



# 多层陶瓷电容 MLCC

## 产品手册



南京汇聚新材料科技有限公司

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# 南京汇聚新材料科技有限公司

南京汇聚新材料科技有限公司成立于2016年，是一家专业从事电子陶瓷材料及片式电子元件研发、生产和销售的高新技术企业。专业专注于多层陶瓷电容、芯片电容、穿心电容、射频组件等，产品广泛应用于工业电子、汽车电子、信息和通信技术等领域。

公司科研技术力量雄厚，具有MLCC产业最高设计及产品规格广度、定制化能力、工艺技术及采用的陶瓷粉配方技术达到国际领先水平。同时，公司始终专注于快速发展的前沿技术市场的要求，设置有新材料研发实验室。

## 公司愿景：成为中国工业、军用电子陶瓷领军品牌

1. MLCC HV MLCC(X7R, NPO) ———— Industrial Application 中国领先
2. MLCC High Cap(X7R) ———— Industrial Application 中国领先
3. MLCC Low Profile & Pulse ———— Medical & Military Application 中国领先
4. MLCC Automotive ———— Car Application 中国领先
5. Hi-Q & RF MLCC ———— HF Application 国际领先
6. Ultra High Frequency LTCC Material ———— Microwave Application 国际领先



|                           |    |
|---------------------------|----|
| 产品订货信息.....               | 1  |
| 外型尺寸.....                 | 2  |
| 包装规格.....                 | 3  |
| <b>NL</b> .....           | 4  |
| 一般品 - 低压 $\leq 50V$       |    |
| <b>NM</b> .....           | 7  |
| 一般品 - 中压 100V ~ 630V      |    |
| <b>NV</b> .....           | 12 |
| 一般品 - 高压 1KV ~ 3KV        |    |
| <b>NH</b> .....           | 17 |
| 一般品 - 高压 $> 3KV \sim 6KV$ |    |
| <b>NC</b> .....           | 19 |
| 一般品 - 高电容系列               |    |
| <b>ND</b> .....           | 21 |
| 一般品 - 低损耗系列               |    |
| <b>OP</b> .....           | 23 |
| 一般品 - 开路模式系列              |    |
| <b>AB</b> .....           | 26 |
| 软端电极 - 抗弯曲裂纹系列            |    |
| <b>IR</b> .....           | 36 |
| 工业应用 - 高可靠度系列             |    |
| <b>AN</b> .....           | 45 |
| 车载应用 - AEC-Q200 认证外系列     |    |
| <b>SX &amp; SY</b> .....  | 50 |
| 安规 - X2 & X1/Y2 系列        |    |

| NM  | 1206 | B   | 104 | K   | 251  | C   | E   | G   | N    |
|-----|------|-----|-----|-----|------|-----|-----|-----|------|
| 系列  | 尺寸   | 介电质 | 容值  | 容差  | 额定电压 | 端电极 | 包装  | 厚度  | 管理码  |
| 表 1 | 表 2  | 表 3 | 表 4 | 表 5 | 表 6  | 表 7 | 表 8 | 表 9 | 表 10 |

| 表 1 | 系列                    |  |  |
|-----|-----------------------|--|--|
| 代码  | 说明                    |  |  |
| NL  | 一般品 - 低压 $\leq 50V$   |  |  |
| NM  | 一般品 - 中压 100V ~ 630V  |  |  |
| NV  | 一般品 - 高压 1KV ~ 3KV    |  |  |
| NH  | 一般品 - 高压 > 3KV ~ 6KV  |  |  |
| NC  | 一般品 - 高电容系列           |  |  |
| ND  | 一般品 - 低损耗系列           |  |  |
| OP  | 一般品 - 开路模式系列          |  |  |
| AB  | 软端电极 - 抗弯曲裂纹系列        |  |  |
| IR  | 工业应用 - 高可靠度系列         |  |  |
| AN  | 车载应用 - AEC-Q200 认证外系列 |  |  |
| SX  | 安规 - X2 系列            |  |  |
| SY  | 安规 - X1/Y2 系列         |  |  |

| 表 2  | 尺寸             |      |                |  |
|------|----------------|------|----------------|--|
| 代码   | 说明: L x W (mm) | 代码   | 说明: L x W (mm) |  |
| 0603 | 1.60 x 0.80    | 1210 | 3.20 x 2.50    |  |
| 0805 | 2.00 x 1.25    | 1812 | 4.50 x 3.20    |  |
| 1206 | 3.20 x 1.60    | 2220 | 5.70 x 5.00    |  |

| 表 3 | 介电质 |    |     |  |
|-----|-----|----|-----|--|
| 代码  | 说明  | 代码 | 说明  |  |
| N   | C0G | H  | C0H |  |
| B   | X7R | X  | X5R |  |
| D   | X7E | S  | X7S |  |

| 表 4 | 容值     |     |                          |  |
|-----|--------|-----|--------------------------|--|
| 代码  | 说明     | 代码  | 说明                       |  |
| R47 | 0.47pF | 100 | $10 \times 10^0 = 10pF$  |  |
| 0R5 | 0.5pF  | 104 | $10 \times 10^4 = 100nF$ |  |

| 表 5 | 容差            |    |                    |  |
|-----|---------------|----|--------------------|--|
| 代码  | 说明            | 代码 | 说明                 |  |
| A   | $\pm 0.05 pF$ | G  | $\pm 2 \%$         |  |
| B   | $\pm 0.10 pF$ | J  | $\pm 5 \%$         |  |
| C   | $\pm 0.25 pF$ | K  | $\pm 10 \%$        |  |
| D   | $\pm 0.50 pF$ | M  | $\pm 20 \%$        |  |
| F   | $\pm 1 \%$    | Z  | $-20\% \sim +80\%$ |  |

| 表 6 | 额定电压                     |     |                            |  |
|-----|--------------------------|-----|----------------------------|--|
| 代码  | 说明                       | 代码  | 说明                         |  |
| 6R3 | 6.3V                     | 101 | $(10) \times 10^1 = 100V$  |  |
| 100 | $(10) \times 10^0 = 10V$ | 102 | $(10) \times 10^2 = 1000V$ |  |

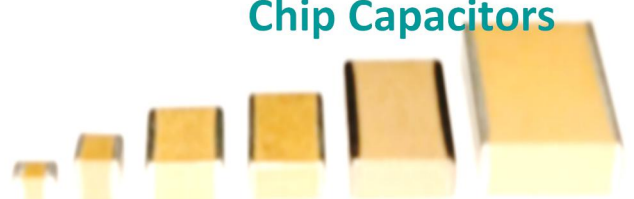
| 表 7 | 端电极             |    |                 |  |
|-----|-----------------|----|-----------------|--|
| 代码  | 说明              | 代码 | 说明              |  |
| L   | Ag+Ni+Sn        | C  | Cu+Ni+Sn        |  |
| B   | Ag+Soft E+Ni+Sn | E  | Cu+Soft E+Ni+Sn |  |

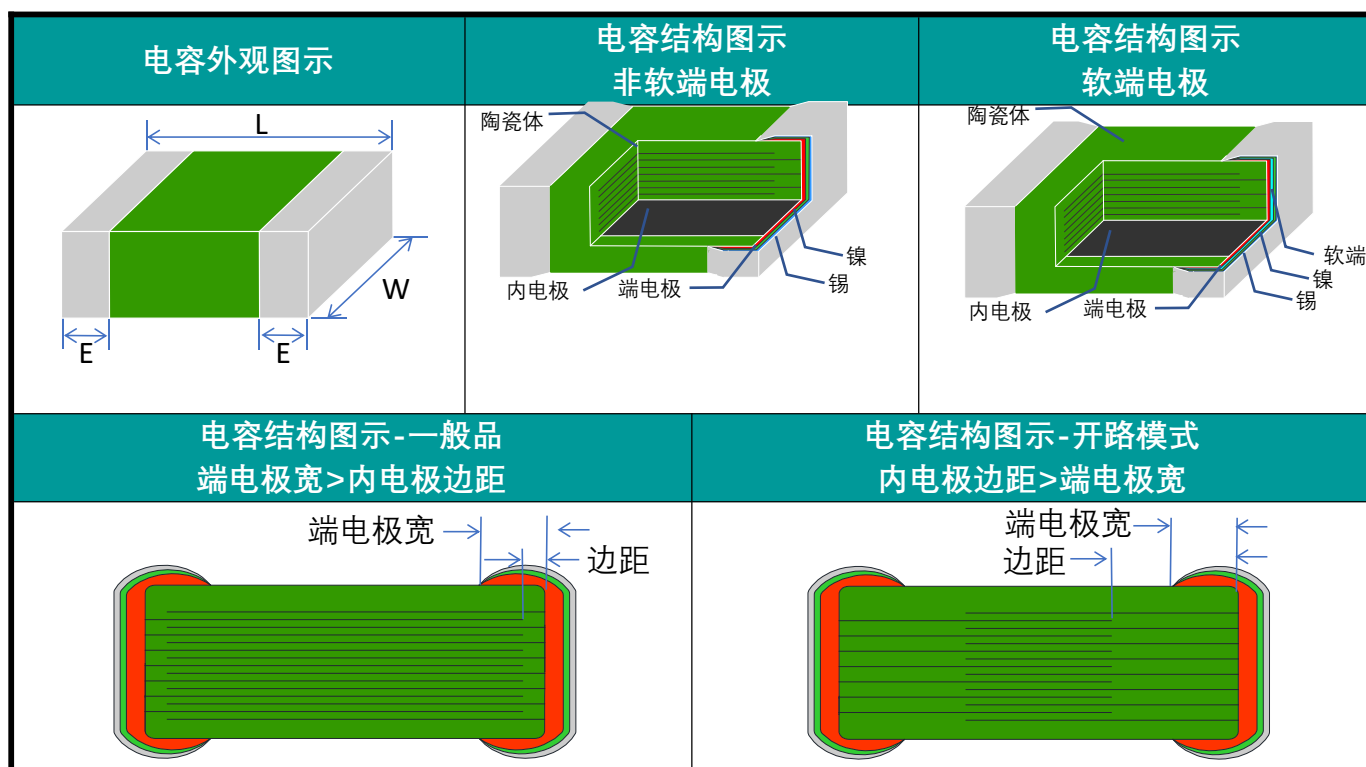
| 表 8 | 包装             |    |                |  |
|-----|----------------|----|----------------|--|
| 代码  | 说明             | 代码 | 说明             |  |
| P   | 7" Reel 卷装-纸带  | E  | 7" Reel 卷装-塑料带 |  |
| R   | 13" Reel 卷装-纸带 | L  | 13" Reel 卷装-纸带 |  |
| B   | 成品散料包装         |    |                |  |

| 表 9 | 厚度                 |    |                         |  |
|-----|--------------------|----|-------------------------|--|
| 代码  | 说明                 | 代码 | 说明                      |  |
| A   | $0.60 \pm 0.10 mm$ | M  | $2.50 \pm 0.30 mm$      |  |
| B   | $0.8 \pm 0.10 mm$  | O  | $3.50 \pm 0.20 mm$      |  |
| C   | $0.95 \pm 0.10 mm$ | P  | $1.60 + 0.30 / -0.10mm$ |  |
| D   | $1.25 \pm 0.10 mm$ | R  | $3.10 \pm 0.20 mm$      |  |
| G   | $1.60 \pm 0.20 mm$ | S  | $0.80 \pm 0.07 mm$      |  |
| J   | $1.15 \pm 0.15 mm$ | U  | $2.80 \pm 0.30 mm$      |  |
| K   | $2.00 \pm 0.20 mm$ | X  | $0.80 + 0.50 / -0.10mm$ |  |

| 表 10 | 管理码   |    |    |  |
|------|-------|----|----|--|
| 代码   | 说明    | 代码 | 说明 |  |
| N    | 无特殊需求 |    |    |  |

## Multilayer Ceramic Chip Capacitors





| 结构类别  | 英制尺寸 | 长度 (L)<br>(mm) | 宽度 (W)<br>(mm) | 厚度 (T)<br>(mm)  | 端电极宽 (E)<br>(mm) |
|-------|------|----------------|----------------|-----------------|------------------|
| 非软端电极 | 0603 | 1.60±0.15      | 0.80±0.15      | 参阅<br>产品订货信息表 9 | 0.40±0.15        |
|       | 0805 | 2.00±0.20      | 1.25±0.20      |                 | 0.50±0.20        |
|       | 1206 | 3.20±0.20      | 1.60±0.20      |                 | 0.60±0.20        |
|       | 1210 | 3.30±0.30      | 2.50±0.30      |                 | 0.75±0.35        |
|       | 1808 | 4.50±0.40      | 2.00±0.25      |                 | 0.75±0.35        |
|       | 1812 | 4.50±0.40      | 3.20±0.30      |                 | 0.75±0.35        |
|       | 1825 | 4.50±0.40      | 6.30±0.40      |                 | 0.75±0.35        |
|       | 2220 | 5.70±0.40      | 5.00±0.40      |                 | 0.85±0.35        |
|       | 2225 | 5.70±0.40      | 6.30±0.40      |                 | 0.85±0.35        |

| 结构类别 | 英制尺寸 | 长度 (L)<br>(mm) | 宽度 (W)<br>(mm) | 厚度 (T)<br>(mm)  | 端电极宽 (E)<br>(mm) |
|------|------|----------------|----------------|-----------------|------------------|
| 软端电极 | 0603 | 1.60±0.20      | 0.80±0.15      | 参阅<br>产品订货信息表 9 | 0.40±0.15        |
|      | 0805 | 2.10±0.20      | 1.25±0.20      |                 | 0.50±0.20        |
|      | 1206 | 3.30±0.30      | 1.60±0.20      |                 | 0.60±0.20        |
|      | 1210 | 3.30±0.40      | 2.50±0.30      |                 | 0.75±0.35        |
|      | 1808 | 4.60±0.50      | 2.00±0.25      |                 | 0.75±0.35        |
|      | 1812 | 4.60±0.50      | 3.20±0.30      |                 | 0.75±0.35        |
|      | 1825 | 4.60±0.50      | 6.30±0.40      |                 | 0.75±0.35        |
|      | 2220 | 5.70±0.50      | 5.00±0.40      |                 | 0.85±0.35        |
|      | 2225 | 5.70±0.50      | 6.30±0.40      |                 | 0.85±0.35        |

| 尺寸   | 产品厚度<br>(mm)    | 纸带包装  |          | 塑带包装  |        |
|------|-----------------|-------|----------|-------|--------|
|      |                 | 7" 卷轮 | 13" r 卷轮 | 7" 卷轮 | 13" 卷轮 |
| 0603 | 0.80±0.07       | 4     | 15       | -     | -      |
|      | 0.80+0.15/-0.10 | 4     | 15       |       |        |
| 0805 | 0.60±0.10       | 4     | 15       | -     | -      |
|      | 0.80±0.10       | 4     | 15       | -     | -      |
|      | 1.25±0.10       | -     | -        | 3     | 10     |
|      | 1.25±0.20       | -     | -        | 3     | -      |
| 1206 | 0.80±0.10       | 4     | 15       | -     | -      |
|      | 0.95±0.10       | -     | -        | 3     | 10     |
|      | 1.25±0.10       | -     | -        | 3     | 10     |
|      | 1.60±0.20       | -     | -        | 2     | -      |
| 1210 | 0.95±0.10       | -     | -        | 3     | 10     |
|      | 1.25±0.10       | -     | -        | 3     | 10     |
|      | 1.60±0.20       | -     | -        | 2     | -      |
|      | 2.50±0.30       | -     | -        | 1     | -      |
| 1808 | 1.25±0.10       | -     | -        | 2     | -      |
|      | 1.60±0.20       | -     | -        | 2     | -      |
|      | 2.00±0.20       | -     | -        | 1     | -      |
| 1812 | 1.25±0.10       | -     | -        | 1     | -      |
|      | 1.60±0.20       | -     | -        | 1     | -      |
|      | 2.00±0.20       | -     | -        | 1     | -      |
|      | 2.50±0.30       | -     | -        | 0.5   | -      |
| 1825 | 2.00±0.20       | -     | -        | 1     | -      |
|      | 2.50±0.30       | -     | -        | 0.5   | -      |
| 2220 | 2.00±0.20       | -     | -        | 1     | -      |
|      | 2.50±0.30       | -     | -        | 0.5   | -      |
| 2225 | 2.00±0.20       | -     | -        | 1     | -      |
|      | 2.50±0.30       | -     | -        | 0.5   | -      |
|      |                 |       |          |       |        |

