

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 Type code | 產品類型 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 Code | F | L | N | M | P | Q | S | U | W | Z | X | Y |
|-----------------------|-----|------|-----|-----|-----|-----|-----|-----|------|------|---------|--------|
| 額定電壓 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 Temperature Characteristics | | 溫度範圍 Temperature range | 容量允許偏差 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 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。 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)



● 引线形状 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

| 引綫間距 Lead spacing | 包裝形式 Packing style |
|----------------------|---|
| F=5.0 | 散裝 Bulk、編帶 Taping(P0=12.7mm, D<10.0mm) |
| F=7.5 | 散裝 Bulk、 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 Packing style | 散裝 Bulk | | 編帶 Taping | | | |
|--|---------|----------|-----------------------|-----------------------|-----------------------|------------------------|
| | D=4~9mm | D=9~13mm | F=5.0mm, P0=12.7mm | F=7.5mm, P0=12.7mm | F=7.5mm, P0=15.0mm | F=10.0mm, P0=15.0mm |
| 最小包裝數量 Min packaging 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 Number | 項目 Item | 性能要求 Performance requirement | 檢測方法 Test method | | |
|--------------|--|---|---|----------------------|--|
| 1 | 電容量 Capacitance | 在規定允許公差之內 Within the specified Tolerance | 測試頻率&測試電壓 Test Frequency&Test Voltage CC81:1MHz/1.0Vrms CT1、CT81、CT7:1KHz/1.0Vrms CS1:1KHz/0.1Vrms | | |
| 2 | 損耗因數 Dissipation Factor | CC81: $tg \delta \leq 0.0015$ | 測試溫濕度 Test temperature and humidity requirements : 25 ± 2℃, < 75%RH | | |
| | | CT1、CT81、CT7: Y5R, $tg \delta \leq 0.025$; Y5P, $tg \delta \leq 0.025$; Y5U, Y5V, $tg \delta \leq 0.030$; | | | |
| | | CS1: $tg \delta \leq 0.050$; | | | |
| 3 | 絕緣電阻 (IR) Insulation Resistance | CS1:1000MΩ Min CT1:4000MΩ Min CC81、CT81、CT7: 10000MΩ Min | 額定電壓小於500VDC ,用額定電壓測試60秒。 Rated voltage is less than 500VDC, With rated voltage test 60 seconds. 額定電壓大於或等於500V ,用500VDC測試60秒。 Rated voltage is greater than the and so on In 500VDC, With 500 VDC test 60 seconds. | | |
| 4 | 端子間耐電壓 Resistance between terminal voltage | 無擊穿 No breakdown | 產品類型 Product Type | 測試電壓 Test Voltage | 充放電流 Charge/ discharge current : <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 Product Type | 電路應用 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。 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。 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 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、以及應用於寬帶信號和頻率分離的電路中。 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 NO. | 項目 Item | 認證標記 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 | CB |

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 Product Type | 額定電壓 Rated Voltage | 溫度特性&容量範圍 (T.C.&Capacitance Range) pF | | | 本體直徑 Body Diameter (mm) | 本體厚度 Body Thickness (mm) | |
|----------------------|-----------------------|--|----------|------------|----------------------------|-----------------------------|---------|
| | | NPO | N750 | SL (K) | | | |
| CC81 | 1KV | 15-47 pF 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 Product Type | 額定電壓 Rated Voltage | 溫度特性&容量範圍 (T.C.&Capacitance Range) pF | | | 本體直徑 Body Diameter (mm) | 本體厚度 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 101~222 pF customized according to customer's requirements | | | | | |

• 容量範圍 Capacitance Range:

| 產品類型 Product Type | 額定電壓 Rated Voltage | 溫度特性&容量範圍 (T.C.&Capacitance Range) pF | | | 本體直徑 Body Diameter (mm) | 本體厚度 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 Product Type | 額定電壓 Rated Voltage | 溫度特性&容量範圍 (T.C.&Capacitance Range) pF | | | 本體直徑 Body Diameter (mm) | 本體厚度 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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