

# 圓片瓷介電容器 CERAMIC DISC CAPACITOR

## ● 產品規格表示方式 Product Part Number Expression

$\frac{CT81}{1}$  —  $\frac{M}{2}$  —  $\frac{5}{3}$  —  $\frac{Y5V}{4}$  —  $\frac{5}{5}$  —  $\frac{B}{6}$  —  $\frac{102}{7}$  —  $\frac{M}{8}$  —  $\frac{T}{9}$  —  $\frac{E}{10}$

### 1、產品類型 Product Type

| 類型代號<br>Type code | 產品類型<br>Product Type |  |
|-------------------|----------------------|--|
| CC81              | 高壓溫度補償型              | High voltage temperature compensation capacitor              |
| CT1               | 低壓高介電常數型             | Low voltage high dielectric constant disk ceramic capacitor  |
| CT81              | 高壓高介電常數型             | High voltage high dielectric constant disk ceramic capacitor |
| CS1               | 半導體型電容器              | Semiconductor disk ceramic capacitor                         |
| CT7               | 交流電容器                | Alternating current disk ceramic capacitor                   |

### 2、電壓代碼 Voltage Code

| 代碼<br>Code            | F   | L    | N   | M   | P   | Q   | S   | U   | W    | Z    | X       | Y      |
|-----------------------|-----|------|-----|-----|-----|-----|-----|-----|------|------|---------|--------|
| 額定電壓<br>Rated Voltage | 50V | 500V | 1KV | 2KV | 3KV | 4KV | 6KV | 8KV | 10KV | 15KV | 250 VAC | 400VAC |

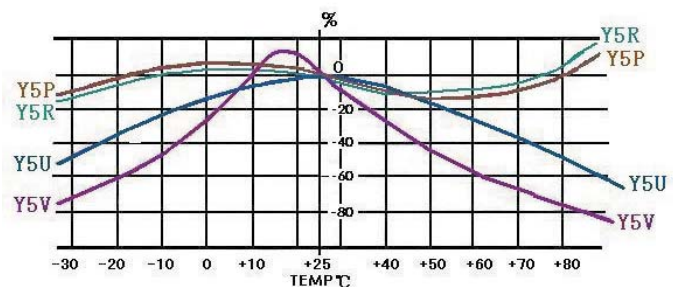
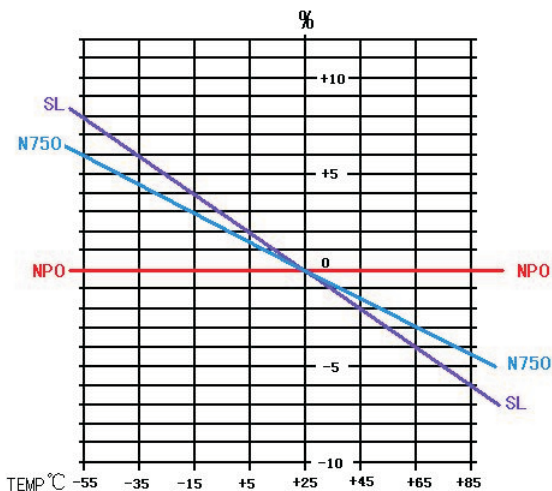
### 3、芯片直徑範圍代碼 The Code Chip Diameter Range

| 代碼 Code         | 5       | 6       | ... | 10       | 12        | ... |
|-----------------|---------|---------|-----|----------|-----------|-----|
| 直徑 Diameter(mm) | 4.5-5.4 | 5.5-6.4 | ... | 9.5-10.4 | 11.5-12.4 | ... |

### 4、溫度特性(溫度系數及EIA代碼):

Temperature Characteristics ( temperature coefficient and EIA code):

| 溫度特性<br>Temperature Characteristics |          | 溫度範圍<br>Temperature range | 容量允許偏差<br>Capacitance with temperature change rate |
|-------------------------------------|----------|---------------------------|--|
| USE code                            | EIA code |                           |  |
| NPO                                 | C0H      | -25~-+85°C                | 0±60PPM/°C   |
| N750                                | U2J      |                           | 750±120PPM/°C                                      |
| SL                                  | S2L      |                           | +140~-1000PPM/°C                                   |
| Y5P                                 | Y5P      |                           | ±10%   |
| Y5R                                 | Y5R      |                           | ±15%   |
| Y5U                                 | Y5U      |                           | +22/-56%   |
| Y5V                                 | Y5V      |                           | +22/-82%   |