单位:KPCS

## 产品简介

汇聚低压系列产品使用无铅/镉元素材料制作，其由精确的介电材料和适当的导电浆料配制，自动化制程的稳定生产和严谨的质量精确管控了介电设计厚度、电极完整性以及端电极连接的良好特性，实现了最佳可靠度的产品性能。

## 特点

- ◆ 高电容量
- ◆ EIA 0603-2225
- ◆ 符合 RoHS 标准
- ◆ 高可靠性和稳定性

## 用途

- ◆ 一般电子设备
- ◆ 电源输入/输出滤波
- ◆ 电源缓冲电路
- ◆ 电功率因素改善
- ◆ 噪音旁路

## 一般电气规格

| 介电材料                             | C0G                                                                  |                                    | X7R                                                                         |                     |
|----------------------------------|----------------------------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------|---------------------|
| EIA 尺寸                           | 0603, 0805, 1206, 1210, 1808, 1812, 1825, 2220, 2225                 |                                    | 0603, 0805, 1206, 1210, 1808, 1812, 1825, 2220, 2225                        |                     |
| 额定电压                             | 25V, 50V                                                             |                                    | 25V, 50V                                                                    |                     |
| 电容范围                             | 0.5pF ~ 470nF                                                        |                                    | 100pF ~ 10 $\mu$ F                                                          |                     |
| 电容公差值                            | 参阅产品订货信息表 5                                                          |                                    | 参阅产品订货信息表 5                                                                 |                     |
| 损耗角正切 (Tan $\delta$ ) & 品质因数 (Q) | 电容量范围                                                                | Q                                  | 额定电压                                                                        | Tan $\delta$ (D.F.) |
|                                  | Cap < 30pF                                                           | Q $\geq$ 400+20C                   | 25V                                                                         | $\leq$ 3.5%         |
|                                  | Cap $\geq$ 30pF                                                      | Q $\geq$ 1000                      | $\geq$ 50V                                                                  | $\leq$ 2.5%         |
| 检测条件                             | 常温 25 $^{\circ}$ C 环境温度                                              |                                    | 预处理 (2 类产品) 150 $\pm$ 10 $^{\circ}$ C /1 小时热处理后静置于常温环境 24 $\pm$ 2 小时再进行测量作业 |                     |
|                                  | 电容量范围                                                                | 检测条件                               | 适用检测:<br>1.0 $\pm$ 0.2Vrms<br>1.0kHz $\pm$ 10%<br>25 $^{\circ}$ C 常温环境      |                     |
|                                  | Cap $\leq$ 1000pF                                                    | 1.0 $\pm$ 0.2Vrms 1.0MHz $\pm$ 10% |                                                                             |                     |
| Cap > 1000pF                     | 1.0 $\pm$ 0.2Vrms 1.0kHz $\pm$ 10%                                   |                                    |                                                                             |                     |
| 绝缘电阻 (IR)                        | $\geq$ 100G $\Omega$ 或 R $\cdot$ C $\geq$ 500 $\Omega$ -F<br>任一较小值以上 |                                    | $\geq$ 10G $\Omega$ 或 R $\cdot$ C $\geq$ 100 $\Omega$ -F<br>任一较小值以上         |                     |
| 工作温度                             | - 55 $^{\circ}$ C to + 125 $^{\circ}$ C                              |                                    |                                                                             |                     |
| 温度系数                             | $\pm$ 30ppm / $^{\circ}$ C                                           |                                    | $\pm$ 15%                                                                   |                     |
| 端电极材料                            | 铜或银/ 镍 / 锡 (无铅端电极)                                                   |                                    |                                                                             |                     |

## COG 容值表

| 尺寸       |     | 0603 |     | 0805 |     | 1206 |     | 1210 |     | 1808 |     | 1812 |     | 1825 |     | 2220 |     | 2225 |     |
|----------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|
| 电容量 (pF) | 代码  | 25V  | 50V | 25V  | 50V | 25V  | 50V | 25V  | 50V | 25V  | 50V | 25V  | 50V | 25V  | 50V | 25V  | 50V | 25V  | 50V |
| 0.5      | 0R5 | S    | S   | A    | A   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 1        | 1R0 | S    | S   | A    | A   |      |     |      |     |      |     |      |     |      |     |      |     |      |     |
| 1.2      | 1R2 | S    | S   | A    | A   | B    | B   |      |     |      |     |      |     |      |     |      |     |      |     |
| 1.5      | 1R5 | S    | S   | A    | A   | B    | B   |      |     |      |     |      |     |      |     |      |     |      |     |
| 1.8      | 1R8 | S    | S   | A    | A   | B    | B   |      |     |      |     |      |     |      |     |      |     |      |     |
| 2.2      | 2R2 | S    | S   | A    | A   | B    | B   |      |     | D    | D   |      |     |      |     |      |     |      |     |
| 2.7      | 2R7 | S    | S   | A    | A   | B    | B   |      |     | D    | D   |      |     |      |     |      |     |      |     |
| 3.3      | 3R3 | S    | S   | A    | A   | B    | B   |      |     | D    | D   |      |     |      |     |      |     |      |     |
| 3.9      | 3R9 | S    | S   | A    | A   | B    | B   |      |     | D    | D   |      |     |      |     |      |     |      |     |
| 4.7      | 4R7 | S    | S   | A    | A   | B    | B   |      |     | D    | D   |      |     |      |     |      |     |      |     |
| 5.6      | 5R6 | S    | S   | A    | A   | B    | B   |      |     | D    | D   |      |     |      |     |      |     |      |     |
| 6.8      | 6R8 | S    | S   | A    | A   | B    | B   |      |     | D    | D   |      |     |      |     |      |     |      |     |
| 8.2      | 8R2 | S    | S   | A    | A   | B    | B   |      |     | D    | D   |      |     |      |     |      |     |      |     |
| 10       | 100 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 12       | 120 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 15       | 150 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 18       | 180 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 22       | 220 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 27       | 270 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 33       | 330 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 39       | 390 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 47       | 470 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 56       | 560 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 68       | 680 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 82       | 820 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 100      | 101 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 120      | 121 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 150      | 151 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 180      | 181 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 220      | 221 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 270      | 271 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 330      | 331 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 390      | 391 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 470      | 471 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 560      | 561 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 680      | 681 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 820      | 821 | S    | S   | A    | A   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 1000     | 102 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 1200     | 122 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 1500     | 152 |      |     | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 1800     | 182 |      |     | C    | C   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 2200     | 222 |      |     | C    | C   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 2700     | 272 |      |     | D    | D   | B    | B   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 3300     | 332 |      |     | D    | D   | C    | C   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 3900     | 392 |      |     | D    | D   | C    | C   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 4700     | 472 |      |     | D    | D   | D    | D   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 5600     | 562 |      |     | D    | D   | D    | D   | C    | C   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 6800     | 682 |      |     | D    | D   | D    | D   | D    | D   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 8200     | 822 |      |     | D    | D   | G    | G   | D    | D   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 10000    | 103 |      |     | D    | D   | G    | G   | D    | D   | D    | D   | D    | D   | G    | G   | G    | G   | G    | G   |
| 12000    | 123 |      |     | D    | D   | G    | G   | G    | G   | G    | G   | D    | D   | G    | G   | G    | G   | G    | G   |
| 15000    | 153 |      |     |      |     | G    | G   | G    | G   | G    | G   | D    | D   | G    | G   | G    | G   | G    | G   |
| 18000    | 183 |      |     |      |     | G    | G   | K    | K   | K    | K   | D    | D   | G    | G   | G    | G   | G    | G   |
| 22000    | 223 |      |     |      |     | G    | G   | K    | K   | K    | K   | D    | D   | G    | G   | G    | G   | G    | G   |
| 27000    | 273 |      |     |      |     | G    | G   | M    | M   | K    | K   | G    | G   | G    | G   | G    | G   | G    | G   |
| 33000    | 333 |      |     |      |     | G    | G   | M    | M   | K    | K   | G    | G   | G    | G   | G    | G   | G    | G   |
| 39000    | 393 |      |     |      |     |      |     | M    | M   | K    | K   | K    | K   | G    | G   | G    | G   | G    | G   |
| 47000    | 473 |      |     |      |     |      |     | M    | M   | K    | K   | K    | K   | G    | G   | G    | G   | G    | G   |
| 56000    | 563 |      |     |      |     |      |     | M    | M   | K    | K   | M    | M   | G    | G   | G    | G   | G    | G   |
| 68000    | 683 |      |     |      |     |      |     | M    | M   |      |     | M    | M   | G    | G   | G    | G   | G    | G   |
| 82000    | 823 |      |     |      |     |      |     | M    | M   |      |     | M    | M   | K    | K   | K    | K   | K    | K   |
| 100000   | 104 |      |     |      |     |      |     | M    | M   |      |     | M    | M   | M    | M   | M    | M   | K    | K   |
| 120000   | 124 |      |     |      |     |      |     |      |     |      |     | M    | M   | M    | M   | M    | M   | M    | M   |
| 150000   | 154 |      |     |      |     |      |     |      |     |      |     | M    | M   | M    | M   | M    | M   | M    | M   |
| 180000   | 184 |      |     |      |     |      |     |      |     |      |     | M    | M   | M    | M   | M    | M   | M    | M   |
| 220000   | 224 |      |     |      |     |      |     |      |     |      |     |      |     | M    | M   | M    | M   | M    | M   |
| 270000   | 274 |      |     |      |     |      |     |      |     |      |     |      |     | M    | M   | M    | M   | M    | M   |
| 330000   | 334 |      |     |      |     |      |     |      |     |      |     |      |     | M    | M   | M    | M   | M    | M   |
| 390000   | 394 |      |     |      |     |      |     |      |     |      |     |      |     | M    | M   |      |     | M    | M   |
| 470000   | 474 |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     | M    | M   |



## ■ X7R 容值表

| 尺寸       |     | 0603 |     | 0805 |     | 1206 |     | 1210 |     | 1808 |     | 1812 |     | 1825 |     | 2225 |     |
|----------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|
| 电容量 (pF) | 代码  | 25V  | 50V | 25V  | 50V | 25V  | 50V | 25V  | 50V | 25V  | 50V | 25V  | 50V | 25V  | 50V | 25V  | 50V |
| 100      | 101 | S    | S   | B    | B   | B    | B   |      |     |      |     |      |     |      |     |      |     |
| 120      | 121 | S    | S   | B    | B   | B    | B   |      |     |      |     |      |     |      |     |      |     |
| 150      | 151 | S    | S   | B    | B   | B    | B   |      |     | D    | D   |      |     |      |     |      |     |
| 180      | 181 | S    | S   | B    | B   | B    | B   |      |     | D    | D   |      |     |      |     |      |     |
| 220      | 221 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   |      |     |      |     |      |     |
| 270      | 271 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   |      |     |      |     |
| 330      | 331 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   |      |     |      |     |
| 390      | 391 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   |      |     |      |     |
| 470      | 471 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   |      |     |      |     |
| 560      | 561 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   |      |     |      |     |
| 680      | 681 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   |      |     |      |     |
| 820      | 821 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   |      |     |      |     |
| 1000     | 102 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 1200     | 122 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 1500     | 152 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 1800     | 182 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 2200     | 222 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 2700     | 272 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 3300     | 332 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 3900     | 392 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 4700     | 472 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 5600     | 562 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 6800     | 682 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 8200     | 822 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 10000    | 103 | S    | S   | B    | B   | B    | B   | C    | C   | D    | D   | D    | D   | K    | K   | K    | K   |
| 12000    | 123 | S    | S   | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 15000    | 153 | S    | S   | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 18000    | 183 | S    | S   | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 22000    | 223 | S    | S   | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 27000    | 273 | S    | S   | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 33000    | 333 | X    | X   | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 39000    | 393 | X    | X   | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 47000    | 473 | X    | X   | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 56000    | 563 | X    | X   | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 68000    | 683 | X    | X   | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 82000    | 823 | X    | X   | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 100000   | 104 | X    | X   | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 120000   | 124 |      |     | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 150000   | 154 |      |     | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 180000   | 184 |      |     | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 220000   | 224 |      |     | B    | B   | B    | B   | C    | C   | G    | G   | D    | D   | K    | K   | K    | K   |
| 270000   | 274 |      |     | D    | D   | B    | B   | C    | C   | K    | K   | D    | D   | K    | K   | K    | K   |
| 330000   | 334 |      |     | D    | D   | B    | B   | C    | C   | K    | K   | D    | D   | K    | K   | K    | K   |
| 390000   | 394 |      |     |      |     |      |     | D    | D   | C    | C   |      |     | D    | D   | K    | K   |
| 470000   | 474 |      |     |      |     |      |     | D    | D   | C    | C   |      |     | D    | D   | K    | K   |
| 560000   | 564 |      |     |      |     |      |     | D    | D   | C    | C   |      |     | D    | D   | K    | K   |
| 680000   | 684 |      |     |      |     |      |     | D    | D   | C    | C   |      |     | D    | D   | K    | K   |
| 820000   | 824 |      |     |      |     |      |     | G    | G   | D    | D   |      |     | D    | D   | K    | K   |
| 1000000  | 105 |      |     |      |     |      |     | P    | P   | D    | D   |      |     | D    | D   | K    | K   |
| 1200000  | 125 |      |     |      |     |      |     |      |     | P    | P   |      |     | D    | D   | K    | K   |
| 1500000  | 155 |      |     |      |     |      |     |      |     | K    | K   |      |     | D    | D   | K    | K   |
| 1800000  | 185 |      |     |      |     |      |     |      |     | M    | M   |      |     | G    | G   | K    | K   |
| 2200000  | 225 |      |     |      |     |      |     |      |     | M    | M   |      |     | G    | G   | K    | K   |
| 2700000  | 275 |      |     |      |     |      |     |      |     | M    | M   |      |     | K    | K   | K    | K   |
| 3300000  | 335 |      |     |      |     |      |     |      |     |      |     |      |     | K    | K   | K    | K   |
| 3900000  | 395 |      |     |      |     |      |     |      |     |      |     |      |     | K    | K   | K    | K   |
| 4700000  | 475 |      |     |      |     |      |     |      |     |      |     |      |     | K    | K   | K    | K   |
| 5600000  | 565 |      |     |      |     |      |     |      |     |      |     |      |     | K    | K   | K    | K   |
| 6800000  | 685 |      |     |      |     |      |     |      |     |      |     |      |     | K    | K   | K    | K   |
| 8200000  | 825 |      |     |      |     |      |     |      |     |      |     |      |     | M    | M   | M    | M   |
| 10000000 | 106 |      |     |      |     |      |     |      |     |      |     |      |     | M    | M   | M    | M   |

## ■ 产品简介

汇聚中压系列产品使用无铅/镉元素材料制作，其由精确的介电材料和适当的导电浆料配制，自动化制程的稳定生产和严谨的质量精确管控了介电设计厚度、电极完整性以及端电极连接的良好特性，实现了最佳可靠度的产品性能。

