## *产品命名表示方法*

Product name representation

CC4Z—0805 - COG - 101 - J - 100V

A E B C F

| A | 产品类别<br>PRODUCT TYPE |
|---|---|
| CC4Z | I 类轴向引线陶瓷电容器<br>Class I dielectric axial leaded capacitor |
| CT4Z | II 类轴向引线陶瓷电容器<br>Class II dielectric axial leaded capacitor |

| B | 标称容量（PF）<br>NOMINAL CAPACITANCE |
|---|---|
| 前面两位为有效数字，后一位表示零的个数。<br>First two digits are significant,and the third digit is number of zero.<br>例如：For example<br>104=100000pF: 5R6=5.6pF | |

| C | 容量偏差<br>Tolerance | | |
|---|---|---|---|
| C | ±0.25PF | K | ±20% |
| D | ±0.5PF | M | ±20% |
| J | ±5.0% | Z | +80% -20% |

| D | 本体长度（单位：英寸）<br>Nominal Body Length(Unit:inches) | | |
|---|---|---|---|
| 13 | 0.13 | 15 | 0.15 |
| 16 | 0.16 | 17 | 0.17 |
| 20 | 0.20 | | |

| E | 温度特性<br>Temperature Characteristics | | |
|---|---|---|---|
| CG | | 0±30ppm/℃ | -55～+125℃ |
| N | NPO | | |
| X | X7R | ±15% | -55～+125℃ |
| Y(F) | Y5V | -80% +30% | -25～+85℃ |

| F | 额定电压<br>Rated Voltage |
|---|---|
| 前面两位为有效数字，后一位表示零的个数。<br>First two digits are significant,and the third digit is number of zero.<br>例如：For example<br>630=63V； 101=100V | |

| G | 包装方式<br>Packaging Style |
|---|---|
| P | 盒带包装<br>Ammo |
| T | **卷带包装**<br>Reel |

| H | 引脚形式<br>Lead Configuration |
|---|---|
| 26 | 编带内距 Tape Width：26mm |
| 52 | 编带内距 Tape Width：52mm |

# *轴向电容介质特点及应用*

DIELECTRIC CHARACTERISTIC AND APPLICATION OF AXIAL LEADS MLCC

| 介质材料 DIELECTRIC MATERIAL | NPO（N） COG（CG） | X7R（B） | Y5V（F、Y） |
|---|---|---|---|
| 介质种类 DIELECTRIC TYPE | I 类电介质 STABLE CLASS I DIELECTRIC | II 类电介质 STABLE CLASS II DIELECTRIC | |
| 电气性能 ELECTRICAL PROPERTIES | 电气性能最稳定，基本上不随温度、电压和时间的改变而改变。 With negligible Dependence of electrical properties On temperature, voltage,frequency and time. | 电气性能较稳定，在温度、电压与时间改变时性能的变化不显著，由于 X7R 是一种强电介质，因而能造出容量比 NPO 介质更大的电容器。 With predictable change Of properties With temperature, voltage, frequency and time, this dielectric is ferroelectric and offers higher capacitance ranges fhan class I. | 具有较高的介电常数，常用于生产比容较大、标称容量较高的大容量电容器产品，但其容量稳定性能较 X7R 差，容量损耗对温度、电压等测试条件较敏感。 With higher dielectric constant and greater variation of properties with temperature and test conditions, very high capacitance per unit volume and suited for bypass and coupling application as well as filtering ,transient supression blocking,and charge storage application. |
| 应用 APPLICATION | 适用于稳定性要求高的高频电路，如温度补偿电路、震荡电路等。 Used in circuits Requiring stable Performance, such as temperature Compensation circuits And smite circuits. | 适用于隔直、偶合、旁路与对容量稳定性要求不太高的鉴频电路。 Used as blocking ,coupling, By –passing and frequency discriminating elements. | 适用于要求容量较大的电路，如储能、记忆电路等。 Suited for By –passing and Coupling application such As store power and memory Circuit. |
| 使用温度 OPERATING TEMPERATURE | -55℃～+125℃ | -55℃～+125℃ | -25℃～+85℃ |

