

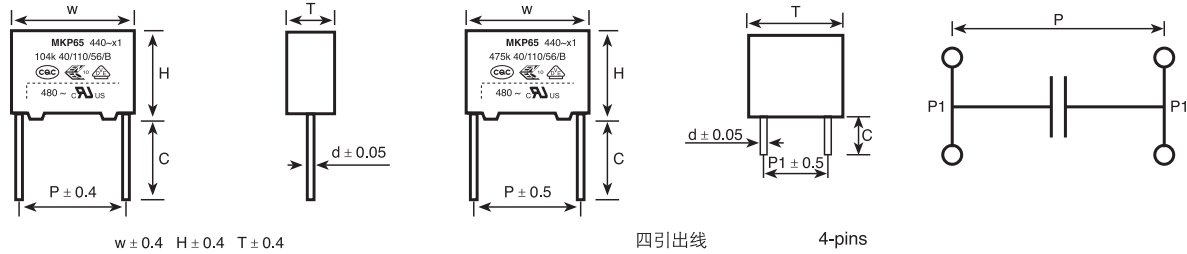
# MKP65 Metallized Polypropylene Film Interference Suppression Capacitor



金属化聚丙烯膜抗干扰电容器 (X1类, 440Vac/480Vac)

Metallized Polypropylene Film Interference Suppression Capacitor (X1 Class, 440Vac/480Vac)

## ■ 外形图 Outline Drawing



## ■ 特点

- 金属化聚丙烯
- 体积小
- 能承受过压冲击
- 优异的阻燃性能
- 广泛用于电源跨线路等抗干扰场合

## ■ Features

- Metallized polypropylene structure
- Compact size
- Withstanding overvoltage stressing
- Excellent active and passive flame resistant abilities
- Widely used in across-the-line, interference suppression circuit, etc.

## ■ 安全认证 Safety Approvals

|   |  |                    |                                                                                                                              |
|---|--|--------------------|------------------------------------------------------------------------------------------------------------------------------|
| ● |  | CQC<br>(中国)        | IEC 60384-14:2005, X1, 440Vac/480Vac, 0.0010μF ~ 10.0μF, 40/110/56/B<br>证书号(Certificate No.): CQC06001016942                 |
| ● |  | ENEC-VDE<br>(欧盟)   | EN 60384-14:2005, X1, 440Vac, 0.0047μF ~ 4.7μF, 40/110/56/B<br>证书号(Certificate No.): 40021925                                |
| ● |  | UL/CUL<br>(美国/加拿大) | UL60384-14:2009, CSA E60384-14:09, X1, 440Vac/480Vac, 0.0010μF ~ 10.0μF, 40/110/56/B<br>证书号(File No.): E186600, CCN: FOWX2/8 |

## ■ 技术要求 Specifications

|                                                                |                                                                                                              |                                     |                                      |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------|
| 电容器类别 Class                                                    | X1 类                                                                                                         |                                     |                                      |
| 气候类别 / 阻燃等级<br>Climatic Category/Passive Flammability Category | 40/110/56/B                                                                                                  |                                     |                                      |
| 工作温度范围<br>Operating Temperature Range                          | -40℃ ~ +110℃                                                                                                 |                                     |                                      |
| 额定电压 U <sub>R</sub> Rated Voltage                              | 440Vac/480Vac, 50/60Hz                                                                                       |                                     |                                      |
| 最大连续交流电压<br>Maximum continuous AC voltage                      | 525Vac, 50/60Hz                                                                                              |                                     |                                      |
| 最大连续直流电压<br>Maximum continuous DC voltage                      | 1 000Vdc                                                                                                     |                                     |                                      |
| 电容量范围 Capacitance Range                                        | 0.0047μF ~ 10.0μF                                                                                            |                                     |                                      |
| 电容量偏差 Capacitance Tolerance                                    | ± 10%(K), ± 20%(M)                                                                                           |                                     |                                      |
| 耐电压 Voltage Proof                                              | 引线之间 Between Terminals:                                                                                      | 3 400 (Vdc) (2s)                    |                                      |
|                                                                | 极壳之间 Between Terminals To Case:                                                                              | 2 560 (Vac) (1min)                  |                                      |
| 绝缘电阻 Insulation Resistance                                     | R ≥ 15 000MΩ, C <sub>N</sub> ≤ 0.33μF<br>R <sub>CN</sub> ≥ 5 000s, C <sub>N</sub> > 0.33μF (20℃ ,100V, 1min) |                                     |                                      |
| 损耗角正切 Dissipation Factor                                       | 0.0010μF < C <sub>N</sub> ≤ 0.47μF                                                                           | ≤ 15 x 10 <sup>-4</sup> (1kHz,20℃ ) | ≤ 20 x 10 <sup>-4</sup> (10kHz,20℃ ) |
|                                                                | 0.47μF < C <sub>N</sub> ≤ 1.0μF                                                                              | ≤ 20 x 10 <sup>-4</sup> (1kHz,20℃ ) | ≤ 40 x 10 <sup>-4</sup> (10kHz,20℃ ) |
|                                                                | 1.0μF < C <sub>N</sub>                                                                                       | ≤ 30 x 10 <sup>-4</sup> (1kHz,20℃ ) | -----                                |

