ACCEPTANCE SHEET

ACCEPTOR MARUTSU ELEC CO.,LTD.

MERCHANDISE DISC CERAMIC CAPACITORS-RoHS

Y5P 152K/332K/682K 50V

Y5U 333M 50V
Z5V 153Z 50V

Y5P 101K/151K 1KV
Y5P 221K/331K 1KV

Y5P 471K/681K 1KV
Y5P 102K/152K 1KV

Y5P 222K/332K 1KV
Y5P 472K/682K 1KV

INSPECTOR 王國一 DATE 2017/4/17

MECHANICAL :

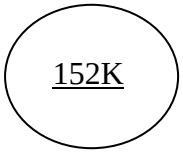
Thickness (T) : 3.0 mm Max.

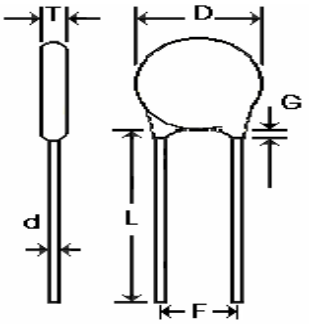
Lead Diameter : 0.45 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking :





ELECTRICAL :

Capacitance : 1500PF

Capacitance Tolerance : + - 10 %

$\tan\delta$ or DF : 0.025 Max.

External Dimensions (D)	5mm ± 1mm
Lead Spacing (F)	5mm ± 0.5mm
Thickness (T)	3mm Max.
Lead Length (L)	25mm ± 3mm
Lead Diameter (d)	0.45mm ± 0.05mm
Lead Coating (G)	1.5mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 50 V DC

Dielectric Withstanding : 125 V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

＊ 備註：耐壓100VDc以下，均需符合Coating之可漏底不漏銀電極的制作規範

CUSTOMER REF NO : DATE : 2017/4/17

UCC REF NO : CY5P152K1H05DS225 APPROVER : 劉淑貞

MECHANICAL :

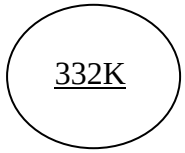
Thickness (T) : 3.0 mm Max.

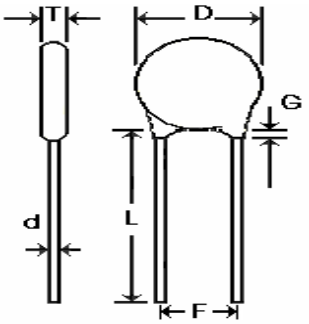
Lead Diameter : 0.45 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking :





ELECTRICAL :

Capacitance : 3300PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions (D)	6mm ± 1mm
Lead Spacing (F)	5mm ± 0.5mm
Thickness (T)	3mm Max.
Lead Length (L)	25mm ± 3mm
Lead Diameter (d)	0.45mm ± 0.05mm
Lead Coating (G)	1.5mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 50 V DC

Dielectric Withstanding : 125 V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

＊ 備註：耐壓100VDc以下，均需符合Coating之可漏底不漏銀電極的制作規範

CUSTOMER REF NO : DATE : 2017/4/17

UCC REF NO : CY5P332K1H06DS225 APPROVER : 劉淑貞

MECHANICAL :

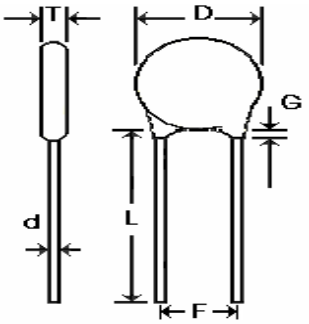
Thickness (T) : 3.0 mm Max.

Lead Diameter : 0.45 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking : B
682K



ELECTRICAL :

Capacitance : 6800PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions (D)	8mm ± 1mm
Lead Spacing (F)	5mm ± 0.5mm
Thickness (T)	3mm Max.
Lead Length (L)	25mm ± 3mm
Lead Diameter (d)	0.45mm ± 0.05mm
Lead Coating (G)	1.5mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 50 V DC

Dielectric Withstanding : 125 V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

＊ 備註：耐壓100VDc以下，均需符合Coating之可漏底不漏銀電極的制作規範

CUSTOMER REF NO : DATE : 2017/4/17

UCC REF NO : CY5P682K1H08DS225 APPROVER : 劉淑貞

MECHANICAL :

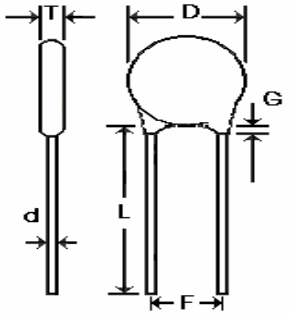
Thickness (T) : 3 mm Max.

Lead Diameter : 0.45 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking : 333M



ELECTRICAL :

Capacitance : 0.033UF

Capacitance Tolerance : + - 20 %

Q or DF : 0.05 Max.