## ■ 特点

- ◆ 电压使用选择范围广
- ◆ EIA 0603-2225
- ◆ 符合 RoHS 标准
- ◆ 高可靠性和稳定性

## ■ 用途

- ◆ 一般电子设备
- ◆ 电源输入/输出滤波
- ◆ 电源缓冲电路
- ◆ 功率因素改善
- ◆ 噪音旁路

## ■ 一般电气规格

| 介电材料                     | COG                                                  |                        | X7R                                                  |              |
|--------------------------|------------------------------------------------------|------------------------|------------------------------------------------------|--------------|
| EIA 尺寸                   | 0603, 0805, 1206, 1210, 1808, 1812, 1825, 2220, 2225 |                        | 0603, 0805, 1206, 1210, 1808, 1812, 1825, 2220, 2225 |              |
| 额定电压                     | 100V~630V                                            |                        | 100V~630V                                            |              |
| 电容范围                     | 0.5pF ~ 270nF                                        |                        | 100pF ~ 10μF                                         |              |
| 电容公差值                    | 参阅产品订货信息表 5                                          |                        | 参阅产品订货信息表 5                                          |              |
| 损耗角正切 (Tan δ) & 品质因数 (Q) | 电容量范围                                                | Q                      | 额定电压                                                 | Tan δ (D.F.) |
|                          | Cap<30pF                                             | Q≥400+20C              | 100V~630V                                            | ≤ 2.5%       |
|                          | Cap≥30pF                                             | Q≥1000                 |                                                      |              |
| 检测条件                     | 常温 25°C 环境温度                                         |                        | 预处理 (2类产品) 150±10°C /1 小时热处理后静置于常温环境 24±2 小时,再进行测量作业 |              |
|                          | 电容量范围                                                | 检测条件                   | 适用检测:<br>1.0±0.2Vrms<br>1.0kHz±10%<br>25°C 常温环境      |              |
|                          | Cap≤1000pF                                           | 1.0±0.2Vrms 1.0MHz±10% |                                                      |              |
| Cap>1000pF               | 1.0±0.2Vrms<br>1.0kHz±10%                            |                        |                                                      |              |
| 绝缘电阻 (IR)                | ≥100GΩ 或 R•C≥ 500Ω-F<br>任一较小值以上                      |                        | ≥10GΩ或 R•C≥100Ω-F<br>任一较小值以上                         |              |
| 工作温度                     | - 55°C to + 125 °C                                   |                        |                                                      |              |
| 温度系数                     | ±30ppm / °C                                          |                        | ±15%                                                 |              |
| 端电极材料                    | 铜或银/ 镍 / 锡 (无铅端电极)                                   |                        |                                                      |              |









## ■ 产品简介

汇聚高压系列产品是通过多层电容器单元的串联，以实现高电压性能，其由精确的介电材料配制及适当的导电浆料搭配，以及自动化制程的稳定生产和严谨的质量把关，以精确控管了介电设计厚度、电极完整性还有外端电子端极连接的良好特性，实现了最佳可靠度的产品性能。

## ■ 特点

- ◆ 特殊结构设计提供高耐压水准
- ◆ EIA 0602-2225
- ◆ 符合 RoHS 标准
- ◆ 高可靠性和稳定性

## ■ 用途

- ◆ 直流对直流转换应用
- ◆ 高压耦合/直流阻断
- ◆ 背光逆变器
- ◆ LAN/WLAN 连接
- ◆ 调制解调器

## ■ 一般电气规格

| 介电质                      | C0G                                            |                         | X7R                                                      |              |
|--------------------------|------------------------------------------------|-------------------------|----------------------------------------------------------|--------------|
| EIA 尺寸                   | 0805, 1206, 1210, 1808, 1812, 1825, 2220, 2225 |                         | 1206, 1210, 1808, 1812, 1825, 2211, 2220, 2225           |              |
| 直流额定电压                   | 1000V~3000V                                    |                         | 1000V~3000V                                              |              |
| 电容范围                     | 1.5pF ~ 18nF                                   |                         | 100pF ~ 390nF                                            |              |
| 电容公差值                    | 参阅产品订货信息表 5                                    |                         | 参阅产品订货信息表 5                                              |              |
| 损耗角正切 (Tan δ) & 质量因子 (Q) | 电容量范围                                          | Q                       | 额定电压                                                     | Tan δ (D.F.) |
|                          | Cap<30pF:                                      | Q≥400+20C               | 1000~3000V                                               | ≤ 2.5%       |
|                          | Cap≥30pF:                                      | Q≥1000                  |                                                          |              |
| 检测条件                     | 常温 25°C 环境温度                                   |                         | 预处理 (2 类产品) 150±10°C /1 小时热处理后静置于常温环境 24±2 小时,紧接再进行测量作业. |              |
|                          | 电容量范围                                          | 检测条件                    | 适用检测:<br>1.0±0.2Vrms,<br>1.0kHz±10%,<br>25°C 常温环境.       |              |
|                          | Cap≤1000pF                                     | 1.0±0.2Vrms, 1.0MHz±10% |                                                          |              |
| Cap>1000pF               | 1.0±0.2Vrms, 1.0kHz±10%                        |                         |                                                          |              |
| 绝缘组抗值 (IR)               | ≥100Ω 或 R•C≥ 500Ω-F<br>任一较小值以上                 |                         | ≥10Ω或 R•C≥100Ω-F<br>任一较小值以上                              |              |
| 操作环境温度                   | - 55°C to + 125 °C                             |                         |                                                          |              |
| 温度公差系数                   | ±30ppm / °C                                    |                         | ±15%                                                     |              |
| 端电极材料                    | 铜或银/ 镍 / 锡 (无铅端电极)                             |                         |                                                          |              |

## COG 容值表 (1)

| 尺寸       |     | 0805 | 1206 |       | 1210 |     |       | 1808 |     |       |     |     |
|----------|-----|------|------|-------|------|-----|-------|------|-----|-------|-----|-----|
| 电容量 (pF) | 代码  | 1KV  | 1KV  | 1.5KV | 2KV  | 1KV | 1.5KV | 2KV  | 1KV | 1.5KV | 2KV | 3KV |
| 0.5      | 0R5 |      |      |       |      |     |       |      |     |       |     |     |
| 1        | 1R0 |      |      |       |      |     |       |      |     |       |     |     |
| 1.2      | 1R2 |      | B    | B     | B    |     |       |      |     |       |     |     |
| 1.5      | 1R5 |      | B    | B     | B    |     |       |      |     |       |     |     |
| 1.8      | 1R8 | B    | B    | B     | B    |     |       |      |     |       |     |     |
| 2.2      | 2R2 | B    | B    | B     | B    |     |       |      | D   | D     | D   | D   |
| 2.7      | 2R7 | B    | B    | B     | B    |     |       |      | D   | D     | D   | D   |
| 3.3      | 3R3 | B    | B    | B     | B    |     |       |      | D   | D     | D   | D   |
| 3.9      | 3R9 | B    | B    | B     | B    |     |       |      | D   | D     | D   | D   |
| 4.7      | 4R7 | B    | B    | B     | B    |     |       |      | D   | D     | D   | D   |
| 5.6      | 5R6 | B    | B    | B     | B    |     |       |      | D   | D     | D   | D   |
| 6.8      | 6R8 | B    | B    | B     | B    |     |       |      | D   | D     | D   | D   |
| 8.2      | 8R2 | B    | B    | B     | B    |     |       |      | D   | D     | D   | D   |
| 10       | 100 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 12       | 120 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 15       | 150 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 18       | 180 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 22       | 220 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 27       | 270 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 33       | 330 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 39       | 390 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 47       | 470 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 56       | 560 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 68       | 680 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 82       | 820 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 100      | 101 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 120      | 121 | B    | B    | B     | B    | C   | C     | C    | D   | D     | D   | D   |
| 150      | 151 | B    | C    | C     | C    | C   | C     | C    | D   | D     | D   | D   |
| 180      | 181 | D    | C    | C     | C    | C   | C     | C    | D   | D     | D   | D   |
| 220      | 221 | D    | C    | D     | D    | C   | C     | C    | D   | D     | D   | D   |
| 270      | 271 | D    | C    | D     | D    | C   | C     | C    | D   | D     | D   | D   |
| 330      | 331 | D    | D    | G     | G    | C   | C     | C    | D   | D     | D   | G   |
| 390      | 391 | D    | D    | G     | G    | C   | C     | C    | D   | D     | D   | G   |
| 470      | 471 |      | D    | G     | G    | C   | D     | D    | D   | D     | D   | K   |
| 560      | 561 |      | G    |       |      | D   | D     | D    | D   | D     | D   | K   |
| 680      | 681 |      | G    |       |      | D   | G     | G    | D   | D     | D   |     |
| 820      | 821 |      | G    |       |      | G   | G     | G    | D   | D     | D   |     |
| 1000     | 102 |      | G    |       |      | G   | K     | K    | D   | G     | G   |     |
| 1200     | 122 |      | G    |       |      | G   | K     | K    | G   | G     | G   |     |
| 1500     | 152 |      |      |       |      | K   | M     | M    | G   | K     | K   |     |
| 1800     | 182 |      |      |       |      | M   | M     | M    | K   | K     | K   |     |
| 2200     | 222 |      |      |       |      | M   |       |      | K   |       |     |     |
| 2700     | 272 |      |      |       |      | M   |       |      | K   |       |     |     |
| 3300     | 332 |      |      |       |      | M   |       |      | K   |       |     |     |
| 3900     | 392 |      |      |       |      | M   |       |      |     |       |     |     |
| 4700     | 472 |      |      |       |      |     |       |      |     |       |     |     |
| 5600     | 562 |      |      |       |      |     |       |      |     |       |     |     |
| 6800     | 682 |      |      |       |      |     |       |      |     |       |     |     |
| 8200     | 822 |      |      |       |      |     |       |      |     |       |     |     |
| 10000    | 103 |      |      |       |      |     |       |      |     |       |     |     |
| 12000    | 123 |      |      |       |      |     |       |      |     |       |     |     |
| 15000    | 153 |      |      |       |      |     |       |      |     |       |     |     |
| 18000    | 183 |      |      |       |      |     |       |      |     |       |     |     |
| 22000    | 223 |      |      |       |      |     |       |      |     |       |     |     |
| 27000    | 273 |      |      |       |      |     |       |      |     |       |     |     |
| 33000    | 333 |      |      |       |      |     |       |      |     |       |     |     |
| 39000    | 393 |      |      |       |      |     |       |      |     |       |     |     |
| 47000    | 473 |      |      |       |      |     |       |      |     |       |     |     |
| 56000    | 563 |      |      |       |      |     |       |      |     |       |     |     |
| 68000    | 683 |      |      |       |      |     |       |      |     |       |     |     |
| 82000    | 823 |      |      |       |      |     |       |      |     |       |     |     |
| 100000   | 104 |      |      |       |      |     |       |      |     |       |     |     |
| 120000   | 124 |      |      |       |      |     |       |      |     |       |     |     |
| 150000   | 154 |      |      |       |      |     |       |      |     |       |     |     |
| 180000   | 184 |      |      |       |      |     |       |      |     |       |     |     |
| 220000   | 224 |      |      |       |      |     |       |      |     |       |     |     |
| 270000   | 274 |      |      |       |      |     |       |      |     |       |     |     |
| 330000   | 334 |      |      |       |      |     |       |      |     |       |     |     |
| 390000   | 394 |      |      |       |      |     |       |      |     |       |     |     |
| 470000   | 474 |      |      |       |      |     |       |      |     |       |     |     |



## COG 容值表 (2)

| 尺寸       |     | 1812 |       |     |     | 1825 |       |     |     | 2220 |       |     |     | 2225 |       |     |     |
|----------|-----|------|-------|-----|-----|------|-------|-----|-----|------|-------|-----|-----|------|-------|-----|-----|
| 电容量 (pF) | 代码  | 1KV  | 1.5KV | 2KV | 3KV | 1KV  | 1.5KV | 2KV | 3KV | 1KV  | 1.5KV | 2KV | 3KV | 1KV  | 1.5KV | 2KV | 3KV |
| 0.5      | 0R5 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 1        | 1R0 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 1.2      | 1R2 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 1.5      | 1R5 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 1.8      | 1R8 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 2.2      | 2R2 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 2.7      | 2R7 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 3.3      | 3R3 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 3.9      | 3R9 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 4.7      | 4R7 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 5.6      | 5R6 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 6.8      | 6R8 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 8.2      | 8R2 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 10       | 100 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 12       | 120 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 15       | 150 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 18       | 180 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 22       | 220 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 27       | 270 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 33       | 330 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 39       | 390 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 47       | 470 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 56       | 560 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 68       | 680 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 82       | 820 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 100      | 101 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 120      | 121 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 150      | 151 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 180      | 181 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 220      | 221 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 270      | 271 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 330      | 331 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 390      | 391 | D    | D     | D   | D   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 470      | 471 | D    | D     | D   | G   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 560      | 561 | D    | D     | D   | G   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 680      | 681 | D    | D     | D   | K   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 820      | 821 | D    | D     | D   | M   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 1000     | 102 | D    | D     | D   | M   | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 1200     | 122 | D    | G     | G   |     | G    | G     | G   | G   | G    | G     | G   | G   | G    | G     | G   | G   |
| 1500     | 152 | D    | G     | G   |     | G    | G     | G   | K   | G    | G     | G   | K   | G    | G     | G   | G   |
| 1800     | 182 | G    | K     | K   |     | G    | G     | G   | K   | G    | G     | G   | M   | G    | G     | G   | K   |
| 2200     | 222 | G    | K     | K   |     | G    | G     | G   | M   | G    | G     | G   | M   | G    | G     | G   | K   |
| 2700     | 272 | K    | M     | M   |     | G    | G     | G   | M   | G    | G     | G   | M   | G    | G     | G   | M   |
| 3300     | 332 | K    | M     | M   |     | G    | G     | G   |     | G    | G     | G   |     | G    | G     | G   | M   |
| 3900     | 392 | M    |       |     |     | G    | G     | G   |     | G    | G     | G   |     | G    | G     | G   |     |
| 4700     | 472 | M    |       |     |     | G    | K     | K   |     | G    | K     | K   |     | G    | G     | G   |     |
| 5600     | 562 | M    |       |     |     | K    | K     | K   |     | K    | K     | K   |     | G    | K     | K   |     |
| 6800     | 682 |      |       |     |     | K    | M     | M   |     | K    | M     | M   |     | G    | K     | K   |     |
| 8200     | 822 |      |       |     |     | M    | M     | M   |     | M    | M     | M   |     | K    | M     | M   |     |
| 10000    | 103 |      |       |     |     | M    |       |     |     | M    |       |     |     | M    | M     | M   |     |
| 12000    | 123 |      |       |     |     | M    |       |     |     |      |       |     |     | M    |       |     |     |
| 15000    | 153 |      |       |     |     |      |       |     |     |      |       |     |     | M    |       |     |     |
| 18000    | 183 |      |       |     |     |      |       |     |     |      |       |     |     | M    |       |     |     |
| 22000    | 223 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 27000    | 273 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 33000    | 333 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 39000    | 393 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 47000    | 473 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 56000    | 563 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 68000    | 683 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 82000    | 823 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 100000   | 104 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 120000   | 124 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 150000   | 154 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 180000   | 184 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 220000   | 224 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 270000   | 274 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 330000   | 334 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 390000   | 394 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |
| 470000   | 474 |      |       |     |     |      |       |     |     |      |       |     |     |      |       |     |     |