产品编码说明    Part number system

■ 18位产品代码如下：

The 18 digits part number is formed as follow:

|     |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
|-----|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|
| 1   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| MKP | 6 | 5 |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |

|         |                                       |                |                                                 |
|---------|---------------------------------------|----------------|-------------------------------------------------|
| 第1~3位   | 型号代码                                  | Digit 1 to 3   | Series code                                     |
|         | MKP65                                 |                | MKP65                                           |
| 第4~5位   | 交流额定电压                                | Digit 4 to 5   | A.C. rated voltage                              |
|         | S1=440V S3=480V                       |                | S1=440V S3=480V                                 |
| 第6~8位   | 标称容量                                  | Digit 6 to 8   | Rated capacitance value                         |
|         | 举例：103=10 × 10 <sup>3</sup> pF=0.01μF |                | For example: 103=10 × 10 <sup>3</sup> pf=0.01μF |
| 第9位     | 容量偏差                                  | Digit 9        | Capacitance tolerance                           |
|         | K= ± 10%, M= ± 20%                    |                | K= ± 10%, M= ± 20%                              |
| 第10位    | 引线脚距P                                 | Digit 10       | Pitch                                           |
|         | 3=7.5mm 4=10.0mm 6=15.0mm             |                | 3=7.5mm 4=10.0mm 6=15.0mm                       |
|         | 9=22.5mm B=27.5mm F=37.5mm            |                | 9=22.5mm B=27.5mm F=37.5mm                      |
|         | M=52.5mm                              |                | M=52.5mm                                        |
| 第11位    | 内部特征码                                 | Digit 11       | Internal use                                    |
| 第12~15位 | 引线加工和包装代码                             | Digit 12 to 15 | Lead form and packaging code                    |
| 第16~18位 | 内部特征码                                 | Digit 16 to 18 | Internal use                                    |

■ Table 1 引线加工和包装代码    lead form and packaging code

| 第 12 位 Digit 12 |                                                      | 第 13 位 Digit 13 |                                                                                | 第 14 位 Digit 14 |                  | 第 15 位 Digit 15 |                                                                                   |
|-----------------|------------------------------------------------------|-----------------|--------------------------------------------------------------------------------|-----------------|------------------|-----------------|-----------------------------------------------------------------------------------|
| 代码 Code         | 说明 explanation                                       | 代码 Code         | 说明 explanation                                                                 | 代码 Code         | 说明 explanation   | 代码 Code         | 说明 explanation                                                                    |
| A               | 弹带包装<br>ammo-pack                                    | 4<br>6          | F=10.0mm<br>F=15.0mm                                                           | 0               | 表示直脚<br>straight | 5               | P3=25.4mm, H=18.5mm (For pitch=10.0/15.0mm)<br>(Detail parameter refer to pag 17) |
| C               | 直脚<br>straight lead<br>“C” in the<br>figure above    | 代码 Code         | 说明 explanation                                                                 | 0               |                  | 0               | 引线长度偏差 ± 0.5mm<br>或标准长度<br>Length tolerance ± 0.5mm<br>Or standard length         |
|                 |                                                      | 00<br>45        | 标准的引线长度 (18mm~26mm)<br>standard lead length<br>引线长度 4.5mm<br>lead length 4.5mm |                 |                  |                 |                                                                                   |
| 1<br>3<br>6     | P1=10mm ± 0.5mm<br>P1=20mm ± 0.5mm<br>P1=5mm ± 0.5mm | 45<br>55        | 引线长度 4.5mm<br>lead length 4.5mm<br>引线长度 5.5mm<br>lead length 5.5mm             | 0               |                  | 0               | 引线长度偏差 ± 0.5mm<br>或标准长度<br>Length tolerance ± 0.5mm<br>Or standard length         |