External Dimensions (D)	5mm ± 1.5mm
Lead Spacing (F)	5mm ± 0.8mm
Thickness (T)	3mm Max.
Lead Length (L)	25mm ± 3mm
Lead Diameter (d)	0.45mm ± 0.05mm
Lead Coating (G)	1.5mm Max.

Insulation Resistance : ≧ 1000MΩ

Working Voltage : 50 V DC

Dielectric Withstanding : 100 V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5U The Capacitance change of + 22 - 56 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 0.5Vrms

＊備註：耐壓100VDc以下，均需符合Coating之可漏底不漏銀電極的制作規範

CUSTOMER REF NO :

UCC REF NO : CY5U333M1H05DS225

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

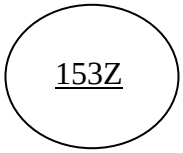
Thickness (T) : 3 mm Max.

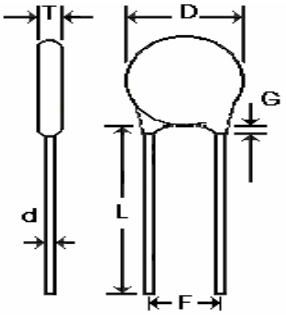
Lead Diameter : 0.45 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking :





ELECTRICAL :

Capacitance : 0.015UF

Capacitance Tolerance : + 80 - 20 %

Q or DF : 0.05 Max.

External Dimensions (D)	6mm ± 1mm
Lead Spacing (F)	5mm ± 0.8mm
Thickness (T)	3mm Max.
Lead Length (L)	25mm ± 3mm
Lead Diameter (d)	0.45mm ± 0.05mm
Lead Coating (G)	1.5mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 50 V DC

Dielectric Withstanding : 100 V DC for 1～5 sec

Temperature Characteristic :

According to EIA Z5V The Capacitance change of + 22 ～ - 82 %

between the temperature range of + 10 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

＊備註：耐壓100VDc以下，均需符合Coating之可漏底不漏銀電極的制作規範

CUSTOMER REF NO :

UCC REF NO : CZ5V153Z1H06DS225

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

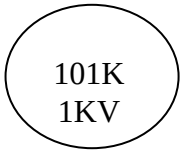
Thickness (T) : 3.8 mm Max.

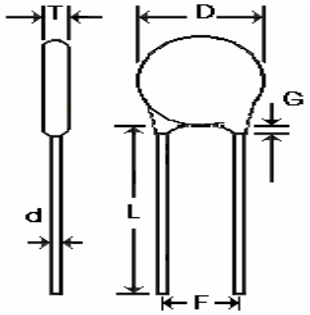
Lead Diameter : 0.55 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking :





ELECTRICAL :

Capacitance : 100PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions	(D)	5mm ± 1.5mm
Lead Spacing	(F)	5mm ± 0.8mm
Thickness	(T)	3.8mm Max.
Lead Length	(L)	25mm ± 3mm
Lead Diameter	(d)	0.55mm ± 0.05mm
Lead Coating	(G)	2.0mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 1K V DC

Dielectric Withstanding : 1.5K V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

CUSTOMER REF NO :

UCC REF NO : CY5P101K1K05DS125

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

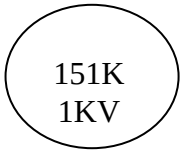
Thickness (T) : 3.8 mm Max.

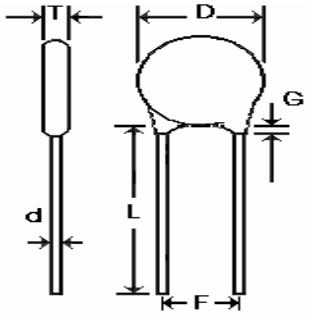
Lead Diameter : 0.55 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking :





ELECTRICAL :

Capacitance : 150PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions	(D)	5mm ± 1.5mm
Lead Spacing	(F)	5mm ± 0.8mm
Thickness	(T)	3.8mm Max.
Lead Length	(L)	25mm ± 3mm
Lead Diameter	(d)	0.55mm ± 0.05mm
Lead Coating	(G)	2.0mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 1K V DC

Dielectric Withstanding : 1.5K V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

CUSTOMER REF NO :

UCC REF NO : CY5P151K1K05DS125

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

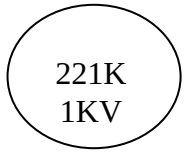
Thickness (T) : 3.8 mm Max.