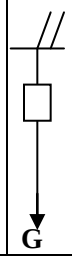
## *电气性能标准*

THE STANDARD OF THE ELECTRICAL PROPERTICAC

| 检验项目 ITEM | 检验标准 TEST STANDARD | | | |
|---|---|---|---|---|
| | NPO(N) COG（CG） | X7R(B) | Z5U(E) | Y5V(Y、F) |
| 电容量(C) Capacitance | 在相应的误差范围内 In the tolerance | 在相应的误差范围内 In the tolerance | 在相应的误差范围内 In the tolerance | 在相应的误差范围内 In the tolerance |
| 损耗角正切(DF) Dissipation Factor | $C_R \geq 50pF$ DF≤0.15% $C_R < 50pF$ $DF \leq 1.5[(150/C_R)+7] \times 10^{-4}$ | ≤3.5% | ≤5% | ≤3.5%(150000PF 以下) ≤10%（220000-470000PF） ≤15%（480000-1000000PF） |
| 绝缘电阻(IR) Insulation Resistance | C≤ 10nF R>10000 MΩ C> 10nF R. C> 100S | C≤ 25nF R>4000 MΩ C> 25nF R. C> 100S | C≤ 25nF R>4000 MΩ C> 25nF R . C> 100S | C≤ 25nF R>4000 MΩ C> 25nF R. C> 100S |
| 耐电压 Dielectric Withstanding Voltage | 2．5倍额定电压 2. 5×rated Voltage | 2．5倍额定电压 2. 5×rated Voltage | 2．5倍额定电压 2. 5×rated Voltage | 2．5倍额定电压 2. 5×rated Voltage |
| 测试条件 TEST CONDITION | | | | |
| 测试频率 Test Frequency | 1MHZ (C>1000PF,1KHZ) | 1KHZ | 1KHZ | 1KHZ |
| 测试电压 Test Voltage | 1±0. 2VDC | 1±0. 2VDC | 0. 3±0. 2VDC | 0. 3±0. 2VDC |
| 绝缘电阻测试电压 Test Voltage of IR | 额定电压 Rated Voltage | 额定电压 Rated Voltage | 额定电压 Rated Voltage | 额定电压 Rated Voltage |
| 环境温度 Temperature | 18℃～25℃ | 18℃～25℃ | 18℃～25℃ | 18℃～25℃ |
| 环境湿度 Humidity | < 75% | < 75% | < 75% | < 75% |
| 温度系数 Temperature Coefficient | 0±30ppm/℃ -55℃ to +125℃ | ±15% -55℃to +125℃ | +22% to -56% +10℃to +85℃ | +30% to-80% -25℃to +85℃ |