| 440Vac/480Vac |    |     |   |     |     |                       | 440Vac/480Vac |    |    |     |    |     |                      | 440Vac/480Vac |    |    |    |    |     |                       |
|---------------|----|-----|---|-----|-----|-----------------------|---------------|----|----|-----|----|-----|----------------------|---------------|----|----|----|----|-----|-----------------------|
| Cn            | W  | H   | T | P   | d   | Part number           | Cn            | W  | H  | T   | P  | d   | Part number          | Cn            | W  | H  | T  | P  | d   | Part number           |
| (uF)          |    |     |   |     |     |                       | (uF)          |    |    |     |    |     |                      | (uF)          |    |    |    |    |     |                       |
| 0.001         | 11 | 9   | 4 | 7.5 | 0.6 | MKP65S1102-30*****++  | 0.056M        | 18 | 12 | 6   | 15 | 0.6 | MKP65S1563M6S*****++ | 1.0M          | 32 | 16 | 28 | 28 | 0.8 | MKP65S1105MBC*****++  |
| 0.0012        | 11 | 9   | 4 | 7.5 | 0.6 | MKP65S1122-30*****++  | 0.056K        | 18 | 12 | 7   | 15 | 0.6 | MKP65S1563K6S*****++ | 1.0K          | 32 | 19 | 31 | 28 | 0.8 | MKP65S1105KBC*****++  |
| 0.0015        | 11 | 9   | 4 | 7.5 | 0.6 | MKP65S1152-30*****++  | 0.068         | 18 | 14 | 7.5 | 15 | 0.6 | MKP65S1683-6S*****++ | 1.0           | 32 | 28 | 17 | 28 | 0.8 | MKP65S1105-BA*****++  |
| 0.0018        | 11 | 9   | 4 | 7.5 | 0.6 | MKP65S1182-30*****++  | 0.068         | 18 | 12 | 13  | 15 | 0.6 | MKP65S1683-6C*****++ | 1.0           | 32 | 30 | 18 | 28 | 0.8 | MKP65S1105-BS*****++  |
| 0.0022        | 11 | 9   | 4 | 7.5 | 0.6 | MKP65S1222-30*****++  | 0.082         | 18 | 14 | 8   | 15 | 0.6 | MKP65S1823-6S*****++ | 1.2M          | 32 | 30 | 18 | 28 | 0.8 | MKP65S1125MBS*****++  |
| 0.0027        | 11 | 9   | 4 | 7.5 | 0.6 | MKP65S1272-30*****++  | 0.10M         | 18 | 14 | 8   | 15 | 0.6 | MKP65S1104MSS*****++ | 1.2M          | 32 | 28 | 17 | 28 | 0.8 | MKP65S1125MBA*****++  |
| 0.0033        | 11 | 9   | 4 | 7.5 | 0.6 | MKP65S1332-30*****++  | 0.10K         | 18 | 15 | 8.5 | 15 | 0.6 | MKP65S1104K6S*****++ | 1.2K          | 32 | 29 | 19 | 28 | 0.8 | MKP65S1125KBA*****++  |
| 0.0039        | 11 | 9   | 4 | 7.5 | 0.6 | MKP65S1392-30*****++  | 0.12          | 18 | 16 | 10  | 15 | 0.6 | MKP65S1124-6S*****++ | 1.2K          | 32 | 33 | 18 | 28 | 0.8 | MKP65S1125KBS*****++  |
| 0.0047        | 11 | 9   | 4 | 7.5 | 0.6 | MKP65S1472-30*****++  | 0.15M         | 18 | 16 | 10  | 15 | 0.8 | MKP65S1154M6S*****++ | 1.5M          | 32 | 29 | 19 | 28 | 0.8 | MKP65S1155MBA*****++  |