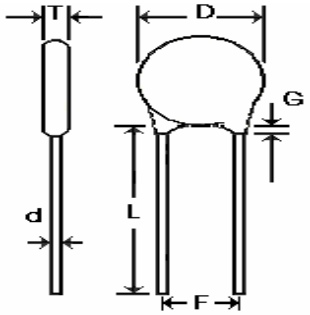
Lead Diameter : 0.55 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking :





ELECTRICAL :

Capacitance : 220PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions	(D)	5mm ± 1.5mm
Lead Spacing	(F)	5mm ± 0.8mm
Thickness	(T)	3.8mm Max.
Lead Length	(L)	25mm ± 3mm
Lead Diameter	(d)	0.55mm ± 0.05mm
Lead Coating	(G)	2.0mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 1K V DC

Dielectric Withstanding : 1.5K V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

CUSTOMER REF NO :

UCC REF NO : CY5P221K1K05DS125

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

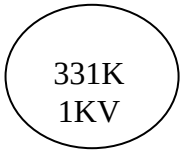
Thickness (T) : 3.8 mm Max.

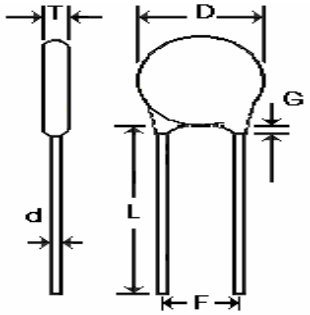
Lead Diameter : 0.55 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking :





ELECTRICAL :

Capacitance : 330PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions	(D)	5mm ± 1.5mm
Lead Spacing	(F)	5mm ± 0.8mm
Thickness	(T)	3.8mm Max.
Lead Length	(L)	25mm ± 3mm
Lead Diameter	(d)	0.55mm ± 0.05mm
Lead Coating	(G)	2.0mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 1K V DC

Dielectric Withstanding : 1.5K V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

CUSTOMER REF NO :

UCC REF NO : CY5P331K1K05DS125

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

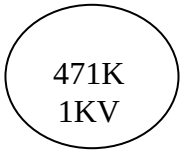
Thickness (T) : 3.8 mm Max.

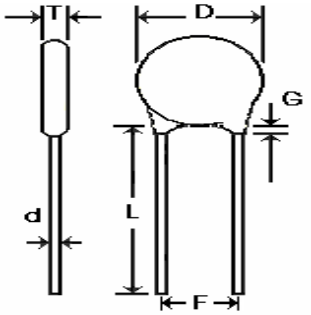
Lead Diameter : 0.55 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking :





ELECTRICAL :

Capacitance : 470PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions (D)	5mm ± 1.5mm
Lead Spacing (F)	5mm ± 0.8mm
Thickness (T)	3.8mm Max.
Lead Length (L)	25mm ± 3mm
Lead Diameter (d)	0.55mm ± 0.05mm
Lead Coating (G)	2.0mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 1K V DC

Dielectric Withstanding : 1.5K V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

CUSTOMER REF NO :

UCC REF NO : CY5P471K1K05DS125

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

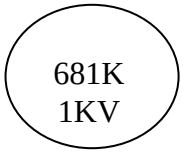
Thickness (T) : 3.8 mm Max.

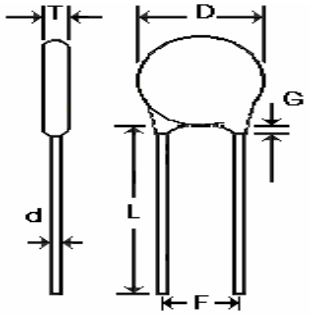
Lead Diameter : 0.55 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking :





ELECTRICAL :

Capacitance : 680PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions	(D)	5mm ± 1.5mm
Lead Spacing	(F)	5mm ± 0.8mm
Thickness	(T)	3.8mm Max.
Lead Length	(L)	25mm ± 3mm
Lead Diameter	(d)	0.55mm ± 0.05mm
Lead Coating	(G)	2.0mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 1K V DC

Dielectric Withstanding : 1.5K V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

CUSTOMER REF NO :

UCC REF NO : CY5P681K1K05DS125

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

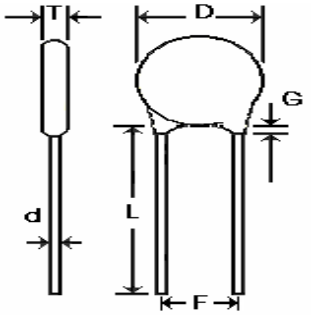
Thickness (T) : 3.8 mm Max.

Lead Diameter : 0.55 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking : B 102K 1KV



ELECTRICAL :

Capacitance : 1000PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions (D)	7mm ± 1.5mm
Lead Spacing (F)	5mm ± 0.8mm
Thickness (T)	3.8mm Max.
Lead Length (L)	25mm ± 3mm
Lead Diameter (d)	0.55mm ± 0.05mm
Lead Coating (G)	2.0mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 1K V DC

Dielectric Withstanding : 1.5K V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

CUSTOMER REF NO :

UCC REF NO : CY5P102K1K07DS125

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

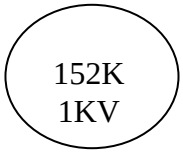
Thickness (T) : 3.8 mm Max.