## *品质检验项目及可靠性试验*

QUALITY INSPECTION AND RELLABILITY

<table>
<tr><th colspan="2">项目<br>ITEM</th><th>检验标准<br>TEST SPECIFICATIONS</th><th>检验方法<br>TEST METHODS</th></tr>
<tr><td colspan="2">可焊性<br>Solderablity</td><td>引线表面均匀沾锡,上锡面积不小于总面积的75%。<br>Lead wire shall be soldered with uniformly coated on the axial or radial direction over 3/4 of the circumferential direction.</td><td>将电容器引线浸入含 25%酒精（或异丙醇）的松香溶液后浸入焊接槽温度为 235±5℃的焊锡中 2±0.5 秒，浸入深度距离电容体 2.5～3.0mm。<br>The lead wire of a capacitor shall be dipped into a 25% methanol solution of rosin and then into molten solder of 235±5℃ for 2±0.5 seconds ,in both cases the depth of dipping is up to about 2.5 to 3.0 mm from the root of lead wires.</td></tr>
<tr><td rowspan="3">耐焊性<br>Resistance<br>To soldering heat</td><td>外观<br>Appearance</td><td>无损伤<br>No marked defect</td><td rowspan="3">焊锡温度 265±5℃，时间 5±0.5 秒，插入深度距离电容体 2.5～3.0mm，插入速度 1 秒，试验后 2～24 小时测量。<br>The lead wire shall be immersed into the melted solder of 265±5℃, up to about 2.5 to 3.0mm from the main body for 5±0.5 sec and the specified items shall be measured after leaving for 2 to 24 hours.</td></tr>
<tr><td>容量变化ΔC/C<br>Capacitance change</td><td>NPO:≤5%<br>X7R:≤-5～+10%<br>Y5V:≤-10～+20%</td></tr>
<tr><td>介电强度（引线间）<br>Dielectric strength<br>（between lead wires）</td><td>不失效<br>No failure</td></tr>
<tr><td rowspan="4">耐久性<br>List test</td><td>外观<br>Appearance</td><td>无外观损伤<br>No marked defect</td><td rowspan="4"><table><tr><td>条件<br>Condition</td><td>NPO</td><td>X7R</td><td>Y5V</td><td>Z5U</td></tr><tr><td>温度<br>Temperature</td><td colspan="2">+125℃</td><td colspan="2">+85℃</td></tr><tr><td>时间<br>Time</td><td colspan="4">t=1000h</td></tr><tr><td>电压<br>Voltage</td><td colspan="4">V=1.5Vr</td></tr><tr><td>恢复时间<br>Recovery time</td><td colspan="4">24±1h</td></tr></table></td></tr>
<tr><td>容量变化ΔC/C<br>Capacitance change</td><td>NPO：≤2%<br>X7R：≤20%<br>Y5V：≤30%</td></tr>
<tr><td>D． F.</td><td>NPO：≤0.3%<br>X7R：≤5%<br>Y5V：≤7%</td></tr>
<tr><td>I. R.</td><td>R．C>25S</td></tr>
<tr><td rowspan="2">引出端强度<br>Strength of Lead temination</td><td>拉力<br>Pull</td><td rowspan="2">引线不断<br>电容器不破损<br>Lead wire shall not cut off. Capacitor shall not be broken.</td><td>如图：固定电容器并加力，引线直径 0.45mm 以上加力 2kg，保持 5 秒<br>As a figure, fix the body of capacitor, apply a tensile weight gradually to each lead in the radial direction of capacitor up to 2 okgf, and keep it for l to 5 sec.<br>  <br></td></tr>
<tr><td>折弯<br>Bending</td><td>引线负荷 0.5kg 向一方向折弯 $90^0$后恢复原位，再向反方向折弯 $90^0$恢复原状为一次，共 3 次。<br>Each lead wire shall be subjected to 0.5kgf weight and then a $90^0$ bend at the point of egress, in one direction, return to original position and then a $90^0$ bend in the opposite direetion at the rate of one bend.</td></tr>
</table>

## *介质、工作电压、容量关系表*

SIZE CODE CAPACITANCE AND VOLTAGE

| 介质材料 DIELECTRIC MATERIAL | 工作电压 VOLTAGE | 容量范围（PF） CAPACITANCE | 容量偏差 CAPACITANCE TOLERANCE |
|---|---|---|---|
| CG (N) | 25V<br>50V<br>100V | 0R5～272<br>0R5～222<br>0R5～102 | J:±5.0%<br>K:±10%<br>M:±20% |
| B | 25V<br>50V<br>100V | 101～224<br>101～104<br>101～333 | K:±10%<br>M:±20% |
| E/F (Y) | 25<br>50<br>100 | 102～125<br>102～105<br>102～104 | M:±20%<br>Z:+80%~-20% |