### 5、引綫形式 Lead style

| 代號 Code | 引綫形式 lead Style                    |
|---------|------------------------------------|
| 1       | 直脚(16-28mm) Straight lead (16~28m) |
| 3       | 短脚(切脚) short lead(cut the feet)    |
| 4       | 編帶直脚型 Tape straight lead           |
| 5       | 編帶小內彎型 Tape small inside kink      |
| 6       | 編帶大內彎型 Tape large inside kink      |
| 7       | 特殊直脚 Special Straight lead         |
| 9       | 外單彎 Outside kink                   |
| 0       | 前後翹 vertical kink lead             |

### 6、脚距 Lead Spacing

| 代碼 Code                 | B       | D       | E        | K        |
|-------------------------|---------|---------|----------|----------|
| 脚距<br>Lead spacing (mm) | 5.0±0.5 | 7.5±0.5 | 10.0±0.5 | 12.5±0.5 |

### 7、標稱容量 Standard capacitance

|       |        |  |
|-------|--------|--|
| 100   | 10PF   | 注：標稱容量以pF為單位，用3位數字表示。前兩位數字表示有效數字，第三位為0的個數。<br>Note: The unit of standard capacitance if consisting of 3 digits, the first and second digits stand for effective value of the Standard capacitance;third digit indicates the number of zeros. |
| 560   | 56PF   |  |
| 821   | 820PF  |  |
| 102   | 1000PF |  |
| ----- | -----  |  |

### 8、允許偏差 Capacitance Tolerance

| 代號 Code      | K     | M     | Z         |
|--------------|-------|-------|-----------|
| 偏差 Tolerance | ± 10% | ± 20% | +80%~-20% |

### 9、包裝形式 Packing style

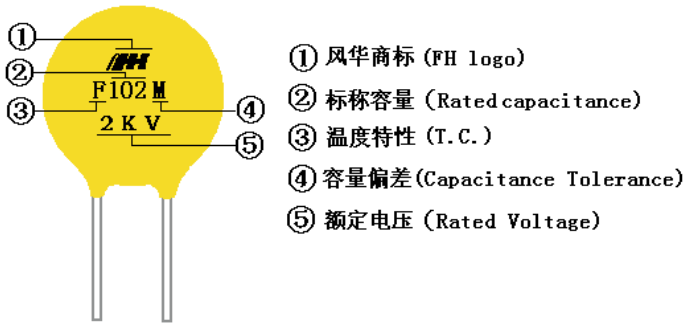
| 代碼 Code            | T        | S       |
|--------------------|----------|---------|
| 包裝形式 Packing style | 編帶Taping | 散裝 bulk |

### 10、包封形式 Coating style

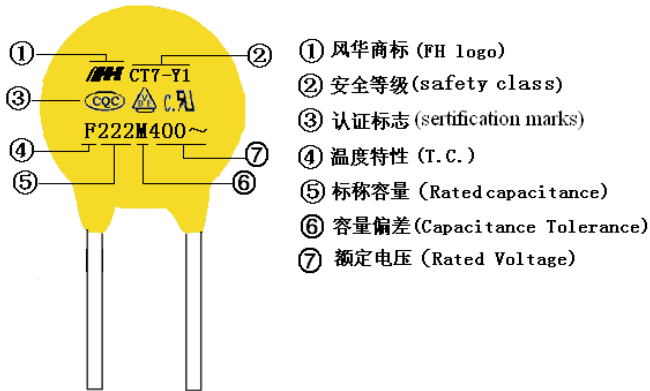
| 代號 code            | E                | P                |
|--------------------|------------------|------------------|
| 包封形式 Coating style | 環氧包封 Epoxy resin | 酚醛包封Phenol resin |

● 產品結構及外形尺寸 Product Structure and Overall Dimensions

直流产品正视图  
DC product front view



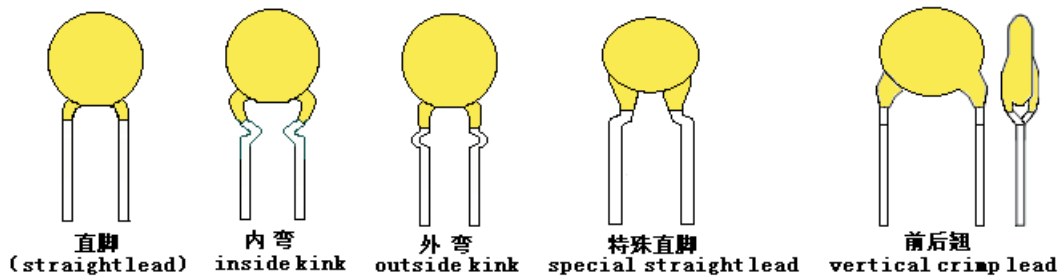
交流产品正视图  
AC product front view



剖视图 (sectional view)