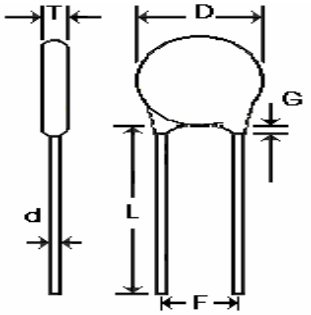
Lead Diameter : 0.55 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking :





ELECTRICAL :

Capacitance : 1500PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions	(D)	7mm ± 1.5mm
Lead Spacing	(F)	5mm ± 0.8mm
Thickness	(T)	3.8mm Max.
Lead Length	(L)	25mm ± 3mm
Lead Diameter	(d)	0.55mm ± 0.05mm
Lead Coating	(G)	2.0mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 1K V DC

Dielectric Withstanding : 1.5K V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

CUSTOMER REF NO :

UCC REF NO : CY5P152K1K07DS125

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

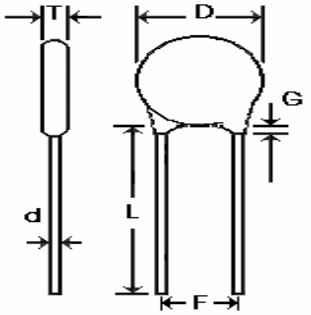
Thickness (T) : 3.8 mm Max.

Lead Diameter : 0.55 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking : B 222K 1KV



ELECTRICAL :

Capacitance : 2200PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions (D)	9mm ± 1.5mm
Lead Spacing (F)	5mm ± 0.8mm
Thickness (T)	3.8mm Max.
Lead Length (L)	25mm ± 3mm
Lead Diameter (d)	0.55mm ± 0.05mm
Lead Coating (G)	2.0mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 1K V DC

Dielectric Withstanding : 1.5K V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

CUSTOMER REF NO :

UCC REF NO : CY5P222K1K09DS125

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

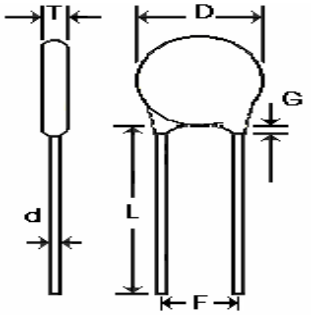
Thickness (T) : 3.8 mm Max.

Lead Diameter : 0.55 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking : B 332K 1KV



ELECTRICAL :

Capacitance : 3300PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions (D)	10mm ± 1.5mm
Lead Spacing (F)	5mm ± 0.8mm
Thickness (T)	3.8mm Max.
Lead Length (L)	25mm ± 3mm
Lead Diameter (d)	0.55mm ± 0.05mm
Lead Coating (G)	2.0mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 1K V DC

Dielectric Withstanding : 1.5K V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

CUSTOMER REF NO :

UCC REF NO : CY5P332K1K10DS125

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

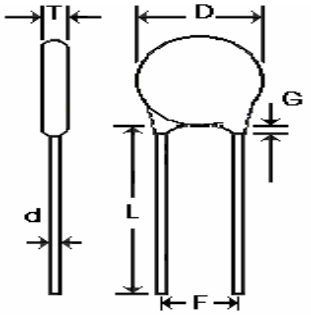
Thickness (T) : 3.8 mm Max.

Lead Diameter : 0.55 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking : B 472K 1KV



ELECTRICAL :

Capacitance : 4700PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions (D)	12mm ± 1.5mm
Lead Spacing (F)	5mm ± 0.8mm
Thickness (T)	3.8mm Max.
Lead Length (L)	25mm ± 3mm
Lead Diameter (d)	0.55mm ± 0.05mm
Lead Coating (G)	2.0mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 1K V DC

Dielectric Withstanding : 1.5K V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

CUSTOMER REF NO :

UCC REF NO : CY5P472K1K12DS125

DATE : 2017/4/17

APPROVER : 劉淑貞

MECHANICAL :

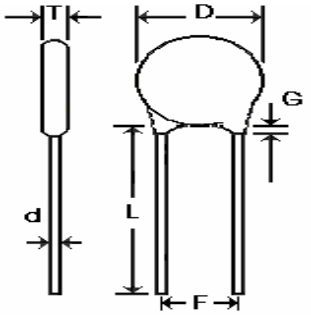
Thickness (T) : 3.8 mm Max.

Lead Diameter : 0.6 mm ± 0.05 mm

Soldering Test : 250 ℃ ± 5 ℃

Pulling Test : 2 KG

Marking : B 682K 1KV



ELECTRICAL :

Capacitance : 6800PF

Capacitance Tolerance : + - 10 %

Q or DF : 0.025 Max.