| 0.0058        | 11 | 9   | 4 | 7.5 | 0.6 | MKP65S1582-30*****++  | 0.15K         | 18 | 19 | 11  | 15 | 0.8 | MKP65S1154K6S*****++ | 1.5M          | 32 | 19 | 31 | 28 | 0.8 | MKP65S1155MBC*****++  |
| 0.0068        | 11 | 11  | 5 | 7.5 | 0.6 | MKP65S1682-30*****++  | 0.18          | 18 | 19 | 11  | 15 | 0.8 | MKP65S1184-6S*****++ | 1.5           | 32 | 33 | 18 | 28 | 0.8 | MKP65S1155-BS*****++  |
| 0.0082        | 11 | 11  | 5 | 7.5 | 0.6 | MKP65S1822-30*****++  | 0.039         | 29 | 15 | 6   | 23 | 0.8 | MKP65S1393-90*****++ | 1.8           | 32 | 37 | 22 | 28 | 0.8 | MKP65S1185-BS*****++  |
| 0.01          | 11 | 11  | 5 | 7.5 | 0.6 | MKP65S1103-30*****++  | 0.047         | 29 | 15 | 6   | 23 | 0.8 | MKP65S1473-90*****++ | 2.2M          | 32 | 37 | 22 | 28 | 0.8 | MKP65S1225MBS*****++  |
| 0.012         | 11 | 12  | 6 | 7.5 | 0.6 | MKP65S1123-30*****++  | 0.058         | 29 | 15 | 6   | 23 | 0.8 | MKP65S1583-90*****++ | 0.33          | 41 | 22 | 11 | 38 | 1.0 | MKP65S1334-F0*****++  |
| 0.015M        | 11 | 12  | 6 | 7.5 | 0.6 | MKP65S1153M30*****++  | 0.068         | 29 | 15 | 6   | 23 | 0.8 | MKP65S1683-90*****++ | 0.39          | 41 | 22 | 11 | 38 | 1.0 | MKP65S1394-F0*****++  |
| 0.001         | 13 | 9   | 4 | 10  | 0.6 | MKP65S1102-40*****++  | 0.082         | 27 | 15 | 6   | 23 | 0.8 | MKP65S1823-9S*****++ | 0.47          | 41 | 22 | 11 | 38 | 1.0 | MKP65S1474-FS*****++  |
| 0.0012        | 13 | 9   | 4 | 10  | 0.6 | MKP65S1122-40*****++  | 0.1           | 27 | 15 | 6   | 23 | 0.8 | MKP65S1104-9S*****++ | 0.56          | 41 | 22 | 11 | 38 | 1.0 | MKP65S1564-FS*****++  |
| 0.0015        | 13 | 9   | 4 | 10  | 0.6 | MKP65S1152-40*****++  | 0.12          | 27 | 15 | 6   | 23 | 0.8 | MKP65S1124-9S*****++ | 0.68          | 41 | 22 | 11 | 38 | 1.0 | MKP65S1684-FS*****++  |
| 0.0018        | 13 | 9   | 4 | 10  | 0.6 | MKP65S1182-40*****++  | 0.15          | 29 | 16 | 7   | 23 | 0.8 | MKP65S1154-9S*****++ | 0.82M         | 41 | 22 | 11 | 38 | 1.0 | MKP65S1824MFS*****++  |
| 0.0022        | 13 | 9   | 4 | 10  | 0.8 | MKP65S1222-40*****++  | 0.18          | 29 | 17 | 8.5 | 23 | 0.8 | MKP65S1184-9S*****++ | 0.82K         | 41 | 24 | 13 | 38 | 1.0 | MKP65S1824KFS*****++  |
| 0.0027        | 13 | 9   | 4 | 10  | 0.6 | MKP65S1272-40*****++  | 0.22          | 27 | 17 | 8.5 | 23 | 0.8 | MKP65S1224-9S*****++ | 1.0           | 41 | 24 | 13 | 38 | 1.0 | MKP65S1105-FS*****++  |
| 0.0033        | 13 | 9   | 4 | 10  | 0.6 | MKP65S1332-40 *****++ | 0.27          | 27 | 19 | 10  | 23 | 0.8 | MKP65S1274-9S*****++ | 1.0           | 42 | 15 | 24 | 38 | 1.0 | MKP65S1105-FC*****++  |