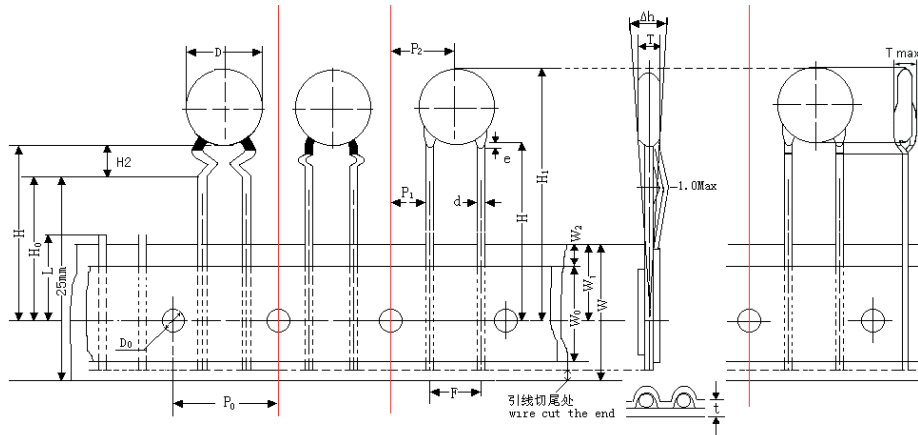
● 引線形狀 Lead shape



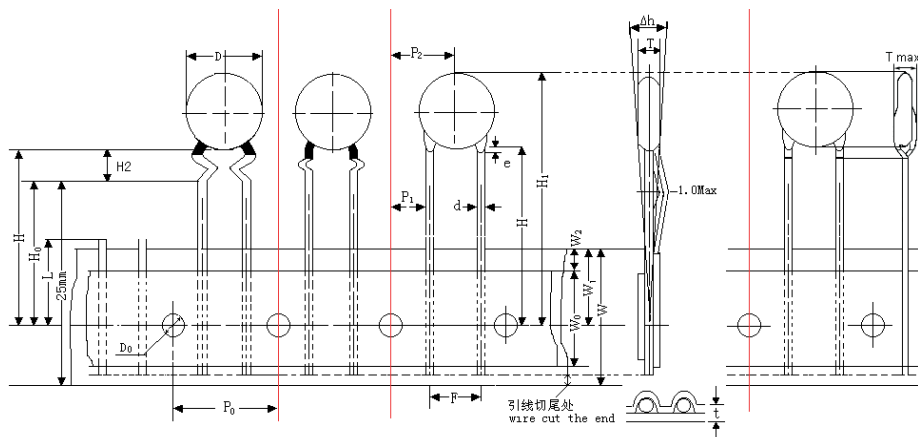
● 包裝形式 Packing style

- 1、散裝 Bulk
- 2、編帶產品 Taping products

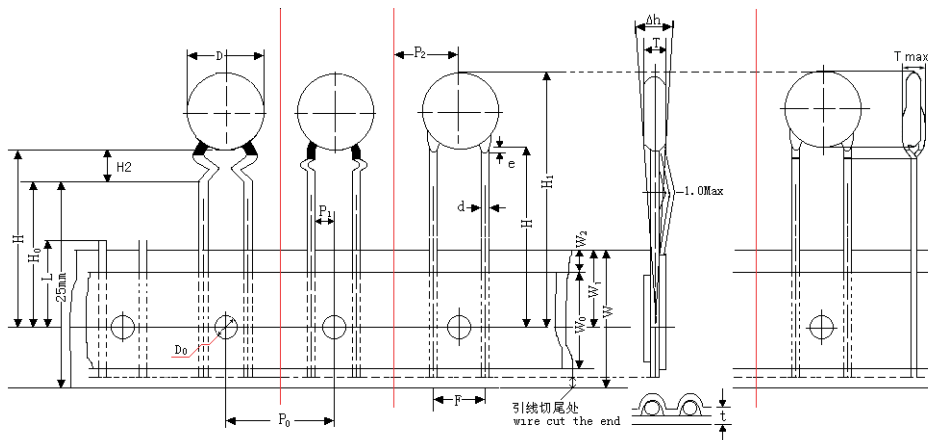
2.1 編帶產品 Taping products ( $P_0=12.7\text{mm}$ ,  $F=5.0\text{mm}$ ,  $F=7.5\text{mm}$ )