External Dimensions (D)	14mm ± 1.5mm
Lead Spacing (F)	10mm ± 0.8mm
Thickness (T)	3.8mm Max.
Lead Length (L)	25mm ± 3mm
Lead Diameter (d)	0.6mm ± 0.05mm
Lead Coating (G)	2.0mm Max.

Insulation Resistance : ≧ 10000MΩ

Working Voltage : 1K V DC

Dielectric Withstanding : 1.5K V DC for 1～5 sec

Temperature Characteristic :

According to EIA Y5P The Capacitance change of + 10 - 10 %

between the temperature range of - 25 ℃ ~ + 85 ℃

TESTING INSTRUMENTS :

1 . TEMPERATURE COMPENSATING TYPE : hp 4278A

2 . HIGH DIELECTRIC TYPE : hp 4265A

TESTING CONDITIONS :

Testing Frequency : 1KHz

Testing Voltage : 1.0Vrms

CUSTOMER REF NO :

UCC REF NO : CY5P682K1K14GS125

DATE : 2017/4/17

APPROVER : 劉淑貞

DISC CERAMIC CAPACITORS

5.0 Specification

<table>
<tr><th>No</th><th>Item</th><th>Class I</th><th>Class II</th><th>Class III</th><th>Measuring Condition</th></tr>
<tr><td>1</td><td>Visual and mechanical examination</td><td colspan="3">To be within the specifications shows in</td><td>Capacitors shall be visually inspected for visible evidence of defect.
Dimensions shall be measured with calipers or micrometers.
Marking shall be legibility.</td></tr>
<tr><td>2</td><td>Operating Temperature Range</td><td>－ 25℃ to +85℃</td><td>Y5E、Y5F、Y5P：
－ 25℃ to +85℃
Z5U、Z5V：
+10℃ to +85℃</td><td>Y5V & Y5U& Y5P：
－ 25℃ to +85℃</td><td>Class III is semi-conductor material</td></tr>
<tr><td>3</td><td>Temperature Characteristics</td><td>NPO(CH)：0 ± 60ppm/℃
UJ：－ 750 ± 120ppm/℃
SL：+350 to－ 1000ppm/℃</td><td>Y5E：± 4.7%
Y5F：± 7.5%
Y5P：± 10%
Z5U：$^{+22}_{-56}$ %
Z5V：$^{+22}_{-82}$ %</td><td>Y5U：$^{+22}_{-56}$ %
Y5V：$^{+22}_{-82}$ %
Y5P：±10 %</td><td>Retain the sample for 30 minutes at the temperature specified below in the sequence listed in the table. Then measure the capacitance in each step after thermal equilibrium at each temperature is reached.
<table>
<tr><th>Step 1</th><th>Step 2</th><th>Step 3</th><th>Step 4</th><th>Step 5</th></tr>
<tr><td>Room Temp.</td><td>Min. Operating Temp.</td><td>Room Temp.</td><td>Max. Operating Temp.</td><td>Room Temp.</td></tr>
<tr><td>25±2℃</td><td>-25±3℃
10±2℃</td><td>25±2℃</td><td>85±2℃</td><td>25±2℃</td></tr>
</table>
Note that step 1 and 2 do not apply for the SL characteristics.</td></tr>
<tr><td>4</td><td>Capacitance</td><td colspan="3">To be within the specified tolerance</td><td rowspan="2">Shall be measured at 25℃± 2℃ normal temperature at the frequency and voltage

Class I：1MHz ± 20% , 1 ± 0.2Vrms
Class II：1KHz ± 10% , 1 ± 0.2Vrms
Class III：1KHz ± 10% , 0.5 ± 0.05Vrms</td></tr>
<tr><td>5</td><td>Q
or
Dissipation Factor (tan δ)</td><td>C≧30pF：Q≧1000
C＜30pF：Q≧400 + 20 × C
(C is nominal capacitance)</td><td>Y5E &Y5F &Y5P &Z5U：
tan δ ≦0.025
Z5V：tan δ ≦0.05</td><td>Y5U & Y5V & Y5P：
tan δ ≦0.05</td></tr>
<tr><td>6</td><td>Withstanding Voltage</td><td colspan="3">No defects</td><td>Applied voltage：
Rated voltage ×3 (Class I)
Rated voltage ×2.5 (Class II)
Rated voltage ×2 (Class III)
Duration：1 to 5 sec.
The charge/discharge current is less than 50mA</td></tr>
<tr><td>7</td><td>Insulation Resistance</td><td>More than 10GΩ</td><td>More than 10GΩ or 200MΩ・F,whichever is less.</td><td>More than 1GΩ or 20MΩ・F,whichever is less.</td><td>Apply rated voltage for 1 minute at 25℃± 2℃and 70% R.H. max.
16Vdc product：Measurement voltage is 25Vdc</td></tr>
<tr><td>8</td><td>Strength of Lead</td><td colspan="3">Termination not to be broken or loosened</td><td>Fix the capacitor, apply the tensile stress listed below in the terminal extraction direction until the designated value is reached, then retain the capacitor for 10 ± 1 seconds as is.
<table>
<tr><td>Nominal wire diameter</td><td>0.5mm</td><td>0.6mm</td></tr>
<tr><td>Tensile stress</td><td>1kg</td><td>1.5kg</td></tr>
</table></td></tr>
<tr><td>9</td><td>Solderability of leads</td><td colspan="3">At least 75% of the immersed surface in the circumference direction is covered with new solder.</td><td>Solder temperature：
Class Ⅰ: 260 ± 5℃
Class Ⅱ、Ⅲ：250 ± 5℃
Dipping：2 ± 0.5 sec.
(Flux shall be used)</td></tr>
</table>