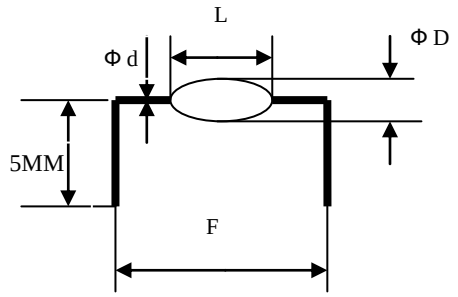
## *包装*

PACKAGE

尺寸

DIMENSIONS

| L | ΦD | Φd | F(±0.6) | |
|---|---|---|---|---|
| 3.5-3.9 | 1.9-2.2 | 0.48±0.2 | 7.5 | 10.0 |




包装数量

PACKAGING QUANTITY

| 卷带包装 Tape and Reel | 盒带包装 Ammo Package |
|---|---|
| 5000 | 5000 |

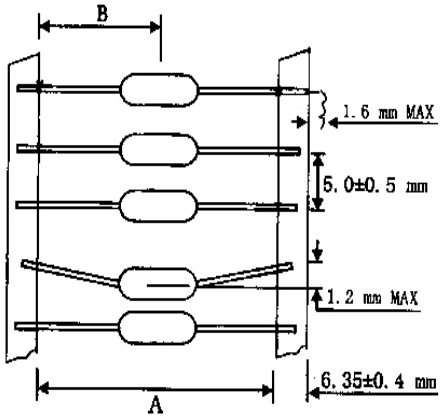
## 包装形式

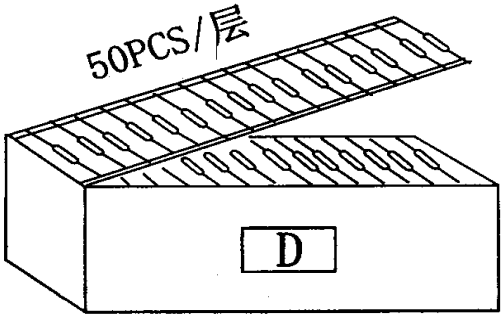
PACKGING STYLE

## 盒带包装

AMMO PACKAGE

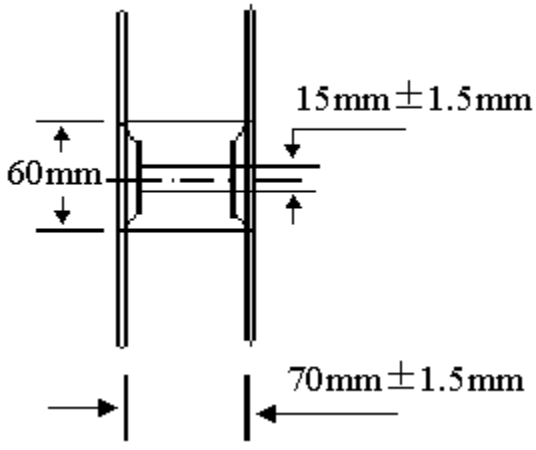
| 编带方式<br>LEAD STYLE | A | B |
|---|---|---|
| 编带内距：52mm<br>Tape width: | 52±1.5MM | 26MM |
| 编带内距：26mm<br>Tape width: | 26±1.5MM | 13MM |

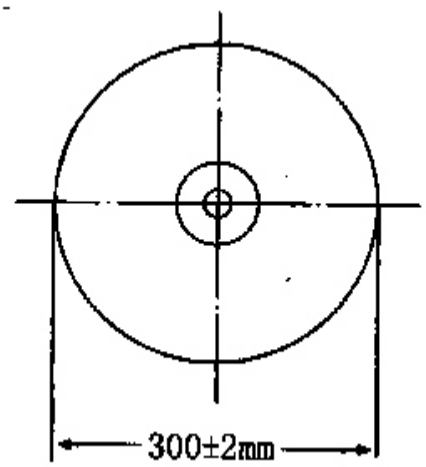



## 卷带包装

TAPE AND REEL






* 可根据用户需求包装*
ACCORDING TO THE CUSTOMER REQUIRE

标签及标识
LABEL AND SYMBOL

盒 子上有标签，标签包括以下内容：
LABEL IS ON THE BOX,IT INCLUDES:

① 型号规格 PART NO　② 标称容量 CAPACITANCE　③ 数量 QUANTITY　④ 误差级别 TOLERANCE　⑤ 批号 LOT NO

⑥ 额定工作电压 RATED VOLTAGE　⑦ 包装日期 PACKAGE DATE　⑧ 温度特性 TEMPERATURE COEFFICIENT　⑨ QC 盖章 QC MARK

储存方式
STORAGE METHODS

存储条件：　温度：5℃～35℃　相对湿度：45%～75%。
STORAGE CONDITION:　TEMPERATURE: 5℃～35℃　RELATIVE HUMIDITY: 45%～75%。