2.2 編帶產品 Taping products ( $P_0=15.0\text{mm}$ ,  $F=7.5\text{mm}$ )



2.3 編帶產品 Taping products ( $P_0=15.0\text{mm}$ ,  $F=10.0\text{mm}$ )



• 包裝形式 Packing style

3、產品包裝 products paking

| 引線間距<br>Lead spacing | 包裝形式<br>Packing style   |
|----------------------|---|
| F=5.0                | 散裝 Bulk、編帶 Taping(P0=12.7mm, D<10.0mm)                          |
| F=7.5                | 散裝 Bulk、<br>編帶 Taping(P0=12.7mm, D<10.0mm; P0=15.0mm, D<13.0mm) |
| F=10.0               | 散裝 Bulk、編帶 Taping(P0=15.0mm, D<13.0mm)                          |
| F=12.5               | 散裝 Bulk   |

| 包裝形式<br>Packing style                  | 散裝 Bulk |          | 編帶 Taping             |                       |                       |                        |
|--|---------|----------|-----------------------|-----------------------|-----------------------|------------------------|
|  | D=4~9mm | D=9~13mm | F=5.0mm,<br>P0=12.7mm | F=7.5mm,<br>P0=12.7mm | F=7.5mm,<br>P0=15.0mm | F=10.0mm,<br>P0=15.0mm |
| 最小包裝數量<br>Min<br>packaging<br>quantily | 1K pcs  | 0.5K pcs | 2K pcs                | 2K pcs                | 1.5K pcs              | 1K pcs                 |

• 參數要求及測試條件  
Parameter requirements and test conditions








| 序號<br>Number | 項目<br>Item                                       | 性能要求<br>Performance requirement   | 檢測方法<br>Test method   |                      |  |
|--------------|--|---|---|----------------------|--|
| 1            | 電容量<br>Capacitance                               | 在規定允許公差之內<br>Within the specified Tolerance   | 測試頻率&測試電壓<br>Test Frequency&Test Voltage<br>CC81:1MHz/1.0Vrms<br>CT1、CT81、CT7:1KHz/1.0Vrms<br>CS1:1KHz/0.1Vrms  |                      |  |
| 2            | 損耗因數<br>Dissipation Factor                       | CC81: $tg \delta \leq 0.0015$   | 測試溫度<br>Test temperature and humidity requirements :<br>25 ± 2℃, < 75%RH  |                      |  |
|              |  | CT1、CT81、CT7:<br>Y5R, $tg \delta \leq 0.025$ ;<br>Y5P, $tg \delta \leq 0.025$ ;<br>Y5U, Y5V, $tg \delta \leq 0.030$ ; |   |                      |  |
|              |  | CS1: $tg \delta \leq 0.050$ ;   |   |                      |  |
| 3            | 絕緣電阻 ( IR)<br>Insulation Resistance              | CS1:1000MΩ Min<br>CT1:4000MΩ Min<br>CC81、CT81、CT7:<br>10000MΩ Min   | 額定電壓小於500VDC ,用額定電壓測試60秒。<br>Rated voltage is less than 500VDC,<br>With rated voltage test 60 seconds.<br>額定電壓大於或等於500V ,用500VDC測試60秒。<br>Rated voltage is greater than the and so on In 500VDC,<br>With 500 VDC test 60 seconds. |                      |  |
| 4            | 端子間耐電壓<br>Resistance between<br>terminal voltage | 無擊穿<br>No breakdown   | 產品類型<br>Product Type  | 測試電壓<br>Test Voltage | 充放電流<br>Charge/<br>discharge<br>current :<br><50mA |
|              |  |   | CT1   | 2.5UR                |  |
|              |  |   | CC81、CT81   | 1.5UR+500V           |  |
|              |  |   | CT7   | 10.0UR               |  |
|              |  |   | CS1   | 1.5UR                |  |
| UR>10KVDC    | 1.1UR  |   |   |                      |  |