## ■ X7R 容值表 (1)

| 尺寸       |     | 0805 |     | 1206 |     |       |     |      | 1210 |     |      | 1808 |     |     |      | 1812 |     |  |  |
|----------|-----|------|-----|------|-----|-------|-----|------|------|-----|------|------|-----|-----|------|------|-----|--|--|
| 电容量 (pF) | 代码  | 1KV  | 1KV | 1.5V | 2KV | 2.5KV | 1KV | 1.5V | 2KV  | 1KV | 1.5V | 2KV  | 3KV | 1KV | 1.5V | 2KV  | 3KV |  |  |
| 100      | 101 | B    | B   | B    | B   | B     |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 120      | 121 | B    | B   | B    | B   | B     |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 150      | 151 | B    | B   | B    | B   | B     |     |      |      | D   | D    | D    | D   |     |      |      |     |  |  |
| 180      | 181 | B    | B   | B    | B   | B     |     |      |      | D   | D    | D    | D   |     |      |      |     |  |  |
| 220      | 221 | B    | B   | B    | B   | B     | C   | C    | C    | D   | D    | D    | D   |     |      |      |     |  |  |
| 270      | 271 | B    | B   | B    | B   | B     | C   | C    | C    | D   | D    | D    | D   | D   | D    | D    | D   |  |  |
| 330      | 331 | B    | B   | B    | B   | B     | C   | C    | C    | D   | D    | D    | D   | D   | D    | D    | D   |  |  |
| 390      | 391 | B    | B   | B    | B   | B     | C   | C    | C    | D   | D    | D    | D   | D   | D    | D    | D   |  |  |
| 470      | 471 | B    | B   | B    | B   | B     | C   | C    | C    | D   | D    | D    | D   | D   | D    | D    | D   |  |  |
| 560      | 561 | B    | B   | B    | B   | B     | C   | C    | C    | D   | D    | D    | G   | D   | D    | D    | D   |  |  |
| 680      | 681 | B    | B   | C    | C   | C     | C   | C    | C    | D   | D    | D    | G   | D   | D    | D    | D   |  |  |
| 820      | 821 | B    | B   | C    | C   | C     | C   | C    | C    | D   | D    | D    | G   | D   | D    | D    | D   |  |  |
| 1000     | 102 | B    | B   | D    | D   | D     | C   | D    | D    | D   | D    | D    | K   | D   | D    | D    | G   |  |  |
| 1200     | 122 | B    | B   | G    | G   | G     | C   | G    | G    | D   | D    | D    | K   | D   | D    | D    | K   |  |  |
| 1500     | 152 | B    | B   | G    | G   | G     | C   | G    | G    | D   | D    | D    | K   | D   | D    | D    | K   |  |  |
| 1800     | 182 | D    | B   | G    | G   | G     | C   | G    | G    | D   | D    | D    | K   | D   | D    | D    | M   |  |  |
| 2200     | 222 | D    | B   | G    | G   | G     | C   | K    | K    | D   | G    | G    | K   | D   | D    | D    | M   |  |  |
| 2700     | 272 | D    | B   | G    | G   | G     | C   | K    | M    | D   | K    | K    |     | D   | D    | D    | M   |  |  |
| 3300     | 332 | D    | B   | G    | G   | G     | C   | K    | M    | D   | K    | K    |     | D   | G    | G    | M   |  |  |
| 3900     | 392 | D    | B   | G    |     |       | C   | M    | M    | D   | K    | K    |     | D   | K    | K    |     |  |  |
| 4700     | 472 | D    | B   | G    |     |       | C   | M    | M    | D   | K    | K    |     | D   | K    | K    |     |  |  |
| 5600     | 562 | D    | B   |      |     |       | C   | M    | M    | D   | K    | K    |     | D   | M    | M    |     |  |  |
| 6800     | 682 | D    | C   |      |     |       | C   | M    | M    | D   | K    | K    |     | D   | M    | M    |     |  |  |
| 8200     | 822 | D    | C   |      |     |       | C   | M    | M    | D   |      |      |     | D   | M    | M    |     |  |  |
| 10000    | 103 |      | C   |      |     |       | D   |      |      | D   |      |      |     | D   | M    | M    |     |  |  |
| 12000    | 123 |      | D   |      |     |       | D   |      |      | G   |      |      |     | D   |      |      |     |  |  |
| 15000    | 153 |      | G   |      |     |       | G   |      |      | G   |      |      |     | D   |      |      |     |  |  |
| 18000    | 183 |      |     |      |     |       | G   |      |      | K   |      |      |     | G   |      |      |     |  |  |
| 22000    | 223 |      |     |      |     |       | G   |      |      | K   |      |      |     | G   |      |      |     |  |  |
| 27000    | 273 |      |     |      |     |       | G   |      |      | K   |      |      |     | K   |      |      |     |  |  |
| 33000    | 333 |      |     |      |     |       | G   |      |      | K   |      |      |     | K   |      |      |     |  |  |
| 39000    | 393 |      |     |      |     |       | M   |      |      | K   |      |      |     | M   |      |      |     |  |  |
| 47000    | 473 |      |     |      |     |       | M   |      |      | K   |      |      |     | M   |      |      |     |  |  |
| 56000    | 563 |      |     |      |     |       | M   |      |      | K   |      |      |     | M   |      |      |     |  |  |
| 68000    | 683 |      |     |      |     |       | M   |      |      |     |      |      |     | M   |      |      |     |  |  |
| 82000    | 823 |      |     |      |     |       |     |      |      |     |      |      |     | M   |      |      |     |  |  |
| 100000   | 104 |      |     |      |     |       |     |      |      |     |      |      |     | M   |      |      |     |  |  |
| 120000   | 124 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 150000   | 154 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 180000   | 184 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 220000   | 224 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 270000   | 274 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 330000   | 334 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 390000   | 394 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 470000   | 474 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 560000   | 564 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 680000   | 684 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 820000   | 824 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 1000000  | 105 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 1200000  | 125 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 1500000  | 155 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 1800000  | 185 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 2200000  | 225 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 2700000  | 275 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 3300000  | 335 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 3900000  | 395 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 4700000  | 475 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 5600000  | 565 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 6800000  | 685 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 8200000  | 825 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |
| 10000000 | 106 |      |     |      |     |       |     |      |      |     |      |      |     |     |      |      |     |  |  |

## ■ X7R 容值表 (2)

| 尺寸       |     | 1825 |      |     |     | 2211 | 2220 |      |     |     | 2225 |      |     |     |
|----------|-----|------|------|-----|-----|------|------|------|-----|-----|------|------|-----|-----|
| 电容量 (pF) | 代码  | 1KV  | 1.5V | 2KV | 3KV | 3KV  | 1KV  | 1.5V | 2KV | 3KV | 1KV  | 1.5V | 2KV | 3KV |
| 100      | 101 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 120      | 121 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 150      | 151 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 180      | 181 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 220      | 221 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 270      | 271 |      |      |     |     | K    |      |      |     |     |      |      |     |     |
| 330      | 331 |      |      |     |     | K    |      |      |     |     |      |      |     |     |
| 390      | 391 |      |      |     |     | K    |      |      |     |     |      |      |     |     |
| 470      | 471 |      |      |     |     | K    |      |      |     |     |      |      |     |     |
| 560      | 561 |      |      |     |     | K    |      |      |     |     |      |      |     |     |
| 680      | 681 |      |      |     |     | K    |      |      |     |     |      |      |     |     |
| 820      | 821 |      |      |     |     | K    |      |      |     |     |      |      |     |     |
| 1000     | 102 | K    | K    | K   | K   | K    | K    | K    | K   | K   | K    | K    | K   | K   |
| 1200     | 122 | K    | K    | K   | K   | M    | K    | K    | K   | K   | K    | K    | K   | K   |
| 1500     | 152 | K    | K    | K   | K   | M    | K    | K    | K   | K   | K    | K    | K   | K   |
| 1800     | 182 | K    | K    | K   | K   | M    | K    | K    | K   | K   | K    | K    | K   | K   |
| 2200     | 222 | K    | K    | K   | K   | M    | K    | K    | K   | K   | K    | K    | K   | K   |
| 2700     | 272 | K    | K    | K   | K   | M    | K    | K    | K   | K   | K    | K    | K   | K   |
| 3300     | 332 | K    | K    | K   | K   | M    | K    | K    | K   | K   | K    | K    | K   | K   |
| 3900     | 392 | K    | K    | K   | K   |      | K    | K    | K   | K   | K    | K    | K   | K   |
| 4700     | 472 | K    | K    | K   | K   |      | K    | K    | K   | K   | K    | K    | K   | K   |
| 5600     | 562 | K    | K    | K   | M   |      | K    | K    | K   | K   | K    | K    | K   | M   |
| 6800     | 682 | K    | K    | K   | M   |      | K    | K    | K   | M   | K    | K    | K   | M   |
| 8200     | 822 | K    | K    | K   | M   |      | K    | M    | M   | M   | K    | K    | K   | M   |
| 10000    | 103 | K    | K    | K   | M   |      | K    | M    | M   | M   | K    | K    | K   | M   |
| 12000    | 123 | K    | M    | M   | U   |      | K    | M    | M   | U   | K    | M    | M   | M   |
| 15000    | 153 | K    | M    | M   | U   |      | K    | M    | M   | U   | K    | M    | M   | M   |
| 18000    | 183 | K    | U    | U   | U   |      | K    | U    | U   | U   | K    | M    | M   | U   |
| 22000    | 223 | K    | U    | U   |     |      | K    | U    | U   |     | K    | M    | M   |     |
| 27000    | 273 | K    | U    | U   |     |      | K    | U    | U   |     | K    | M    | M   |     |
| 33000    | 333 | K    | U    | U   |     |      | K    | U    | U   |     | K    | M    | M   |     |
| 39000    | 393 | K    | U    | U   |     |      | K    | U    | U   |     | K    | U    | U   |     |
| 47000    | 473 | K    | U    | U   |     |      | K    | U    | U   |     | K    | U    | U   |     |
| 56000    | 563 | K    | U    | U   |     |      | K    | U    | U   |     | K    | U    | U   |     |
| 68000    | 683 | K    |      |     |     |      | K    |      |     |     | K    |      |     |     |
| 82000    | 823 | K    |      |     |     |      | K    |      |     |     | K    |      |     |     |
| 100000   | 104 | M    |      |     |     |      | M    |      |     |     | M    |      |     |     |
| 120000   | 124 | U    |      |     |     |      | M    |      |     |     | U    |      |     |     |
| 150000   | 154 | U    |      |     |     |      | U    |      |     |     | U    |      |     |     |
| 180000   | 184 | U    |      |     |     |      | U    |      |     |     | U    |      |     |     |
| 220000   | 224 | U    |      |     |     |      | U    |      |     |     | U    |      |     |     |
| 270000   | 274 | U    |      |     |     |      | U    |      |     |     | U    |      |     |     |
| 330000   | 334 | U    |      |     |     |      | U    |      |     |     | U    |      |     |     |
| 390000   | 394 |      |      |     |     |      | U    |      |     |     | U    |      |     |     |
| 470000   | 474 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 560000   | 564 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 680000   | 684 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 820000   | 824 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 1000000  | 105 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 1200000  | 125 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 1500000  | 155 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 1800000  | 185 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 2200000  | 225 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 2700000  | 275 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 3300000  | 335 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 3900000  | 395 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 4700000  | 475 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 5600000  | 565 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 6800000  | 685 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 8200000  | 825 |      |      |     |     |      |      |      |     |     |      |      |     |     |
| 10000000 | 106 |      |      |     |     |      |      |      |     |     |      |      |     |     |

## ■ 产品简介

汇聚高压系列产品是通过多层电容器单元的串联，以实现高电压性能，其由精确的介电材料配制及适当的导电浆料搭配，以及自动化制程的稳定生产和严谨的质量把关，以精确控管了介电设计厚度、电极完整性还有外端电子端极连接的良好特性，实现了最佳可靠度的产品性能。

## ■ 特点

- ◆ 特殊结构设计提供高耐压水准
- ◆ EIA 1808-2225
- ◆ 符合 RoHS 标准
- ◆ 高可靠性和稳定性

## ■ 用途

- ◆ 直流对直流转换应用
- ◆ 高压耦合/直流阻断
- ◆ 背光逆变器
- ◆ LAN/WLAN 连接
- ◆ 调制解调器

## ■ 一般电气规格

| 介电质                      | C0G                               |                         | X7R                                                        |              |
|--------------------------|-----------------------------------|-------------------------|------------------------------------------------------------|--------------|
| EIA 尺寸                   | 1808,<br>1812, 1825, 2220, 2225   |                         | 1808,<br>1812, 1825, 2211, 2220, 2225                      |              |
| 直流额定电压                   | >3000V                            |                         | >3000V                                                     |              |
| 电容范围                     | 2.2pF ~ 330pF                     |                         | 150pF ~ 1.8nF                                              |              |
| 电容公差值                    | 参阅产品订货信息表 5                       |                         | 参阅产品订货信息表 5                                                |              |
| 损耗角正切 (Tan δ) & 质量因子 (Q) | 电容量范围                             | Q                       | 额定电压                                                       | Tan δ (D.F.) |
|                          | Cap < 30pF:                       | Q ≥ 400+20C             | 3000~6000V                                                 | ≤ 2.5%       |
|                          | Cap ≥ 30pF:                       | Q ≥ 1000                |                                                            |              |
| 检测条件                     | 常温 25°C 环境温度                      |                         | 预处理 (2 类产品) 150±10°C / 1 小时热处理后静置于常温环境 24±2 小时, 紧接再进行测量作业. |              |
|                          | 电容量范围                             | 检测条件                    | 适用检测:<br>1.0±0.2Vrms,<br>1.0kHz±10%,<br>25°C 常温环境.         |              |
|                          | Cap ≤ 1000pF                      | 1.0±0.2Vrms, 1.0MHz±10% |                                                            |              |
| Cap > 1000pF             | 1.0±0.2Vrms, 1.0kHz±10%           |                         |                                                            |              |
| 绝缘组抗值 (IR)               | ≥ 100GΩ 或 R•C ≥ 500Ω-F<br>任一较小值以上 |                         | ≥ 10GΩ 或 R•C ≥ 100Ω-F<br>任一较小值以上                           |              |
| 操作环境温度                   | - 55°C to + 125 °C                |                         |                                                            |              |
| 温度公差系数                   | ±30ppm / °C                       |                         | ±15%                                                       |              |
| 端电极材料                    | 铜或银/ 镍 / 锡 (无铅端电极)                |                         |                                                            |              |

## 容值表

| 介电质     |     | C0G   |       |       |       |       | X7R   |       |       |       |       |       |
|---------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 尺寸      |     | 1808  | 1812  | 1825  | 2220  | 2225  | 1808  | 1812  | 1825  | 2211  | 2220  | 2225  |
| 电容量(pF) | 代码  | 4000V | 4000V | 4000V | 4000V | 4000V | 4000V | 4000V | 4000V | 4000V | 4000V | 4000V |
| 1.2     | 1R2 |       |       |       |       |       |       |       |       |       |       |       |
| 1.5     | 1R5 |       |       |       |       |       |       |       |       |       |       |       |
| 1.8     | 1R8 |       |       |       |       |       |       |       |       |       |       |       |
| 2.2     | 2R2 | D     |       |       |       |       |       |       |       |       |       |       |
| 2.7     | 2R7 | D     |       |       |       |       |       |       |       |       |       |       |
| 3.3     | 3R3 | D     |       |       |       |       |       |       |       |       |       |       |
| 3.9     | 3R9 | D     |       |       |       |       |       |       |       |       |       |       |
| 4.7     | 4R7 | D     |       |       |       |       |       |       |       |       |       |       |
| 5       | 5R0 | D     |       |       |       |       |       |       |       |       |       |       |
| 5.6     | 5R6 | D     |       |       |       |       |       |       |       |       |       |       |
| 6.8     | 6R8 | D     |       |       |       |       |       |       |       |       |       |       |
| 8.2     | 8R2 | D     |       |       |       |       |       |       |       |       |       |       |
| 10      | 100 | D     | D     | G     | G     | G     |       |       |       |       |       |       |
| 12      | 120 | D     | D     | G     | G     | G     |       |       |       |       |       |       |
| 15      | 150 | D     | D     | G     | G     | G     |       |       |       |       |       |       |
| 18      | 180 | D     | D     | G     | G     | G     |       |       |       |       |       |       |
| 22      | 220 | G     | D     | G     | G     | G     |       |       |       |       |       |       |
| 27      | 270 | G     | D     | G     | G     | G     |       |       |       |       |       |       |
| 33      | 330 | K     | D     | G     | G     | G     |       |       |       |       |       |       |
| 39      | 390 | K     | D     | G     | G     | G     |       |       |       |       |       |       |
| 47      | 470 |       | G     | G     | G     | G     |       |       |       |       |       |       |
| 56      | 560 |       | G     | G     | G     | G     |       |       |       |       |       |       |
| 68      | 680 |       | K     | G     | G     | G     |       |       |       |       |       |       |
| 82      | 820 |       | K     | G     | G     | G     |       |       |       |       |       |       |
| 100     | 101 |       |       | G     | G     | G     |       |       |       |       |       |       |
| 120     | 121 |       |       | G     | G     | G     |       |       |       |       |       |       |
| 150     | 151 |       |       | K     | G     | G     | K     |       |       |       |       |       |
| 180     | 181 |       |       | K     | K     | K     | K     |       |       |       |       |       |
| 220     | 221 |       |       |       | K     | K     | K     |       |       |       |       |       |
| 270     | 271 |       |       |       | M     | M     | K     | K     | K     | K     | K     | K     |
| 330     | 331 |       |       |       | M     |       | K     | K     | K     | K     | K     | K     |
| 390     | 391 |       |       |       |       |       | K     | K     | K     | K     | K     | K     |
| 470     | 471 |       |       |       |       |       | K     | K     | K     | K     | K     | K     |
| 560     | 561 |       |       |       |       |       | K     | K     | K     | K     | K     | K     |
| 680     | 681 |       |       |       |       |       | K     | K     | K     | K     | K     | K     |
| 820     | 821 |       |       |       |       |       | K     | K     | K     | K     | K     | K     |
| 1000    | 102 |       |       |       |       |       | K     | K     | K     | K     | K     | K     |
| 1200    | 122 |       |       |       |       |       |       | M     | M     | M     | M     | M     |
| 1500    | 152 |       |       |       |       |       |       | M     | M     | M     | M     | M     |
| 1800    | 182 |       |       |       |       |       |       | M     | M     | M     | M     | M     |
| 2200    | 222 |       |       |       |       |       |       |       |       |       |       |       |