5.0 Specification

No	Item		Class I	Class II	Class III	Measuring Condition
10	Resistance to Soldering heat	ΔC	± 2.5% or ± 0.25pF (Whichever is greater)	**Y5E、Y5F、Y5P**：± 5% **Z5U**：± 15% **Z5V**：± 20%	**Y5U & Y5V**：± 30% **Y5P :** ± 7.5%	The lead wire is immersed in the melted solder 1.5mm to 2mm from the capacitor body (Class I, II) Solder temperature：350 ± 10℃ Duration：3 ± 0.5sec. (Class III) Solder temperature：260 ± 5℃ Duration：5 ± 0.5sec. The measurements after testing must be taken after leaving the sample for 12 to 24 hours under normal temperature and humidity conditions.
		Withstanding voltage	No defects			
		Exterior	No abnormalities			
11	Temperature and Immersion cycling	ΔC	± 5% or ± 0.5pF (Whichever is greater)	**Y5E、Y5F、Y5P**：± 10% **Z5U**：± 20% **Z5V**：± 30%	**Y5U & Y5V**：± 30% **Y5P :** ± 15 %	Fix the capacitor to the supporting jig in the same manner and under the same conditions as (10). Perform the 5 cycles according to the four heat treatments listed in the following table. Step 1: Temp. (℃) Min. Operating Temp., Time (min.) 30±3 Step 2: Temp. Room Temp., Time 15 Step 3: Temp. Max. Operating Temp., Time 30±3 Step 4: Temp. Room Temp., Time 15 The measurements after testing must be taken after leaving the sample for 12 to 24 hours under normal temperature and humidity conditions.
		Q／D.F.	C≧30pF：Q≧350 10pF>C<30pF： $Q \geqq 275 + \frac{5}{2} \times C$ C≦10pF：Q≧200 + 10 × C (C is nominal capacitance)	**Y5E &Y5F&Y5P &Z5U**： tan δ ≦0.05 **Z5V**：tan δ ≦0.075	**Y5U & Y5P**：tan δ ≦0.05 **Y5V**： tan δ ≦0.075	
		I.R.	More than 1GΩ	More than 1GΩ or 20MΩ・F,whichever is less.	More than 500MΩ or 10MΩ・F,whichever is less.	
		Withstanding voltage	No defects			
		Exterior	No abnormalities			
12	Humidity Loading	ΔC	± 7.5% or ± 0.75pF (Whichever is greater)	**Y5E、Y5F、Y5P**：± 10% **Z5U**：± 20% **Z5V**：± 30%	**Y5U & Y5V**：± 30% **Y5P :** ± 15 %	Temperature：40 ± 2℃ Humidity：90 to 95% R.H. Duration：500^{+24}_{-0} hrs. The rated voltage continuously applied. The charge/discharge current is less than 10mA. The measurements after testing must be taken after leaving the sample for 1 to 2 hours under normal temperature and humidity conditions. • Perform a heat treatment at 40 ± 2℃ for 1 hour. Remove and let sit for 1 to 2 hours at normal temperature and humidity conditions. Perform the initial measurement.
		Q／D.F.	C≧30pF：Q≧200 C<30pF： $Q \geqq 100 + \frac{10}{3} \times C$ (C is nominal capacitance)	**Y5E &Y5F&Y5P &Z5U**： tan δ ≦0.05 **Z5V**：tan δ ≦0.075	**Y5U & Y5V& Y5P**： tan δ ≦0.075	
		I.R.	More than 1GΩ	More than 1GΩ or 20MΩ・F,whichever is less.	More than 500MΩ or 10MΩ・F,whichever is less.	
		Withstanding voltage	No defects			
		Exterior	No abnormalities			