● 電路應用circuit application

| 產品類型<br>Product Type | 電路應用<br>circuit application   |
|----------------------|---|
| CC81                 | 用于要求損耗值小、容量穩定性要求較高的電路中：諧振回路、高頻旁路、溫度補償、控制電路的時間常數元件、穩定性要求高的耦合元件。<br>Loss value for small and high capacitance stability circuit: the resonant circuit, high-frequency bypass, temperature compensation and control time constant of the circuit components, high stability requirements of coupling components. |
| CT1、CT81             | 用于對損耗值和容量穩定性要求不高的電路中，如低頻旁路、耦合、濾波、退耦等，時間常數元件。<br>Used for loss value and volume stability of circuits, such as low frequency, by-pass, coupling, filtering, decoupling, etc. the time constant of components.  |
| CT7                  | 交流瓷介電容器適于在電子設備中作為跨電源綫連接、天綫耦合和旁路等<br>In ac ceramic capacitor is suitable for electronic equipment as the power cord connection and antenna coupling and bypass, etc  |
| CS1                  | 適用於在耐壓較低的電路中作旁路和耦合、以及應用于寬帶信號和頻率分離的電路中。<br>Apply to circuits in the low pressure bypass and coupling, as well as the application in the broadband signal and frequency separation of circuits.   |

● 交流產品的安全認證

Communication products safety certification

| 序號<br>NO. | 項目<br>Item | 認證標記<br>Marking   |
|-----------|------------|---|
| 1         | CQC        |  |
| 2         | 德國 VDE     |  |
| 3         | 瑞士 SEV     |  |
| 4         | 瑞典 SEMKO   |  |
| 5         | 挪威 NEMKO   |  |
| 6         | 丹麥 DEMKO   |  |
| 7         | 芬蘭 FIMKO   |  |
| 8         | 美國 UL      |  |
| 9         | CB 證書      | <b>CB</b>   |

交流產品通過了的125°C 安全認證

Communication products has passed of 125 °C of safety

## 圓片瓷介電容器

## CERAMIC DISC CAPACITOR

● 容量範圍 Capacitance Range:

| 產品類型<br>Product Type | 額定電壓<br>Rated Voltage | 溫度特性&容量範圍 (T.C.&Capacitance Range) pF  |          |            | 本體直徑<br>Body Diameter (mm) | 本體厚度<br>Body Thickness (mm) |         |
|----------------------|-----------------------|--|----------|------------|----------------------------|-----------------------------|---------|
|                      |                       | NPO  | N750     | SL (K)     |                            |                             |         |
| CC81                 | 1KV                   | 15-47 pF<br>根據客戶需求定制   |          |            | 18~47                      | 6.5 Max                     | 3.5 Max |
|                      |                       |  |          |            | 47~68                      | 7.5 Max                     | 4.0 Max |
|                      | 2KV                   |  |          |            | 18~47                      | 6.5 Max                     | 3.5 Max |
|                      |                       |  |          |            | 47~68                      | 6.5 Max                     | 4.0 Max |
|                      | 3KV                   |  |          |            | 18~47                      | 6.5 Max                     | 4.0 Max |
|                      |                       |  |          |            | 47~68                      | 6.5 Max                     | 4.5 Max |
| 產品類型<br>Product Type | 額定電壓<br>Rated Voltage | 溫度特性&容量範圍 (T.C.&Capacitance Range) pF  |          |            | 本體直徑<br>Body Diameter (mm) | 本體厚度<br>Body Thickness (mm) |         |
|                      |                       | Y5P (K, M)   | Y5U (M)  | Y5V (M, Z) |                            |                             |         |
| CT1                  | 50V                   | 221~102  | 102~472  | 102~332    | 6.5 Max                    | 3.5 Max                     |         |
|                      |                       |  |          | 472~103    | 7.0 Max                    | 3.5 Max                     |         |
|                      | 500V                  | 221~102  |          | 102~332    | 6.5 Max                    | 3.5 Max                     |         |
|                      |                       | 122, 152   |          | 472        | 7.0 Max                    | 3.5 Max                     |         |
|                      |                       | 222, 332   |          | 103        | 9.0 Max                    | 3.5Max                      |         |
| CT81                 | 1KV                   | 221~681  |          | 102~222    | 6.5 Max                    | 3.5Max                      |         |
|                      |                       | 681~102  | 102~222  | 222~392    | 7.5 Max                    | 3.5Max                      |         |
|                      |                       | 102~182  | 222~332  | 392~682    | 8.5 Max                    | 3.5Max                      |         |
|                      |                       | 182~222  | 332~472  | 682~103    | 9.5 Max                    | 3.5Max                      |         |
|                      | 2KV                   | 221~471  | 102~122  | 102~152    | 7.0 Max                    | 4.0Max                      |         |
|                      |                       | 681~102  | 122~222  | 152~332    | 8.0 Max                    | 4.0Max                      |         |
|                      |                       | 102~222  | 272~332  | 332~472    | 9.0 Max                    | 4.0Max                      |         |
|                      |                       |  | 472      | 682        | 10.0 Max                   | 4.0Max                      |         |
|                      |                       |  | 103      | 103        | 13.0 Max                   | 4.0Max                      |         |
|                      | 3KV                   | 221~681  | 102~152  | 102~222    | 9.5 Max                    | 5.0Max                      |         |
|                      |                       | 681~102  | 182, 222 | 222~332    | 10.5 Max                   | 5.0Max                      |         |
|                      |                       | 102, 152   | 252, 272 | 332~472    | 11.5 Max                   | 5.0Max                      |         |
|                      |                       | 182, 222   | 332, 472 | 682        | 12.5 Max                   | 5.0Max                      |         |
|                      |                       |  | 103      | 103        | 13.5 Max                   | 5.0Max                      |         |
|                      | 4KV                   | 681~102  | 102, 152 | 102~222    | 10.0 Max                   | 6.0Max                      |         |
|                      |                       | 102, 152   | 182, 222 | 222~332    | 11.0 Max                   | 6.0Max                      |         |
|                      |                       |  | 332      | 332        | 13.0 Max                   | 6.0Max                      |         |
|                      |                       |  | 472      | 472        | 15.0 Max                   | 6.0Max                      |         |
|                      | 6~15KV                | 101~222 pF根據客戶需求定制<br>101~222 pF customized according to customer's requirements |          |            |                            |                             |         |