## ■ 产品简介

汇聚高电容产品使用无铅/锡元素材料制作，其由精确的介电材料和适当的导电浆料配制，自动化制程的稳定生产和严谨的质量精确管控了介电设计厚度、电极完整性以及端电极连接的良好特性，实现了最佳可靠度的产品性能。

## ■ 特点

- ◆ 高容量规格于限定尺寸产品
- ◆ EIA 1206-2225
- ◆ 符合 RoHS 标准
- ◆ 高可靠性和稳定性

## ■ 用途

- ◆ 高频高密度应用电源
- ◆ 耦合/去耦应用
- ◆ 旁路应用
- ◆ 滤波应用

## ■ 一般电气规格

|                                  |                                                                             |                          |
|----------------------------------|-----------------------------------------------------------------------------|--------------------------|
| 介电材料                             | X7R                                                                         |                          |
| EIA 尺寸                           | 1206, 1210, 1812, 1825, 2220, 2225                                          |                          |
| 额定电压                             | 50V~250V                                                                    |                          |
| 电容范围                             | 1 $\mu$ F ~ 10 $\mu$ F                                                      |                          |
| 电容公差值                            | 参阅产品订货信息表 5                                                                 |                          |
| 损耗角正切 (Tan $\delta$ ) & 品质因数 (Q) | 参阅*附表 1                                                                     |                          |
| 检测条件<br>(25 $^{\circ}$ C 常温环境)   | 预处理 (2 类产品) 150 $\pm$ 10 $^{\circ}$ C /1 小时热处理后静置于常温环境 24 $\pm$ 2 小时再进行测量作业 |                          |
|                                  | 电容范围                                                                        | 检测条件                     |
|                                  | 100pF < Cap $\leq$ 10 $\mu$ F                                               | 1.0 $\pm$ 0.2Vrms 1.0kHz |
|                                  | Cap > 10 $\mu$ F                                                            | 0.5 $\pm$ 0.2Vrms, 120Hz |
| 绝缘电阻 (IR)                        | $\geq$ 10G $\Omega$ 或 R $\cdot$ C $\geq$ 100 $\Omega$ -F<br>任一较小值以上         |                          |
| 工作温度                             | - 55 $^{\circ}$ C to + 125 $^{\circ}$ C                                     |                          |
| 温度系数                             | $\pm$ 15%                                                                   |                          |
| 端电极材料                            | 铜或银/ (软银) / 镍 / 锡 (无铅端电极)                                                   |                          |

\*附表 1

| 额定电压       | D.F. $\leq$ | 特殊控管 D.F. $\leq$ | 尺寸容值                                                                                                |
|------------|-------------|------------------|-----------------------------------------------------------------------------------------------------|
| 25V        | $\leq$ 3.5% | $\leq$ 5%        | 0805 $\geq$ 1 $\mu$ F; 1210 $\geq$ 10 $\mu$ F                                                       |
|            |             | $\leq$ 7%        | 0603 $\geq$ 0.33 $\mu$ F; 1206 $\geq$ 4.7 $\mu$ F                                                   |
|            |             | $\leq$ 10%       | 0603 $\geq$ 0.47 $\mu$ F; 0805 $\geq$ 2.2 $\mu$ F; 1206 $\geq$ 6.8 $\mu$ F ; 1210 $\geq$ 22 $\mu$ F |
| $\geq$ 50V | $\leq$ 2.5% | $\leq$ 3%        | 0603 $\geq$ 0.047 $\mu$ F; 0805 $\geq$ 0.18 $\mu$ F; 1206 $\geq$ 0.47 $\mu$ F                       |
|            |             | $\leq$ 5%        | 1210 $\geq$ 4.7 $\mu$ F                                                                             |
|            |             | $\leq$ 10%       | 0603 $\geq$ 1 $\mu$ F; 0805 $\geq$ 1 $\mu$ F; 1206 $\geq$ 4.7 $\mu$ F; 1210 $\geq$ 10 $\mu$ F       |



## ■ 产品简介

汇聚低损产品采用低损耗陶瓷材料设计，其由精确的介电材料和适当的导电浆料配制，自动化制程的稳定生产和严谨的质量精确管控了介电设计厚度、电极完整性以及端电极连接的良好特性，实现了最佳可靠度的产品性能。

## ■ 特点

- ◆ 低 ESR、低损耗
- ◆ EIA 0805-2220
- ◆ 符合 RoHS 标准
- ◆ 高可靠性和稳定性

## ■ 用途

- ◆ 数码相机触控应用
- ◆ 数字电信应用
- ◆ 音频电路
- ◆ 照明应用

## ■ 一般电气规格

| 介电材料                     | X7R                                                                                                      |
|--------------------------|----------------------------------------------------------------------------------------------------------|
| EIA 尺寸                   | 0805, 1206, 1210, 1812, 1825, 2220                                                                       |
| 额定电压                     | 50V~500V                                                                                                 |
| 电容范围                     | 100pF ~ 1.2μF                                                                                            |
| 电容公差值                    | 参阅产品订货信息表 5                                                                                              |
| 损耗角正切 (Tan δ) & 品质因数 (Q) | U <sub>r</sub> < 200V: 1.4% max.<br>U <sub>r</sub> ≥ 200V: 1.0% max.                                     |
| 检测条件                     | 预处理 (2 类产品) 150±10°C / 1 小时热处理后静置于常温环境 24±2 小时再进行测量作业<br>适用检测:<br>1.0±0.2Vrms<br>1.0kHz±10%<br>25°C 常温环境 |
| 绝缘电阻 (IR)                | ≥10GΩ或 R•C≥500Ω-F<br>任一较小值以上                                                                             |
| 工作温度                     | - 55°C to + 125 °C                                                                                       |
| 温度系数                     | ±15%                                                                                                     |
| 端电极材料                    | 铜或银 / 镍 / 锡 (无铅端电极)                                                                                      |



## ■ X7R 容值表

| 尺寸       |     | 0805 |      | 1206 |      | 1210 |      |      | 1812 | 1825 | 2220 |      |
|----------|-----|------|------|------|------|------|------|------|------|------|------|------|
| 电容量 (pF) | 代码  | 250V | 100V | 250V | 500V | 100V | 250V | 500V | 100V | 100V | 100V | 250V |
| 100      | 101 | B    |      |      |      |      |      |      |      |      |      |      |
| 120      | 121 | B    |      |      |      |      |      |      |      |      |      |      |
| 150      | 151 | B    | D    | D    | D    |      |      |      |      |      |      |      |
| 180      | 181 | B    | D    | D    | D    |      |      |      |      |      |      |      |
| 220      | 221 | B    | D    | D    | D    |      |      |      |      |      |      |      |
| 270      | 271 | B    | D    | D    | D    |      |      |      |      |      |      |      |
| 330      | 331 | B    | D    | D    | D    |      |      |      |      |      |      |      |
| 390      | 391 | B    | D    | D    | D    |      |      |      |      |      |      |      |
| 470      | 471 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 560      | 561 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 680      | 681 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 820      | 821 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 1000     | 102 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 1200     | 122 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 1500     | 152 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 1800     | 182 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 2200     | 222 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 2700     | 272 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 3300     | 332 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 3900     | 392 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 4700     | 472 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 5600     | 562 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 6800     | 682 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 8200     | 822 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 10000    | 103 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 12000    | 123 | B    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 15000    | 153 | D    | D    | D    | D    | G    | G    | F    | G    | G    | K    | K    |
| 18000    | 183 | D    | D    | D    | G    | G    | G    | F    | G    | G    | K    | K    |
| 22000    | 223 | D    | D    | D    | G    | G    | G    | F    | G    | G    | K    | K    |
| 27000    | 273 |      | D    | D    | G    | G    | G    | F    | G    | G    | K    | K    |
| 33000    | 333 |      | D    | D    | G    | G    | G    | F    | G    | G    | K    | K    |
| 39000    | 393 |      | D    | D    | G    | G    | G    | G    | G    | G    | K    | K    |
| 47000    | 473 |      | D    | D    |      | G    | G    | G    | G    | G    | K    | K    |
| 56000    | 563 |      | D    | G    |      | G    | G    |      | G    | G    | K    | K    |
| 68000    | 683 |      | D    | G    |      | G    | G    |      | G    | G    | K    | K    |
| 82000    | 823 |      | D    | G    |      | G    | G    |      | G    | G    | K    | K    |
| 100000   | 104 |      | D    | G    |      | G    | G    |      | G    | G    | K    | K    |
| 120000   | 124 |      | D    |      |      | G    | G    |      | G    | G    | K    | K    |
| 150000   | 154 |      | G    |      |      | G    | G    |      | G    | G    | K    | K    |
| 180000   | 184 |      | G    |      |      | G    |      |      | G    | G    | K    | K    |
| 220000   | 224 |      | G    |      |      | G    |      |      | G    | G    | K    | K    |
| 270000   | 274 |      |      |      |      | G    |      |      | G    | G    | K    | K    |
| 330000   | 334 |      |      |      |      | G    |      |      | G    | G    | K    | K    |
| 390000   | 394 |      |      |      |      |      |      |      | G    | G    | K    | K    |
| 470000   | 474 |      |      |      |      |      |      |      | G    | G    | K    | K    |
| 560000   | 564 |      |      |      |      |      |      |      | G    | K    | K    | K    |
| 680000   | 684 |      |      |      |      |      |      |      | K    | K    | K    | M    |
| 820000   | 824 |      |      |      |      |      |      |      | K    | K    | K    |      |
| 1000000  | 105 |      |      |      |      |      |      |      | M    | K    | K    |      |
| 1200000  | 125 |      |      |      |      |      |      |      |      |      | M    |      |
| 1500000  | 155 |      |      |      |      |      |      |      |      |      |      |      |

## ■ 产品简介

汇聚开路模式产品通过特殊的内部印刷电极网版设计，同时达到分压降低电压冲击效应以及避免因电路板弯曲使组件损伤所引起回路电流影响。其由精确的介电材料和适当的导电浆料配制，自动化制程的稳定生产和严谨的质量精确管控了介电设计厚度、电极完整性以及端电极连接的良好特性，实现了最佳可靠度的产品性能。

## ■ 特点

- ◆ 开路工作模式
- ◆ EIA 0805-1812
- ◆ 符合 RoHS 标准
- ◆ 高可靠性和稳定性

## ■ 用途

- ◆ 高电流回路应用
- ◆ 受到机械应力影响相关应用

## ■ 一般电气规格

|                          |                                                          |              |
|--------------------------|----------------------------------------------------------|--------------|
| 介电材料                     | X7R                                                      |              |
| EIA 尺寸                   | 0805, 1206, 1210, 1808, 1812                             |              |
| 额定电压                     | 50V~630V                                                 |              |
| 电容范围                     | 100pF ~ 390nF                                            |              |
| 电容公差值                    | 参阅产品订货信息表 5                                              |              |
| 损耗角正切 (Tan δ) & 品质因数 (Q) | 额定电压                                                     | Tan δ (D.F.) |
|                          | 50V~630V                                                 | ≤ 2.5%       |
| 检测条件                     | 预处理 (2类产品)<br>150±10°C / 1 小时热处理后静置于常温环境 24±2 小时,再进行测量作业 |              |
|                          | 适用检测: 1.0±0.2Vrms, 1.0kHz±10%, 25°C 常温环境                 |              |
| 绝缘电阻 (IR)                | ≥ 10GΩ 或 R•C ≥ 100Ω-F, 取任一较小值以上                          |              |
| 工作温度                     | - 55°C to + 125 °C                                       |              |
| 温度系数                     | ±15%                                                     |              |
| 端电极材料                    | 铜或银/ 镍 / 锡 (无铅端电极)                                       |              |

## ■ X7R 容值表 (1)

| 尺寸          |     | 805 |      |      |      |      | 1206 |      |      |      |      |
|-------------|-----|-----|------|------|------|------|------|------|------|------|------|
| 电容量<br>(pF) | 代码  | 50V | 100V | 250V | 500V | 630V | 50V  | 100V | 250V | 500V | 630V |
| 100         | 101 | B   | B    | B    | B    | B    |      |      |      |      |      |
| 120         | 121 | B   | B    | B    | B    | B    |      |      |      |      |      |
| 150         | 151 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 180         | 181 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 220         | 221 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 270         | 271 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 330         | 331 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 390         | 391 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 470         | 471 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 560         | 561 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 680         | 681 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 820         | 821 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 1000        | 102 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 1200        | 122 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 1500        | 152 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 1800        | 182 | B   | B    | B    | B    | B    | B    | B    | B    | B    | B    |
| 2200        | 222 | B   | B    | B    | C    | C    | B    | B    | B    | B    | B    |
| 2700        | 272 | B   | B    | B    | C    | C    | B    | B    | B    | B    | B    |
| 3300        | 332 | B   | B    | B    | D    | D    | B    | B    | B    | B    | B    |
| 3900        | 392 | B   | B    | B    | D    | D    | B    | B    | B    | B    | B    |
| 4700        | 472 | B   | B    | B    | D    | D    | B    | B    | B    | B    | B    |
| 5600        | 562 | B   | B    | B    |      |      | B    | B    | B    | B    | B    |
| 6800        | 682 | B   | B    | B    |      |      | B    | B    | B    | B    | B    |
| 8200        | 822 | B   | B    | B    |      |      | B    | B    | B    | B    | B    |
| 10000       | 103 | B   | B    | B    |      |      | B    | B    | B    | C    | C    |
| 12000       | 123 | B   | B    | C    |      |      | B    | B    | B    | D    | D    |
| 15000       | 153 | B   | B    | D    |      |      | B    | B    | B    | D    | D    |
| 18000       | 183 | B   | B    | D    |      |      | B    | B    | B    | D    | D    |
| 22000       | 223 | B   | B    | D    |      |      | B    | B    | B    | G    | G    |
| 27000       | 273 | B   | C    | D    |      |      | B    | B    | B    | G    | G    |
| 33000       | 333 | B   | C    |      |      |      | B    | B    | B    | G    |      |
| 39000       | 393 | B   | D    |      |      |      | B    | B    | B    | G    |      |
| 47000       | 473 | C   | D    |      |      |      | B    | B    | B    | G    |      |
| 56000       | 563 | C   | D    |      |      |      | B    | B    | C    |      |      |
| 68000       | 683 | D   | D    |      |      |      | B    | B    | D    |      |      |
| 82000       | 823 | D   |      |      |      |      | B    | B    | D    |      |      |
| 100000      | 104 | D   |      |      |      |      | B    | B    | G    |      |      |
| 120000      | 124 |     |      |      |      |      | B    | B    |      |      |      |
| 150000      | 154 |     |      |      |      |      | B    | C    |      |      |      |
| 180000      | 184 |     |      |      |      |      | B    | D    |      |      |      |
| 220000      | 224 |     |      |      |      |      | B    | D    |      |      |      |
| 270000      | 274 |     |      |      |      |      | D    | G    |      |      |      |
| 330000      | 334 |     |      |      |      |      | D    | P    |      |      |      |
| 390000      | 394 |     |      |      |      |      | D    |      |      |      |      |
| 470000      | 474 |     |      |      |      |      | P    |      |      |      |      |
| 560000      | 564 |     |      |      |      |      |      |      |      |      |      |
| 680000      | 684 |     |      |      |      |      |      |      |      |      |      |
| 820000      | 824 |     |      |      |      |      |      |      |      |      |      |
| 1000000     | 105 |     |      |      |      |      |      |      |      |      |      |
| 1200000     | 125 |     |      |      |      |      |      |      |      |      |      |
| 1500000     | 155 |     |      |      |      |      |      |      |      |      |      |
| 1800000     | 185 |     |      |      |      |      |      |      |      |      |      |
| 2200000     | 225 |     |      |      |      |      |      |      |      |      |      |
| 2700000     | 275 |     |      |      |      |      |      |      |      |      |      |

