	Organic bromide	PBB	＜1000ppm
		PBDE	＜1000ppm

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十二、Storage conditions

10.1. Storage temperature：≤35℃。

10.2. Relative Humidity：≤70% RH。

10.3. Keep away form corrosive atmosphere and sunlight。

10.4. Period of storage：1 year。

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