| 0.0039        | 13 | 9   | 4 | 10  | 0.6 | MKP65S1392-40*****++  | 0.33          | 27 | 20 | 11  | 23 | 0.8 | MKP65S1334-9S*****++ | 1.2           | 41 | 26 | 15 | 38 | 1.0 | MKP65S1125-FA*****++  |
| 0.0047        | 13 | 9   | 4 | 10  | 0.6 | MKP65S1472-4S*****++  | 0.39          | 29 | 20 | 11  | 23 | 0.8 | MKP65S1394-9S*****++ | 1.2           | 42 | 28 | 14 | 38 | 1.0 | MKP65S1125-FS*****++  |
| 0.0056        | 13 | 9   | 4 | 10  | 0.6 | MKP65S1582-4S*****++  | 0.47M         | 29 | 22 | 12  | 23 | 0.8 | MKP65S1474M9S*****++ | 1.5M          | 41 | 26 | 15 | 38 | 1.0 | MKP65S1155MFA *****++ |
| 0.0088        | 13 | 9   | 4 | 10  | 0.6 | MKP65S1682-4S*****++  | 0.47K         | 27 | 23 | 14  | 23 | 0.8 | MKP65S1474K9S*****++ | 1.5M          | 42 | 28 | 14 | 38 | 1.0 | MKP65S1155MFS *****++ |
| 0.0082        | 13 | 9   | 4 | 10  | 0.6 | MKP65S1822-4S*****++  | 0.56M         | 27 | 23 | 14  | 23 | 0.8 | MKP65S1564M9S*****++ | 1.5K          | 41 | 30 | 16 | 38 | 1.0 | MKP65S1155KFS*****++  |
| 0.01          | 13 | 9   | 4 | 10  | 0.6 | MKP65S1103-4S*****++  | 0.56          | 27 | 25 | 16  | 23 | 0.8 | MKP65S1564K9S*****++ | 1.5           | 42 | 19 | 24 | 38 | 1.0 | MKP65S1155-FC*****++  |
| 0.012         | 13 | 11  | 5 | 10  | 0.6 | MKP65S1123-4S*****++  | 0.68M         | 27 | 25 | 16  | 23 | 0.8 | MKP65S1684M9S*****++ | 1.8M          | 41 | 30 | 18 | 38 | 1.0 | MKP65S1185MFS*****++  |
| 0.015         | 13 | 11  | 5 | 10  | 0.6 | MKP65S1153-4S*****++  | 0.15          | 32 | 18 | 9   | 28 | 0.8 | MKP65S1154-B0*****++ | 1.8K          | 41 | 32 | 17 | 38 | 1.0 | MKP65S1185KFS*****++  |
| 0.018         | 13 | 11  | 5 | 10  | 0.6 | MKP65S1183-4S*****++  | 0.18          | 32 | 18 | 9   | 28 | 0.8 | MKP65S1184-B0*****++ | 2.2M          | 41 | 32 | 17 | 38 | 1.0 | MKP65S1225MFA *****++ |
| 0.022         | 13 | 11  | 5 | 10  | 0.6 | MKP65S1223-4S*****++  | 0.22          | 32 | 18 | 9   | 28 | 0.8 | MKP65S1224-B0*****++ | 2.2           | 41 | 34 | 19 | 38 | 1.0 | MKP65S1225-FS*****++  |
| 0.027         | 13 | 12  | 5 | 10  | 0.6 | MKP65S1273-4S*****++  | 0.27          | 32 | 18 | 9   | 28 | 0.8 | MKP65S1274-BS*****++ | 2.7           | 41 | 37 | 22 | 38 | 1.0 | MKP65S1275-FS*****++  |
| 0.033         | 13 | 12  | 6 | 10  | 0.6 | MKP65S1333-4S*****++  | 0.33          | 32 | 18 | 9   | 28 | 0.8 | MKP65S1334-BS*****++ | 3.3M          | 41 | 37 | 22 | 38 | 1.0 | MKP65S1335MFS*****++  |
| 0.039         | 13 | 13  | 7 | 10  | 0.6 | MKP65S1393-4S*****++  | 0.33          | 32 | 12 | 18  | 28 | 0.8 | MKP65S1334-BC*****++ | 3.3K          | 41 | 41 | 26 | 38 | 1.0 | MKP65S1335KFS*****++  |