## ■ X7R 容值表 (2)

| 尺寸       |     | 1210 |      |      |      |      | 1808 |      |      |      |      | 1812 |      |      |      |      |
|----------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 电容量 (pF) | 代码  | 50V  | 100V | 250V | 500V | 630V | 50V  | 100V | 250V | 500V | 630V | 50V  | 100V | 250V | 500V | 630V |
| 100      | 101 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 120      | 121 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 150      | 151 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 180      | 181 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 220      | 221 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 270      | 271 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 330      | 331 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 390      | 391 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 470      | 471 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 560      | 561 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 680      | 681 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 820      | 821 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 1000     | 102 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 1200     | 122 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 1500     | 152 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 1800     | 182 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 2200     | 222 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 2700     | 272 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 3300     | 332 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 3900     | 392 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 4700     | 472 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 5600     | 562 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 6800     | 682 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 8200     | 822 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 10000    | 103 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 12000    | 123 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 15000    | 153 | C    | C    | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 18000    | 183 | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 22000    | 223 | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 27000    | 273 | C    | C    | C    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    | D    |
| 33000    | 333 | C    | C    | C    | G    | G    | D    | D    | D    | G    | G    | D    | D    | D    | D    | D    |
| 39000    | 393 | C    | C    | C    | G    | G    | D    | D    | D    | G    | G    | D    | D    | D    | D    | D    |
| 47000    | 473 | C    | C    | C    | G    | G    | D    | D    | D    | G    | G    | D    | D    | D    | D    | D    |
| 56000    | 563 | C    | C    | C    | K    | K    | D    | D    | D    | K    | K    | D    | D    | D    | G    | G    |
| 68000    | 683 | C    | C    | C    | M    | M    | D    | D    | D    | K    | K    | D    | D    | D    | G    | G    |
| 82000    | 823 | C    | C    | C    |      |      | D    | D    | D    |      |      | D    | D    | D    | K    | K    |
| 100000   | 104 | C    | C    | C    |      |      | D    | D    | D    |      |      | D    | D    | D    | K    | K    |
| 120000   | 124 | C    | C    | G    |      |      | D    | D    | D    |      |      | D    | D    | D    | M    | M    |
| 150000   | 154 | C    | C    | G    |      |      | D    | D    | D    |      |      | D    | D    | D    | M    | M    |
| 180000   | 184 | C    | C    | G    |      |      | D    | D    | G    |      |      | D    | D    | D    |      |      |
| 220000   | 224 | C    | C    | G    |      |      | D    | D    | G    |      |      | D    | D    | D    |      |      |
| 270000   | 274 | C    | C    | K    |      |      | D    | D    | K    |      |      | D    | D    | G    |      |      |
| 330000   | 334 | C    | C    | K    |      |      | D    | D    |      |      |      | D    | D    | G    |      |      |
| 390000   | 394 | C    | D    | M    |      |      | D    | G    |      |      |      | D    | D    | K    |      |      |
| 470000   | 474 | C    | D    |      |      |      | G    | G    |      |      |      | D    | D    | K    |      |      |
| 560000   | 564 | D    | G    |      |      |      | G    | G    |      |      |      | D    | D    | M    |      |      |
| 680000   | 684 | D    | G    |      |      |      | K    | G    |      |      |      | D    | D    | M    |      |      |
| 820000   | 824 | D    | K    |      |      |      | K    | K    |      |      |      | D    | G    |      |      |      |
| 1000000  | 105 | P    | M    |      |      |      | K    |      |      |      |      | G    | G    |      |      |      |
| 1200000  | 125 | K    |      |      |      |      |      |      |      |      |      | G    | K    |      |      |      |
| 1500000  | 155 | M    |      |      |      |      |      |      |      |      |      | G    | K    |      |      |      |
| 1800000  | 185 |      |      |      |      |      |      |      |      |      |      | K    | M    |      |      |      |
| 2200000  | 225 |      |      |      |      |      |      |      |      |      |      | K    |      |      |      |      |
| 2700000  | 275 |      |      |      |      |      |      |      |      |      |      | M    |      |      |      |      |

## ■ 产品简介

汇聚软段电极产品是在端电极中加入特殊的具有柔软性导电性树脂层，介于端电极层与陶瓷之间。树脂层能吸收热冲击和基板弯曲应力，因此具有良好的对应机械应力和热冲击的能力，在应用过程中出现弯曲应力时提供了良好的缓冲性能。

## ■ 特点

- ◆ 高抗基板弯能力水平
- ◆ 抗热冲击能力
- ◆ EIA 0603-2225
- ◆ 符合 RoHS 标准
- ◆ 高可靠性和稳定性

## ■ 用途

- ◆ 受机械应力影响相关应用
- ◆ 受热冲击力影响相关应用
- ◆ 跌落风险高的产品应用

## ■ 一般电气规格

| 介电材料                     | COG                                                  |                     | X7R                                                  |                     |
|--------------------------|------------------------------------------------------|---------------------|------------------------------------------------------|---------------------|
| EIA 尺寸                   | 0603, 0805, 1206, 1210, 1808, 1812, 1825, 2220, 2225 |                     | 0603, 0805, 1206, 1210, 1808, 1812, 1825, 2220, 2225 |                     |
| 额定电压                     | 25V~4000V                                            |                     | 25V~4000V                                            |                     |
| 电容范围                     | 0.5pF ~ 470nF                                        |                     | 100pF ~ 10μF                                         |                     |
| 电容公差值                    | 参阅产品订货信息表 5                                          |                     | 参阅产品订货信息表 5                                          |                     |
| 损耗角正切 (Tan δ) & 品质因数 (Q) | 电容量范围                                                | Q                   |                                                      |                     |
|                          | Cap<30pF                                             | Q≥400+20C           |                                                      |                     |
|                          | Cap≥30pF                                             | Q≥1000              |                                                      |                     |
| 检测条件<br>(25°C 常温环境)      | 常温 25°C 环境温度                                         |                     | 预处理 (2 类产品) 150±10°C /1 小时热处理后静置于常温环境 24±2 小时再进行测量作业 |                     |
|                          | 电容量范围                                                | 检测条件                | 电容量范围                                                | 检测条件                |
|                          | Cap≤1000pF                                           | 1.0±0.2Vrms, 1.0MHz | Cap≤100pF                                            | 1.0±0.2Vrms, 1.0MHz |
|                          | Cap>1000pF                                           | 1.0±0.2Vrms 1.0kHz  | 100pF<Cap≤10μF                                       | 1.0±0.2Vrms 1.0kHz  |
|                          |                                                      |                     | Cap>10μF                                             | 0.5±0.2Vrms, 120Hz  |
| 绝缘电阻 (IR)                | ≥100GΩ 或 R•C≥ 500Ω-F<br>任一较小值以上                      |                     | ≥10GΩ或 R•C≥100Ω-F<br>任一较小值以上                         |                     |
| 工作温度                     | - 55°C to + 125 °C                                   |                     |                                                      |                     |
| 温度系数                     | ±30ppm / °C                                          |                     | ±15%                                                 |                     |
| 端电极材料                    | 铜或银 / 软端 / 镍 / 锡 (无铅端电极)                             |                     |                                                      |                     |

\*附表 1

| 额定电压  | D.F. ≤ | 特殊控管 D.F. ≤ | 尺寸容值                                                    |
|-------|--------|-------------|---------------------------------------------------------|
| 25V   | ≤ 3.5% | ≤ 5%        | 0805 ≥ 1μF; 1210 ≥ 10μF                                 |
|       |        | ≤ 7%        | 0603 ≥ 0.33μF; 1206 ≥ 4.7μF                             |
|       |        | ≤ 10%       | 0603 ≥ 0.47μF; 0805 ≥ 2.2μF; 1206 ≥ 6.8μF ; 1210 ≥ 22μF |
| ≥ 50V | ≤ 2.5% | ≤ 3%        | 0603 ≥ 0.047μF; 0805 ≥ 0.18μF; 1206 ≥ 0.47μF            |
|       |        | ≤ 5%        | 1210 ≥ 4.7μF                                            |
|       |        | ≤ 10%       | 0603 ≥ 1μF; 0805 ≥ 1μF; 1206 ≥ 4.7μF; 1210 ≥ 10μF       |

















# AB: 软端电极 – 抗弯曲裂纹系列



## ■ X7R 容值表 (4)

| 尺寸       |     | 2211 |     |     |     |      | 2220 |      |      |      |     |      |     |     |     |  |
|----------|-----|------|-----|-----|-----|------|------|------|------|------|-----|------|-----|-----|-----|--|
| 电容量 (pF) | 代码  | 3KV  | 4KV | 25V | 50V | 100V | 200V | 250V | 500V | 630V | 1KV | 1.5V | 2KV | 3KV | 4KV |  |
| 100      | 101 |      |     |     |     |      |      |      |      |      |     |      |     |     |     |  |
| 120      | 121 |      |     |     |     |      |      |      |      |      |     |      |     |     |     |  |
| 150      | 151 |      |     |     |     |      |      |      |      |      |     |      |     |     |     |  |
| 180      | 181 |      |     |     |     |      |      |      |      |      |     |      |     |     |     |  |
| 220      | 221 |      |     |     |     |      |      |      |      |      |     |      |     |     |     |  |
| 270      | 271 | K    | K   |     |     |      |      |      |      |      |     |      |     |     | K   |  |
| 330      | 331 | K    | K   |     |     |      |      |      |      |      |     |      |     |     | K   |  |
| 390      | 391 | K    | K   |     |     |      |      |      |      |      |     |      |     |     | K   |  |
| 470      | 471 | K    | K   |     |     |      |      |      |      |      |     |      |     |     | K   |  |
| 560      | 561 | K    | K   |     |     |      |      |      |      |      |     |      |     |     | K   |  |
| 680      | 681 | K    | K   |     |     |      |      |      |      |      |     |      |     |     | K   |  |
| 820      | 821 | K    | K   |     |     |      |      |      |      |      |     |      |     |     | K   |  |
| 1000     | 102 | K    | K   | K   | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   | K   |  |
| 1200     | 122 | M    | M   | K   | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   | M   |  |
| 1500     | 152 | M    | M   | K   | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   | M   |  |
| 1800     | 182 | M    | M   | K   | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   | M   |  |
| 2200     | 222 | M    |     | K   | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   |     |  |
| 2700     | 272 | M    |     | K   | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   |     |  |
| 3300     | 332 | M    |     | K   | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   |     |  |
| 3900     | 392 |      |     | K   | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   |     |  |
| 4700     | 472 |      |     | K   | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   |     |  |
| 5600     | 562 |      |     | K   | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   |     |  |
| 6800     | 682 |      |     | K   | K   | K    | K    | K    | K    | K    | K   | K    | K   | M   |     |  |
| 8200     | 822 |      |     | K   | K   | K    | K    | K    | K    | K    | M   | M    | M   |     |     |  |
| 10000    | 103 |      |     | K   | K   | K    | K    | K    | K    | K    | M   | M    | M   |     |     |  |
| 12000    | 123 |      |     | K   | K   | K    | K    | K    | K    | K    | M   | M    | U   |     |     |  |
| 15000    | 153 |      |     | K   | K   | K    | K    | K    | K    | K    | M   | M    | U   |     |     |  |
| 18000    | 183 |      |     | K   | K   | K    | K    | K    | K    | K    | U   | U    | U   |     |     |  |
| 22000    | 223 |      |     | K   | K   | K    | K    | K    | K    | K    | U   | U    |     |     |     |  |
| 27000    | 273 |      |     | K   | K   | K    | K    | K    | K    | K    | U   | U    |     |     |     |  |
| 33000    | 333 |      |     | K   | K   | K    | K    | K    | K    | K    | U   | U    |     |     |     |  |
| 39000    | 393 |      |     | K   | K   | K    | K    | K    | K    | K    | U   | U    |     |     |     |  |
| 47000    | 473 |      |     | K   | K   | K    | K    | K    | K    | K    | U   | U    |     |     |     |  |
| 56000    | 563 |      |     | K   | K   | K    | K    | K    | K    | K    | U   | U    |     |     |     |  |
| 68000    | 683 |      |     | K   | K   | K    | K    | K    | K    | K    |     |      |     |     |     |  |
| 82000    | 823 |      |     | K   | K   | K    | K    | K    | K    | K    |     |      |     |     |     |  |
| 100000   | 104 |      |     | K   | K   | K    | K    | K    | K    | K    | M   |      |     |     |     |  |
| 120000   | 124 |      |     | K   | K   | K    | K    | K    | K    | K    | M   |      |     |     |     |  |
| 150000   | 154 |      |     | K   | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |  |
| 180000   | 184 |      |     | K   | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |  |
| 220000   | 224 |      |     | K   | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |  |
| 270000   | 274 |      |     | K   | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |  |
| 330000   | 334 |      |     | K   | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |  |
| 390000   | 394 |      |     | K   | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |  |
| 470000   | 474 |      |     | K   | K   | K    | K    | K    | K    | K    |     |      |     |     |     |  |
| 560000   | 564 |      |     | K   | K   | K    | K    | K    | M    | M    |     |      |     |     |     |  |
| 680000   | 684 |      |     | K   | K   | K    | K    | K    | M    | M    |     |      |     |     |     |  |
| 820000   | 824 |      |     | K   | K   | K    | K    | K    | U    | U    |     |      |     |     |     |  |
| 1000000  | 105 |      |     | K   | K   | K    | K    | K    | U    | U    |     |      |     |     |     |  |
| 1200000  | 125 |      |     | K   | K   | K    | M    | M    |      |      |     |      |     |     |     |  |
| 1500000  | 155 |      |     | K   | K   | K    | M    | M    |      |      |     |      |     |     |     |  |
| 1800000  | 185 |      |     | K   | K   | K    | M    | M    |      |      |     |      |     |     |     |  |
| 2200000  | 225 |      |     | K   | K   | K    | M    | M    |      |      |     |      |     |     |     |  |
| 2700000  | 275 |      |     | K   | K   | K    | U    | U    |      |      |     |      |     |     |     |  |
| 3300000  | 335 |      |     | K   | K   | K    |      |      |      |      |     |      |     |     |     |  |
| 3900000  | 395 |      |     | K   | K   | K    |      |      |      |      |     |      |     |     |     |  |
| 4700000  | 475 |      |     | K   | K   | K    |      |      |      |      |     |      |     |     |     |  |
| 5600000  | 565 |      |     | K   | K   | K    |      |      |      |      |     |      |     |     |     |  |
| 6800000  | 685 |      |     | K   | K   | K    |      |      |      |      |     |      |     |     |     |  |
| 8200000  | 825 |      |     | M   | M   | M    |      |      |      |      |     |      |     |     |     |  |
| 10000000 | 106 |      |     | M   | M   | M    |      |      |      |      |     |      |     |     |     |  |