5.0 Specification

No	Item		Class I	Class II	Class III	Measuring Condition
13	Life	ΔC	± 5% or ± 0.5pF (Whichever is greater)	**Y5E、Y5F、Y5P**：± 10% **Z5U**：± 20% **Z5V**：± 30%	**Y5U & Y5V**：± 30% **Y5P :** ± 15 %	Applied voltage： Rated voltage ×2(Class I, II) Rated voltage ×1.25(Class III) Temperature：85± 2℃ Duration：1000 $^{+48}_{-0}$ hrs. The charge/discharge current is less than 10mA. The measurements after testing must be taken after leaving the sample for 12 to 24 hours under normal temperature and humidity conditions. • Perform a heat treatment at 85± 2℃ for 1 hour. Remove and let sit for 12 to 24 hours at normal temperature and humidity conditions. Perform the initial measurement.
		Q／D.F.	C≧30pF：Q≧350 10pF>C<30pF： $Q \geqq 275 + \frac{5}{2} \times C$ C≦10pF：Q≧200 + 10 × C (C is nominal capacitance)	**Y5E&Y5F&Y5P &Z5U**： tan δ ≦0.05 **Z5V**：tan δ ≦0.075	**Y5U & Y5V& Y5P**： tan δ ≦0.075	
		I.R.	More than 1GΩ	More than 1GΩ or 20MΩ・F,whichever is less.	More than 500MΩ or 10MΩ・F,whichever is less.	
		Withstanding voltage	No defects			
		Exterior	No abnormalities			

* Note on standard condition： “standard condition” referred to herein is defined as follows：
5 to 35℃ of temperature, 45 to 85% relative humidity, and 860 to 1060 mbar of air pressure.
When there are questions concerning measurement results：
In order to provide correlation data, the test shall be conducted under condition of 23℃± 2℃ of temperature, 60 to 70% relative humidity, and 860 to 1060 mbar of air
Pressure, Unless otherwise specified, all the tests are conducted under the “standard condition”.

6.0 Storage

1. The storage conditions should be:
   Temperature = Lower than 40℃
   Humidity = Lower than 70% R.H.
2. After opening the package, please store in desiccators.

DISC CERAMIC CAPACITORS

Medium-High Voltage Capacitor

7.0 Specification

No	Item	Class I	Class II	Measuring Condition
1	Visual and mechanical examination	To be within the specifications shows in		Capacitors shall be visually inspected for visible evidence of defect. Dimensions shall be measured with calipers or micrometers. Marking shall be legibility.
2	Operating Temperature Range	－25℃ to +85℃	**Y5E、Y5P 、Y5U、Y5V**： －25℃ to +85℃ **Z5U、Z5V**： +10℃ to +85℃	Class III is semi-conductor material
3	Temperature Characteristics	**NPO(CH)**：0 ± 60ppm/℃ **UJ**：－ 750 ± 120ppm/℃ **SL**：+350 to－ 1000ppm/℃	**Y5E**：± 4.7% **Y5P**：± 10% **Y5U**：$^{+22}_{-56}$ % **Z5U**：$^{+22}_{-56}$ % **Z5V**、 **Y5V**：$^{+22}_{-82}$ %	Retain the sample for 30 minutes at the temperature specified below in the sequence listed in the table. Then measure the capacitance in each step after thermal equilibrium at each temperature is reached. Step 1: Room Temp. / Step 2: Min. Operating Temp. / Step 3: Room Temp. / Step 4: Max. Operating Temp. / Step 5: Room Temp. 25±2℃ / -25±3℃ 10±2℃ / 25±2℃ / 85±2℃ / 25±2℃ Note that step 1 and 2 do not apply for the SL characteristics.
4	Capacitance	To be within the specified tolerance		Shall be measured at 25℃± 2℃ normal temperature at the frequency and voltage Class I：1MHz ± 20% , 1 ± 0.2Vrms Class II：1KHz ± 10% , 1 ± 0.2Vrms
5	Q or Dissipation Factor (tan δ)	C≧30pF：Q≧1000 C＜30pF：Q≧400 + 20 × C (C is nominal capacitance)	**Y5E & Y5P & Y5U & Z5U**：tan δ ≦0.025 **Z5V、 Y5V**：tan δ ≦0.05	
6	Withstanding Voltage	No defects between terminals No defects between terminal and body		Applied voltage： Rated voltage × 2 (Class I) Rated voltage × 1.5 (Class II、Ⅲ) 5KV~7999V × 1.5 8KV~12KV × 1.2 Duration：1 to 5 sec. The charge/discharge current is less than 50mA Applied voltage：1.3kVdc Duration：1 to 5 sec.
7	Insulation Resistance	More than 10GΩ or 200MΩ・F ,whichever is less. **Y5V**：More than 1GΩ or 20MΩ・F,whichever is less .		Apply 500Vdc for 1 minute at 25℃± 2℃ and 70% R.H. max.
8	Strength of Lead	Termination not to be broken or loosened		Fix the capacitor, apply the tensile stress listed below in the terminal extraction direction until the designated value is reached, then retain the capacitor for 10 ± 1 seconds as is. Tensile stress≧1.5kg
9	Solderability of leads	At least three-fourths of the immersed surface in the circumference direction is covered with new solder.		Solder temperature： Class Ⅰ：260 ± 5℃ Class II、Ⅲ：250 ± 5℃ Dipping：2 ± 0.5 sec. (Flux shall be used)