| 0.047M        | 13 | 13  | 7 | 10  | 0.6 | MKP65S1473M4S*****++  | 0.39          | 32 | 20 | 11  | 28 | 0.8 | MKP65S1394-BS*****++ | 3.3K          | 42 | 38 | 28 | 38 | 1.0 | MKP65S1335KFA *****++ |
| 0.047K        | 13 | 14  | 8 | 10  | 0.6 | MKP65S1473K4S*****++  | 0.47          | 32 | 20 | 11  | 28 | 0.8 | MKP65S1474-BS*****++ | 3.9           | 41 | 41 | 28 | 38 | 1.0 | MKP65S1395-FS*****++  |
| 0.056         | 13 | 14  | 5 | 10  | 0.6 | MKP65S1563-4S*****++  | 0.47          | 32 | 12 | 22  | 28 | 0.8 | MKP65S1474-BC*****++ | 3.9           | 42 | 38 | 28 | 38 | 1.0 | MKP65S1395-FA*****++  |
| 0.01          | 18 | 9.5 | 5 | 15  | 0.6 | MKP65S1103-6S*****++  | 0.56          | 32 | 22 | 13  | 28 | 0.8 | MKP65S1564-BS*****++ | 4.7M          | 41 | 43 | 28 | 38 | 1.0 | MKP65S1475MFS*****++  |
| 0.012         | 18 | 9.5 | 5 | 15  | 0.6 | MKP65S1123-6S*****++  | 0.68M         | 32 | 22 | 13  | 28 | 0.8 | MKP65S1684MBS*****++ | 4.7K          | 42 | 45 | 30 | 38 | 1.0 | MKP65S1475KFS*****++  |
| 0.015         | 18 | 9.5 | 5 | 15  | 0.6 | MKP65S1153-6S*****++  | 0.68K         | 32 | 25 | 13  | 28 | 0.8 | MKP65S1684KBA*****++ | 4.7           | 57 | 38 | 24 | 53 | 1.2 | MKP65S1475-MS3*****++ |
| 0.018         | 18 | 9.5 | 5 | 15  | 0.6 | MKP65S1183-6S*****++  | 0.68K         | 32 | 25 | 15  | 28 | 0.8 | MKP65S1684KBS*****++ | 5.8           | 57 | 45 | 30 | 53 | 1.2 | MKP65S1585-MS3*****++ |
| 0.022         | 18 | 9.5 | 5 | 15  | 0.6 | MKP65S1223-6S*****++  | 0.68          | 32 | 18 | 22  | 28 | 0.8 | MKP65S1684-BC*****++ | 6.8           | 57 | 45 | 30 | 53 | 1.2 | MKP65S1885-MS3*****++ |
| 0.027         | 18 | 11  | 5 | 15  | 0.6 | MKP65S1273-6S*****++  | 0.82M         | 32 | 25 | 13  | 28 | 0.8 | MKP65S1824MBS*****++ | 6.8           | 57 | 30 | 44 | 53 | 1.2 | MKP65S1685-MC3*****++ |
| 0.033         | 18 | 11  | 5 | 15  | 0.6 | MKP65S1333-6S*****++  | 0.82K         | 32 | 25 | 15  | 28 | 0.8 | MKP65S1624KBS*****++ | 8.2           | 57 | 50 | 35 | 53 | 1.2 | MKP65S1825-MS3*****++ |
| 0.039         | 18 | 12  | 6 | 15  | 0.6 | MKP65S1393-6S*****++  | 0.82K         | 32 | 28 | 14  | 28 | 0.8 | MKP65S1824KBA*****++ | 10.0          | 57 | 50 | 35 | 53 | 1.2 | MKP65S1106-MS3*****++ |
| 0.047         | 18 | 12  | 6 | 15  | 0.6 | MKP65S1473-6S*****++  |               |    |    |     |    |     |                      |               |    |    |    |    |     |                       |

备注：1. “-”表示容量偏差。 “-”=capacitance tolerance code, M=±20%,K=±10%  
2. “\*\*\*\*”表示引线加工和包装代码（见table 1）。 “\*\*\*\*”=lead form and packing code（refer to table 1）