# AB: 软端电极 – 抗弯曲裂纹系列



## ■ X7R 容值表 (5)

| 尺寸       |     | 2225 |     |      |      |      |      |      |     |      |     |     |     |
|----------|-----|------|-----|------|------|------|------|------|-----|------|-----|-----|-----|
| 电容量 (pF) | 代码  | 25V  | 50V | 100V | 200V | 250V | 500V | 630V | 1KV | 1.5V | 2KV | 3KV | 4KV |
| 100      | 101 |      |     |      |      |      |      |      |     |      |     |     |     |
| 120      | 121 |      |     |      |      |      |      |      |     |      |     |     |     |
| 150      | 151 |      |     |      |      |      |      |      |     |      |     |     |     |
| 180      | 181 |      |     |      |      |      |      |      |     |      |     |     |     |
| 220      | 221 |      |     |      |      |      |      |      |     |      |     |     |     |
| 270      | 271 |      |     |      |      |      |      |      |     |      |     |     | K   |
| 330      | 331 |      |     |      |      |      |      |      |     |      |     |     | K   |
| 390      | 391 |      |     |      |      |      |      |      |     |      |     |     | K   |
| 470      | 471 |      |     |      |      |      |      |      |     |      |     |     | K   |
| 560      | 561 |      |     |      |      |      |      |      |     |      |     |     | K   |
| 680      | 681 |      |     |      |      |      |      |      |     |      |     |     | K   |
| 820      | 821 |      |     |      |      |      |      |      |     |      |     |     | K   |
| 1000     | 102 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   | K   |
| 1200     | 122 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   | M   |
| 1500     | 152 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   | M   |
| 1800     | 182 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   | M   |
| 2200     | 222 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   |     |
| 2700     | 272 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   |     |
| 3300     | 332 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   |     |
| 3900     | 392 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   |     |
| 4700     | 472 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | K   |     |
| 5600     | 562 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | M   |     |
| 6800     | 682 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | M   |     |
| 8200     | 822 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | M   |     |
| 10000    | 103 | K    | K   | K    | K    | K    | K    | K    | K   | K    | K   | M   |     |
| 12000    | 123 | K    | K   | K    | K    | K    | K    | K    | K   | M    | M   | M   |     |
| 15000    | 153 | K    | K   | K    | K    | K    | K    | K    | K   | M    | M   | M   |     |
| 18000    | 183 | K    | K   | K    | K    | K    | K    | K    | K   | M    | M   | U   |     |
| 22000    | 223 | K    | K   | K    | K    | K    | K    | K    | K   | M    | M   |     |     |
| 27000    | 273 | K    | K   | K    | K    | K    | K    | K    | K   | M    | M   |     |     |
| 33000    | 333 | K    | K   | K    | K    | K    | K    | K    | K   | M    | M   |     |     |
| 39000    | 393 | K    | K   | K    | K    | K    | K    | K    | K   | U    | U   |     |     |
| 47000    | 473 | K    | K   | K    | K    | K    | K    | K    | K   | U    | U   |     |     |
| 56000    | 563 | K    | K   | K    | K    | K    | K    | K    | K   | U    | U   |     |     |
| 68000    | 683 | K    | K   | K    | K    | K    | K    | K    | K   |      |     |     |     |
| 82000    | 823 | K    | K   | K    | K    | K    | K    | K    | K   |      |     |     |     |
| 100000   | 104 | K    | K   | K    | K    | K    | K    | K    | M   |      |     |     |     |
| 120000   | 124 | K    | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |
| 150000   | 154 | K    | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |
| 180000   | 184 | K    | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |
| 220000   | 224 | K    | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |
| 270000   | 274 | K    | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |
| 330000   | 334 | K    | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |
| 390000   | 394 | K    | K   | K    | K    | K    | K    | K    | U   |      |     |     |     |
| 470000   | 474 | K    | K   | K    | K    | K    | K    | K    |     |      |     |     |     |
| 560000   | 564 | K    | K   | K    | K    | K    | K    | K    |     |      |     |     |     |
| 680000   | 684 | K    | K   | K    | K    | K    | K    | K    |     |      |     |     |     |
| 820000   | 824 | K    | K   | K    | K    | K    | M    | M    |     |      |     |     |     |
| 1000000  | 105 | K    | K   | K    | K    | K    | M    | M    |     |      |     |     |     |
| 1200000  | 125 | K    | K   | K    | M    | M    | U    | U    |     |      |     |     |     |
| 1500000  | 155 | K    | K   | K    | M    | M    | U    | U    |     |      |     |     |     |
| 1800000  | 185 | K    | K   | K    | M    | M    |      |      |     |      |     |     |     |
| 2200000  | 225 | K    | K   | K    | M    | M    |      |      |     |      |     |     |     |
| 2700000  | 275 | K    | K   | K    | M    | M    |      |      |     |      |     |     |     |
| 3300000  | 335 | K    | K   | K    | U    | U    |      |      |     |      |     |     |     |
| 3900000  | 395 | K    | K   | K    | U    | U    |      |      |     |      |     |     |     |
| 4700000  | 475 | K    | K   | K    |      |      |      |      |     |      |     |     |     |
| 5600000  | 565 | K    | K   | K    |      |      |      |      |     |      |     |     |     |
| 6800000  | 685 | K    | K   | K    |      |      |      |      |     |      |     |     |     |
| 8200000  | 825 | M    | M   | M    |      |      |      |      |     |      |     |     |     |
| 10000000 | 106 | M    | M   | M    |      |      |      |      |     |      |     |     |     |

## ■ 产品简介

汇聚工业应用产品按照工业级标准设计和生产，采取高可靠性筛选-Thermal Shock/Dual 85C/85%RH Mil Grad Bias Humidity Qualifications Plan(MIL-PRF-55681)，其由精确的介电材料和适当的导电浆料配制，自动化制程的稳定生产和严谨的质量精确管控了介电设计厚度、电极完整性以及端电极连接的良好特性，实现了最佳可靠度的产品性能。

## ■ 特点

- ◆ 工业级电容
- ◆ EIA 0603-2225
- ◆ 符合 RoHS 标准
- ◆ 高可靠性和稳定性

## ■ 用途

- ◆ 工业电子设备
- ◆ 电源输入/输出滤波
- ◆ 电源缓冲电路
- ◆ 电功率因素改善
- ◆ 噪音旁路

## ■ 一般电气规格

| 介电材料                           | COG                                                  |                     | X7R                                                        |                     |
|--------------------------------|------------------------------------------------------|---------------------|------------------------------------------------------------|---------------------|
| EIA 尺寸                         | 0603, 0805, 1206, 1210, 1808, 1812, 1825, 2220, 2225 |                     | 0603, 0805, 1206, 1210, 1808, 1812, 1825, 2211, 2220, 2225 |                     |
| 额定电压                           | 25V~4000V                                            |                     | 25V~4000V                                                  |                     |
| 电容范围                           | 0.5pF ~ 470nF                                        |                     | 100pF ~ 10μF                                               |                     |
| 电容公差值                          | 参阅产品订货信息表 5                                          |                     | 参阅产品订货信息表 5                                                |                     |
| 损耗角正切 (Tan δ)<br>&<br>品质因数 (Q) | 电容量范围                                                | Q                   | 参阅附表 1                                                     |                     |
|                                | Cap<30pF                                             | Q≥400+20C           |                                                            |                     |
|                                | Cap≥30pF                                             | Q≥1000              |                                                            |                     |
| 检测条件                           | 常温 25°C 环境温度                                         |                     | 预处理 (2 类产品) 150±10°C /1 小时热处理后静置于常温环境 24±2 小时再进行测量作业       |                     |
|                                | 电容量范围                                                | 检测条件                | 电容量范围                                                      | 检测条件                |
|                                | Cap≤1000pF                                           | 1.0±0.2Vrms, 1.0MHz | Cap≤100pF                                                  | 1.0±0.2Vrms, 1.0MHz |
|                                | Cap>1000pF                                           | 1.0±0.2Vrms 1.0kHz  | 100pF<Cap≤10μF                                             | 1.0±0.2Vrms 1.0kHz  |
|                                |                                                      | Cap>10μF            | 0.5±0.2Vrms, 120Hz                                         |                     |
| 绝缘电阻 (IR)                      | ≥100GΩ 或 R•C≥ 500Ω-F<br>任一较小值以上                      |                     | ≥10GΩ或 R•C≥ 100Ω-F<br>任一较小值以上                              |                     |
| 工作温度                           | - 55°C to + 125 °C                                   |                     |                                                            |                     |
| 温度系数                           | ±30ppm / °C                                          |                     | ±15%                                                       |                     |
| 端电极材料                          | 铜或银/ 镍 / 锡 (无铅端电极)                                   |                     |                                                            |                     |

## \*附表 1

| 额定电压  | D.F. ≤ | 特殊控管 D.F. ≤ | 尺寸容值                                                    |
|-------|--------|-------------|---------------------------------------------------------|
| 25V   | ≤ 3.5% | ≤ 5%        | 0805 ≥ 1μF; 1210 ≥ 10μF                                 |
|       |        | ≤ 7%        | 0603 ≥ 0.33μF; 1206 ≥ 4.7μF                             |
|       |        | ≤ 10%       | 0603 ≥ 0.47μF; 0805 ≥ 2.2μF; 1206 ≥ 6.8μF ; 1210 ≥ 22μF |
| ≥ 50V | ≤ 2.5% | ≤ 3%        | 0603 ≥ 0.047μF; 0805 ≥ 0.18μF; 1206 ≥ 0.47μF            |
|       |        | ≤ 5%        | 1210 ≥ 4.7μF                                            |
|       |        | ≤ 10%       | 0603 ≥ 1μF; 0805 ≥ 1μF; 1206 ≥ 4.7μF; 1210 ≥ 10μF       |



















## ■ 产品简介

汇聚车载应用系列产品采用车规级设计工艺、加强质量控制，符合 AEC-Q200 车载标准，提供了更高的电气精度，稳定性和可靠性，从而保证在汽车应用中的质量性能。

## ■ 特点

- ◆ 低 ESR、ESL
- ◆ EIA 0603-2220
- ◆ 高可靠性和稳定性
- ◆ 符合 AEC-Q200 车载标准

## ■ 用途

- ◆ 导航或相关信息设备
- ◆ 车载娱乐设备
- ◆ 车身电子设备
- ◆ 新能源汽车电子设备

## ■ 一般电气规格

| 介电材料                     | COG                             |                     | X7R                                                  |                     |
|--------------------------|---------------------------------|---------------------|------------------------------------------------------|---------------------|
| EIA 尺寸                   | 0603, 0805, 1206, 1210, 1812    |                     | 0603, 0805, 1206, 1210, 1812                         |                     |
| 额定电压                     | 25V~250V                        |                     | 25V~250V                                             |                     |
| 电容范围                     | 0.5pF ~ 180nF                   |                     | 100pF ~ 3.3μF                                        |                     |
| 电容公差值                    | 参阅产品订货信息表 5                     |                     | 参阅产品订货信息表 5                                          |                     |
| 损耗角正切 (Tan δ) & 品质因数 (Q) | 电容范围                            | Q                   | 参阅*附表 1                                              |                     |
|                          | Cap<30pF                        | Q≥400+20C           |                                                      |                     |
|                          | Cap≥30pF                        | Q≥1000              |                                                      |                     |
| 检测条件                     | 常温 25°C 环境温度                    |                     | 预处理 (2 类产品) 150±10°C /1 小时热处理后静置于常温环境 24±2 小时再进行测量作业 |                     |
|                          | 电容范围                            | 检测条件                | 电容范围                                                 | 检测条件                |
|                          | Cap≤1000pF                      | 1.0±0.2Vrms, 1.0MHz | Cap≤100pF                                            | 1.0±0.2Vrms, 1.0MHz |
|                          | Cap>1000pF                      | 1.0±0.2Vrms 1.0KHz  | 100pF<Cap≤10μF                                       | 1.0±0.2Vrms 1.0kHz  |
| 绝缘电阻 (IR)                | ≥100GΩ 或 R•C≥ 500Ω-F<br>任一较小值以上 |                     | ≥10GΩ或 R•C≥100Ω-F<br>任一较小值以上                         |                     |
|                          | - 55°C to + 125 °C              |                     | ±15%                                                 |                     |
| 工作温度                     |                                 |                     |                                                      |                     |
| 温度系数                     | ±30ppm / °C                     |                     | ±15%                                                 |                     |
| 端电极材料                    | 铜或银/ 镍 / 锡 (无铅端电极)              |                     |                                                      |                     |

### \*附表 1

| 额定电压  | D.F. ≤ | 特殊控管 D.F. ≤ | 尺寸容值                                                   |
|-------|--------|-------------|--------------------------------------------------------|
| 25V   | ≤ 3.5% | ≤ 5%        | 0805 ≥ 1μF; 1210 ≥ 10μF                                |
|       |        | ≤ 7%        | 0603 ≥ 0.33μF; 1206 ≥ 4.7μF                            |
|       |        | ≤ 10%       | 0603 ≥ 0.47μF; 0805 ≥ 2.2μF; 1206 ≥ 6.8μF; 1210 ≥ 22μF |
| ≥ 50V | ≤ 2.5% | ≤ 3%        | 0603 ≥ 0.047μF; 0805 ≥ 0.18μF; 1206 ≥ 0.47μF           |
|       |        | ≤ 5%        | 1210 ≥ 4.7μF                                           |
|       |        | ≤ 10%       | 0603 ≥ 1μF; 0805 ≥ 1μF; 1206 ≥ 4.7μF; 1210 ≥ 10μF      |







## ■ X7R 容值表 (1)

| 尺寸       |     | 0603 |     |      |      |      | 0805 |     |      |      |      | 1206 |     |      |      |      |
|----------|-----|------|-----|------|------|------|------|-----|------|------|------|------|-----|------|------|------|
| 电容量 (pF) | 代码  | 25V  | 50V | 100V | 200V | 250V | 25V  | 50V | 100V | 200V | 250V | 25V  | 50V | 100V | 200V | 250V |
| 100      | 101 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 120      | 121 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 150      | 151 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 180      | 181 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 220      | 221 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 270      | 271 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 330      | 331 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 390      | 391 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 470      | 471 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 560      | 561 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 680      | 681 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 820      | 821 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 1000     | 102 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 1200     | 122 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 1500     | 152 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 1800     | 182 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 2200     | 222 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 2700     | 272 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 3300     | 332 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 3900     | 392 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 4700     | 472 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 5600     | 562 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 6800     | 682 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 8200     | 822 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 10000    | 103 | S    | S   | S    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 12000    | 123 | S    | S   | X    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 15000    | 153 | S    | S   | X    | X    | X    | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 18000    | 183 | S    | S   | X    |      |      | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 22000    | 223 | S    | S   | X    |      |      | B    | B   | B    | B    | B    | B    | B   | B    | B    | B    |
| 27000    | 273 | S    | S   | X    |      |      | B    | B   | C    | C    | C    | B    | B   | B    | B    | B    |
| 33000    | 333 | X    | X   | X    |      |      | B    | B   | C    | D    | D    | B    | B   | B    | B    | B    |
| 39000    | 393 | X    | X   | X    |      |      | B    | B   | C    | D    |      | B    | B   | B    | B    | B    |
| 47000    | 473 | X    | X   | X    |      |      | B    | B   | C    | D    |      | B    | B   | B    | B    | B    |
| 56000    | 563 | X    | X   |      |      |      | B    | B   | C    | D    |      | B    | B   | B    | C    | C    |
| 68000    | 683 | X    | X   |      |      |      | B    | B   | C    | D    |      | B    | B   | B    | D    | D    |
| 82000    | 823 | X    | X   |      |      |      | B    | B   | C    |      |      | B    | B   | B    | D    | D    |
| 100000   | 104 | X    | X   |      |      |      | B    | B   | D    |      |      | B    | B   | B    | G    | G    |
| 120000   | 124 |      |     |      |      |      | B    | B   | D    |      |      | B    | B   | B    |      |      |
| 150000   | 154 |      |     |      |      |      | B    | B   | D    |      |      | B    | B   | B    |      |      |
| 180000   | 184 |      |     |      |      |      | B    | B   | D    |      |      | B    | B   | C    |      |      |
| 220000   | 224 |      |     |      |      |      | B    | B   | D    |      |      | B    | B   | C    |      |      |
| 270000   | 274 |      |     |      |      |      | D    | D   |      |      |      | B    | B   | D    |      |      |
| 330000   | 334 |      |     |      |      |      | D    | D   |      |      |      | B    | B   | G    |      |      |
| 390000   | 394 |      |     |      |      |      |      |     |      |      |      | D    | D   | G    |      |      |
| 470000   | 474 |      |     |      |      |      |      |     |      |      |      | D    | D   | G    |      |      |
| 560000   | 564 |      |     |      |      |      |      |     |      |      |      | D    | D   | P    |      |      |
| 680000   | 684 |      |     |      |      |      |      |     |      |      |      | D    | D   | P    |      |      |
| 820000   | 824 |      |     |      |      |      |      |     |      |      |      | G    | G   | P    |      |      |
| 1000000  | 105 |      |     |      |      |      |      |     |      |      |      | P    | P   | P    |      |      |
| 1200000  | 125 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 1500000  | 155 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 1800000  | 185 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 2200000  | 225 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 2700000  | 275 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 3300000  | 335 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 3900000  | 395 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 4700000  | 475 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 5600000  | 565 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 6800000  | 685 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 8200000  | 825 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 10000000 | 106 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |

## ■ X7R 容值表 (2)

| 尺寸       |     | 1210 |     |      |      |      | 1808 |     |      |      |      | 1812 |     |      |      |      |
|----------|-----|------|-----|------|------|------|------|-----|------|------|------|------|-----|------|------|------|
| 电容量 (pF) | 代码  | 25V  | 50V | 100V | 200V | 250V | 25V  | 50V | 100V | 200V | 250V | 25V  | 50V | 100V | 200V | 250V |
| 100      | 101 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 120      | 121 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 150      | 151 |      |     |      |      |      | D    | D   | D    | D    | D    |      |     |      |      |      |
| 180      | 181 |      |     |      |      |      | D    | D   | D    | D    | D    |      |     |      |      |      |
| 220      | 221 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    |      |     |      |      |      |
| 270      | 271 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 330      | 331 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 390      | 391 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 470      | 471 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 560      | 561 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 680      | 681 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 820      | 821 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 1000     | 102 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 1200     | 122 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 1500     | 152 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 1800     | 182 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 2200     | 222 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 2700     | 272 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 3300     | 332 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 3900     | 392 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 4700     | 472 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 5600     | 562 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 6800     | 682 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 8200     | 822 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 10000    | 103 | C    | C   | C    | C    | C    | D    | D   | D    | D    | D    | D    | D   | D    | D    | D    |
| 12000    | 123 | C    | C   | C    | C    | C    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 15000    | 153 | C    | C   | C    | C    | C    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 18000    | 183 | C    | C   | C    | C    | C    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 22000    | 223 | C    | C   | C    | C    | C    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 27000    | 273 | C    | C   | C    | C    | C    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 33000    | 333 | C    | C   | C    | C    | C    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 39000    | 393 | C    | C   | C    | C    | C    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 47000    | 473 | C    | C   | C    | C    | C    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 56000    | 563 | C    | C   | C    | C    | C    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 68000    | 683 | C    | C   | C    | C    | C    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 82000    | 823 | C    | C   | C    | C    | C    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 100000   | 104 | C    | C   | C    | C    | C    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 120000   | 124 | C    | C   | C    | G    | G    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 150000   | 154 | C    | C   | C    | G    | G    | G    | G   | G    | G    | G    | D    | D   | D    | D    | D    |
| 180000   | 184 | C    | C   | C    | G    | G    | G    | G   | G    | K    | K    | D    | D   | D    | D    | D    |
| 220000   | 224 | C    | C   | C    | G    | G    | G    | G   | G    |      |      | D    | D   | D    | D    | D    |
| 270000   | 274 | C    | C   | C    | K    | K    | K    | K   | K    |      |      | D    | D   | D    | G    | G    |
| 330000   | 334 | C    | C   | C    | K    | K    | K    | K   |      |      |      | D    | D   | D    | G    | G    |
| 390000   | 394 | C    | C   | D    | M    | M    |      |     |      |      |      | D    | D   | D    | K    | K    |
| 470000   | 474 | C    | C   | D    | M    | M    | K    | K   | K    | K    | K    | D    | D   | D    | K    | K    |
| 560000   | 564 | C    | C   | G    | M    | M    | K    | K   | K    | K    | K    | D    | D   | D    | M    | M    |
| 680000   | 684 | C    | C   | G    | M    | M    | K    | K   | K    |      |      | D    | D   | D    | M    | M    |
| 820000   | 824 | D    | D   | P    |      |      |      |     | K    |      |      | D    | D   | D    | M    | M    |
| 1000000  | 105 | D    | D   | P    |      |      |      |     |      |      |      | D    | D   | D    | M    |      |
| 1200000  | 125 | P    | P   | K    |      |      |      |     |      |      |      | D    | D   | D    |      |      |
| 1500000  | 155 | K    | K   | K    |      |      |      |     |      |      |      | D    | D   | D    |      |      |
| 1800000  | 185 | M    | M   | M    |      |      |      |     |      |      |      | G    | G   | G    |      |      |
| 2200000  | 225 | M    | M   | M    |      |      |      |     |      |      |      | G    | G   | G    |      |      |
| 2700000  | 275 | M    | M   |      |      |      |      |     |      |      |      | K    | K   | K    |      |      |
| 3300000  | 335 |      |     |      |      |      |      |     |      |      |      | K    | K   | K    |      |      |
| 3900000  | 395 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 4700000  | 475 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 5600000  | 565 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 6800000  | 685 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 8200000  | 825 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |
| 10000000 | 106 |      |     |      |      |      |      |     |      |      |      |      |     |      |      |      |

## ■ 产品简介

安全规范认证电容器是针对现代传真及其他射频防护设备中的脉冲或避雷器而设计的，通过检验规范 (IEC60384-14 & UL60384-14 & UL60950) 认证 (CQC/TUV/UL)。SY 系列的电容器是 X1/Y2 兼容。

## ■ 特点

- ◆ 通过安规认证
- ◆ EIA 1808-2220
- ◆ 符合 RoHS 标准
- ◆ 高可靠性和稳定性

## ■ 用途

- ◆ 调制解调器
- ◆ 传真电子电路
- ◆ 电话接收电路
- ◆ 照明、脉冲保护、隔离等电子设备

## ■ 一般电气规格

| 介电质                                     | COG                                                                                                                                                                                                                                |                                         | X7R                                                        |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------|------------------|-------------|---------------------|-------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--|------|--------------|-----|--------|
| EIA 尺寸                                  | 1808, 1812, 2211                                                                                                                                                                                                                   |                                         | 1808, 1812, 2211, 2220                                     |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| 直流额定电压                                  | 250VAC                                                                                                                                                                                                                             |                                         |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| 电容范围                                    | X1/Y2 Class<br>(Impulse 6KV)                                                                                                                                                                                                       | 4pF ~ 100pF                             | X1/Y2<br>Class                                             | 100pF ~ 4700pF   |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
|                                         | X1/Y2 Class<br>(Impulse 5KV)                                                                                                                                                                                                       | 4pF ~ 680pF                             | X2<br>Class                                                | 150pF ~ 22,000pF |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
|                                         | X2 Class                                                                                                                                                                                                                           | 3pF ~ 1000pF                            |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| 电容公差值                                   | 参阅产品订货信息表 5                                                                                                                                                                                                                        |                                         | 参阅产品订货信息表 5                                                |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| 损耗角正切 (Tan δ) & 质量因子 (Q)                | <table border="1"> <thead> <tr> <th>电容量范围</th> <th>Q</th> </tr> </thead> <tbody> <tr> <td>Cap &lt; 30pF:</td> <td>Q ≥ 400 + 20C</td> </tr> <tr> <td>Cap ≥ 30pF:</td> <td>Q ≥ 1000</td> </tr> </tbody> </table>                     |                                         | 电容量范围                                                      | Q                | Cap < 30pF: | Q ≥ 400 + 20C       | Cap ≥ 30pF: | Q ≥ 1000            | <table border="1"> <thead> <tr> <th>额定电压</th> <th>Tan δ (D.F.)</th> </tr> </thead> <tbody> <tr> <td>All</td> <td>≤ 2.5%</td> </tr> </tbody> </table> |  | 额定电压 | Tan δ (D.F.) | All | ≤ 2.5% |
|                                         | 电容量范围                                                                                                                                                                                                                              | Q                                       |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| Cap < 30pF:                             | Q ≥ 400 + 20C                                                                                                                                                                                                                      |                                         |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| Cap ≥ 30pF:                             | Q ≥ 1000                                                                                                                                                                                                                           |                                         |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| 额定电压                                    | Tan δ (D.F.)                                                                                                                                                                                                                       |                                         |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| All                                     | ≤ 2.5%                                                                                                                                                                                                                             |                                         |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| 10kHz for Cap < 1μF (IEC60384-14 4.2.3) |                                                                                                                                                                                                                                    | 10kHz for Cap < 1μF (IEC60384-14 4.2.3) |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| 检测条件                                    | 常温 25°C 环境温度                                                                                                                                                                                                                       |                                         | 预处理 (2 类产品) 150±10°C / 1 小时热处理后静置于常温环境 24±2 小时, 紧接再进行测量作业. |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
|                                         | <table border="1"> <thead> <tr> <th>电容量范围</th> <th>检测条件</th> </tr> </thead> <tbody> <tr> <td>Cap ≤ 100pF</td> <td>1.0±0.2Vrms, 1.0MHz</td> </tr> <tr> <td>Cap &gt; 100pF</td> <td>1.0±0.2Vrms, 1.0kHz</td> </tr> </tbody> </table> |                                         | 电容量范围                                                      | 检测条件             | Cap ≤ 100pF | 1.0±0.2Vrms, 1.0MHz | Cap > 100pF | 1.0±0.2Vrms, 1.0kHz | 适用检测:<br>1.0±0.2Vrms, 1.0kHz, 25°C 常温环境.                                                                                                             |  |      |              |     |        |
|                                         | 电容量范围                                                                                                                                                                                                                              | 检测条件                                    |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| Cap ≤ 100pF                             | 1.0±0.2Vrms, 1.0MHz                                                                                                                                                                                                                |                                         |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| Cap > 100pF                             | 1.0±0.2Vrms, 1.0kHz                                                                                                                                                                                                                |                                         |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
|                                         |                                                                                                                                                                                                                                    |                                         |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| 绝缘组抗值 (IR)                              | ≥ 600MΩ (C <sub>R</sub> ≤ 0.33μF, IEC60384-14 4.2.5)                                                                                                                                                                               |                                         |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| 操作环境温度                                  | - 55°C to + 125 °C                                                                                                                                                                                                                 |                                         |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| 温度公差系数                                  | ±30ppm / °C                                                                                                                                                                                                                        |                                         | ±15%                                                       |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |
| 端电极材料                                   | 铜或银/ 镍 / 锡 (无铅端电极)                                                                                                                                                                                                                 |                                         |                                                            |                  |             |                     |             |                     |                                                                                                                                                      |  |      |              |     |        |

## 容值表

| 额定电压  |     | 250Vac |      |       |      |      |      |      |      |      |      |      |      |      |
|-------|-----|--------|------|-------|------|------|------|------|------|------|------|------|------|------|
| 介电质   |     | C0G    |      | X7R   |      |      | C0G  |      |      |      | X7R  |      |      |      |
| 容值    | 脉冲  | 2.5KV  |      | 2.5KV |      |      | 5KV  |      | 6KV  | 5KV  |      |      |      |      |
| (pF)  | 尺寸  | 1808   | 1812 | 1808  | 1812 | 2220 | 1808 | 1812 | 2211 | 2211 | 1808 | 1812 | 2211 | 2220 |
| 3     | 3R0 | G      |      |       |      |      | G    |      |      |      |      |      |      |      |
| 3.3   | 3R3 | G      |      |       |      |      | G    |      |      |      |      |      |      |      |
| 1     | 4R0 | G      |      |       |      |      | G    |      | K    | K    |      |      |      |      |
| 1.7   | 4R7 | G      |      |       |      |      | G    |      | K    | K    |      |      |      |      |
| 5     | 5R0 | G      |      |       |      |      | G    |      | K    | K    |      |      |      |      |
| 5.6   | 5R6 | G      |      |       |      |      | G    |      | K    | K    |      |      |      |      |
| 6.8   | 6R8 | G      |      |       |      |      | G    |      | K    | K    |      |      |      |      |
| 8.2   | 8R2 | G      |      |       |      |      | G    |      | K    | K    |      |      |      |      |
| 10    | 100 | G      | G    |       |      |      | G    | G    | K    | K    |      |      |      |      |
| 12    | 120 | G      | G    |       |      |      | G    | G    | K    | K    |      |      |      |      |
| 15    | 150 | G      | G    |       |      |      | G    | G    | K    | K    |      |      |      |      |
| 18    | 180 | G      | G    |       |      |      | G    | G    | K    | K    |      |      |      |      |
| 22    | 220 | G      | G    |       |      |      | G    | G    | K    | K    |      |      |      |      |
| 27    | 270 | G      | G    |       |      |      | G    | G    | K    | K    |      |      |      |      |
| 33    | 330 | G      | G    |       |      |      | G    | G    | K    | K    |      |      |      |      |
| 39    | 390 | G      | G    |       |      |      | G    | G    | K    | K    |      |      |      |      |
| 47    | 470 | G      | G    |       |      |      | G    | G    | K    | K    |      |      |      |      |
| 56    | 560 | G      | G    |       |      |      | G    | G    | K    | K    |      |      |      |      |
| 68    | 680 | G      | G    |       |      |      | G    | G    | K    | M    |      |      |      |      |
| 82    | 820 | G      | G    |       |      |      | G    | G    | K    | M    |      |      |      |      |
| 100   | 101 | K      | G    |       |      |      | K    | G    | K    | U    | G    |      |      |      |
| 120   | 121 | K      | G    |       |      |      | K    | G    | K    |      | G    |      |      |      |
| 130   | 131 | K      | G    |       |      |      | K    | G    | M    |      | G    |      |      |      |
| 150   | 151 | K      | G    | G     |      |      | K    | K    | M    |      | G    | G    | G    |      |
| 160   | 161 | K      | G    | G     |      |      | K    | K    | M    |      | G    | G    | G    | K    |
| 180   | 181 | K      | G    | G     |      |      | K    | K    | M    |      | G    | G    | G    | K    |
| 220   | 221 | K      | G    | G     |      |      | K    | K    | M    |      | G    | G    | G    | K    |
| 270   | 271 | K      | K    | G     | G    |      | K    | K    | M    |      | K    | G    | G    | K    |
| 300   | 301 | K      | K    | G     | G    |      |      | K    | M    |      | K    | G    | G    | K    |
| 330   | 331 | K      | K    | G     | G    |      |      | K    | M    |      | K    | G    | G    | K    |
| 390   | 391 | K      | K    | G     | G    |      |      | K    | M    |      | K    | G    | G    | K    |
| 470   | 471 | K      | K    | G     | G    |      |      | K    | M    |      | K    | G    | G    | K    |
| 560   | 561 | K      | K    | G     | G    |      |      |      | M    |      | K    | G    | K    | K    |
| 680   | 681 | K      | K    | G     | G    |      |      |      | M    |      | K    | K    | K    | K    |
| 820   | 821 | K      | K    | G     | G    |      |      |      |      |      | K    | K    | K    | K    |
| 1000  | 102 | K      | K    | K     | G    |      |      |      |      |      | K    | K    | K    | K    |
| 1200  | 122 |        |      | K     | G    |      |      |      |      |      |      |      | K    | K    |
| 1500  | 152 |        |      | K     | K    |      |      |      |      |      |      |      | M    | M    |
| 1800  | 182 |        |      | K     | K    |      |      |      |      |      |      |      | M    | M    |
| 2200  | 222 |        |      | K     | M    |      |      |      |      |      |      |      | M    | M    |
| 2700  | 272 |        |      |       | M    |      |      |      |      |      |      |      |      | M    |
| 3300  | 332 |        |      |       | M    |      |      |      |      |      |      |      |      | M    |
| 3900  | 392 |        |      |       | M    |      |      |      |      |      |      |      |      | M    |
| 4700  | 472 |        |      |       | M    |      |      |      |      |      |      |      |      | M    |
| 5600  | 562 |        |      |       | M    |      |      |      |      |      |      |      |      |      |
| 6800  | 682 |        |      |       |      |      |      |      |      |      |      |      |      |      |
| 8200  | 822 |        |      |       |      |      |      |      |      |      |      |      |      |      |
| 10000 | 103 |        |      |       |      | M    |      |      |      |      |      |      |      |      |
| 12000 | 123 |        |      |       |      | M    |      |      |      |      |      |      |      |      |
| 15000 | 153 |        |      |       |      | M    |      |      |      |      |      |      |      |      |
| 18000 | 183 |        |      |       |      | U    |      |      |      |      |      |      |      |      |
| 22000 | 223 |        |      |       |      | U    |      |      |      |      |      |      |      |      |

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## 质量管理体系—GJB/9000



## 质量管理体系--IATF16949



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