• 容量範圍 Capacitance Range:

| 產品類型<br>Product Type | 額定電壓<br>Rated Voltage | 溫度特性&容量範圍 (T.C.&Capacitance Range) pF |          |            | 本體直徑<br>Body Diameter (mm) | 本體厚度<br>Body Thickness (mm) |
|----------------------|-----------------------|---------------------------------------|----------|------------|----------------------------|-----------------------------|
|                      |                       | Y5P (K, M)                            | Y5U (M)  | Y5V (M, Z) |                            |                             |
| CT7                  | 250VAC                | 101~471                               | 331, 471 | 102~152    | 7.5 Max                    | 5.0Max                      |
|                      |                       | 471~561                               | 561, 821 | 152~222    | 8.5 Max                    | 5.0Max                      |
|                      |                       | 561~681                               | 102~152  | 222, 332   | 9.5 Max                    | 5.0Max                      |
|                      |                       | 681~821                               | 222, 252 | 332, 472   | 10.5 Max                   | 5.0Max                      |
|                      |                       | 102~152                               | 332      | 472        | 11.5 Max                   | 5.0Max                      |
|                      |                       |                                       | 472      | 103        | 13.5 Max                   | 5.0Max                      |
| CT7                  | 400VAC                | 101, 221                              | 331, 471 | 102~152    | 7.0 Max                    | 5.0Max                      |
|                      |                       | 331, 471                              | 561, 821 | 152~222    | 8.0 Max                    | 5.0Max                      |
|                      |                       | 561, 681                              | 102~152  | 222        | 9.0 Max                    | 5.0Max                      |
|                      |                       | 821                                   | 222, 252 | 332        | 12.0 Max                   | 5.0Max                      |
|                      |                       | 102                                   | 332      | 472        | 14.0 Max                   | 5.0Max                      |
|                      |                       |                                       |          | 103        | 15.0 Max                   | 5.0Max                      |

| 產品類型<br>Product Type | 額定電壓<br>Rated Voltage | 溫度特性&容量範圍 (T.C.&Capacitance Range) pF |         |            | 本體直徑<br>Body Diameter (mm) | 本體厚度<br>Body Thickness (mm) |
|----------------------|-----------------------|---------------------------------------|---------|------------|----------------------------|-----------------------------|
|                      |                       | Y5P (K, M)                            | Y5U (M) | Y5V (M, Z) |                            |                             |
| CS1                  | 25V                   |                                       |         | 104        | 7.0 Max                    | 3.5Max                      |
|                      | 50V                   |                                       |         | 104        | 7.0 Max                    | 3.5Max                      |



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[615R100GAD10](#) [615R150GAD10](#) [NCD100K1KVSLF](#) [NCD682M1KVZ5UF](#) [CCK-100N](#) [CCK-100P](#) [CCK-22N](#) [CCK-2N2](#) [CCK-47N](#) [CCK-](#)  
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