Medium-High Voltage Capacitor

7.0 Specification

No	Item		Class I	Class II	Measuring Condition
10	Resistance to Soldering heat	ΔC	± 2.5% or ± 0.25pF (Whichever is greater)	**Y5E & Y5P**：± 5% **Y5U & Z5U**：± 15% **Z5V**：± 20% **Y5V**：± 30%	The lead wire is immersed in the melted solder 1.5mm to 2mm from the capacitor body (Class I, II, Ⅲ) Solder temperature：260 ± 5℃ Duration：5 ± 0.5sec. The measurements after testing must be taken after leaving the sample for 12 to 24 hours under normal temperature and humidity conditions.
		Withstanding voltage	No defects		
		Exterior	No abnormalities		
11	Temperature and Immersion cycling	ΔC	± 5% or ± 0.5pF (Whichever is greater)	**Y5E & Y5P**：± 10% **Y5U & Z5U**：± 20% **Z5V**：± 30% **Y5V**：± 30%	Fix the capacitor to the supporting jig in the same manner and under the same conditions as (10). Perform the five cycles according to the four heat treatments listed in the following table. Step / Temp. (℃) / Time (min.) 1: Min. Operating Temp. / 30±3 2: Room Temp. / 15 3: Max. Operating Temp. / 30±3 4: Room Temp. / 15 The measurements after testing must be taken after leaving the sample for 12 to 24 hours under normal temperature and humidity conditions.
		Q／D.F.	C≧30pF：Q≧350 10pF>C<30pF： $Q \geqq 275 + \frac{5}{2} \times C$ C≦10pF：Q≧200 + 10 × C (C is nominal capacitance)	**Y5E & Y5P & Z5U & Y5U**：tan δ ≦0.05 **Z5V**、 **Y5V**：tan δ ≦0.075	
		I.R.	More than 1GΩ	More than 1GΩ or 20MΩ・F,whichever is less. **Y5V**：More than 500MΩ or 10MΩ・F,whichever is less.	
		Withstanding voltage	No defects		
		Exterior	No abnormalities		
12	Humidity Loading	ΔC	± 7.5% or ± 0.75pF (Whichever is greater)	**Y5E**、**Y5P**：± 10% **Y5U & Z5U**：± 20% **Z5V**、 **Y5V**：± 30%	Temperature：40 ± 2℃ Humidity：90 to 95% R.H. Duration：500^{+24}_{-0} hrs. The rated voltage continuously applied. The charge/discharge current is less than 10mA. The measurements after testing must be taken after leaving the sample for 1 to 2 hours under normal temperature and humidity conditions. • Perform a heat treatment at 40 ± 2℃ for 1 hour. Remove and let sit for 1 to 2 hours at normal temperature and humidity conditions. Perform the initial measurement.
		Q／D.F.	C≧30pF：Q≧200 C<30pF： $Q \geqq 100 + \frac{10}{3} \times C$ (C is nominal capacitance)	**Y5E & Y5P & Y5U & Z5U** ：tan δ ≦0.05 **Z5V**、 **Y5V**：tan δ ≦0.075	
		I.R.	More than 500MΩ **Y5V**：More than 500MΩ or 10MΩ・F,whichever is less.		
		Withstanding voltage	No defects		
		Exterior	No abnormalities		

Medium-High Voltage Capacitor

7.0 Specification

No	Item		Class I	Class II	Measuring Condition
13	Life	ΔC	± 5% or ± 0.5pF (Whichever is greater)	**Y5E、Y5P**：± 10% **Y5U & Z5U**：± 20% **Z5V、 Y5V**：± 30%	Applied voltage： Rated voltage ×1.5(Class I) Rated voltage ×1.25(Class II , Ⅲ) 8KV~12KV × 1 Temperature：85± 2℃ Duration：1000 $^{+48}_{-0}$ hrs. The charge/discharge current is less than 10mA. The measurements after testing must be taken after leaving the sample for 12 to 24 hours under normal temperature and humidity conditions. • Perform a heat treatment at 85± 2℃ for 1 hour. Remove and let sit for 12 to 24 hours at normal temperature and humidity conditions. Perform the initial measurement.
		Q／D.F.	C≧30pF：Q≧350 10pF >C< 30pF： $Q \geqq 275 + \frac{5}{2} \times C$ C≦10pF：Q≧200 + 10 × C (C is nominal capacitance)	**Y5E、Y5P、Z5U、Y5U**：tan δ ≦0.05 **Z5V、Y5V**：tan δ ≦0.075	
		I.R.	More than 1GΩ	More than 1GΩ or 20MΩ・F,whichever is less. **Y5V**： More than 500MΩ or 10MΩ・F,whichever is less.	
		Withstanding voltage	No defects		
		Exterior	No abnormalities		