

# 包封金属化聚丙烯膜电容器 (MPP/CBB21) 规格书

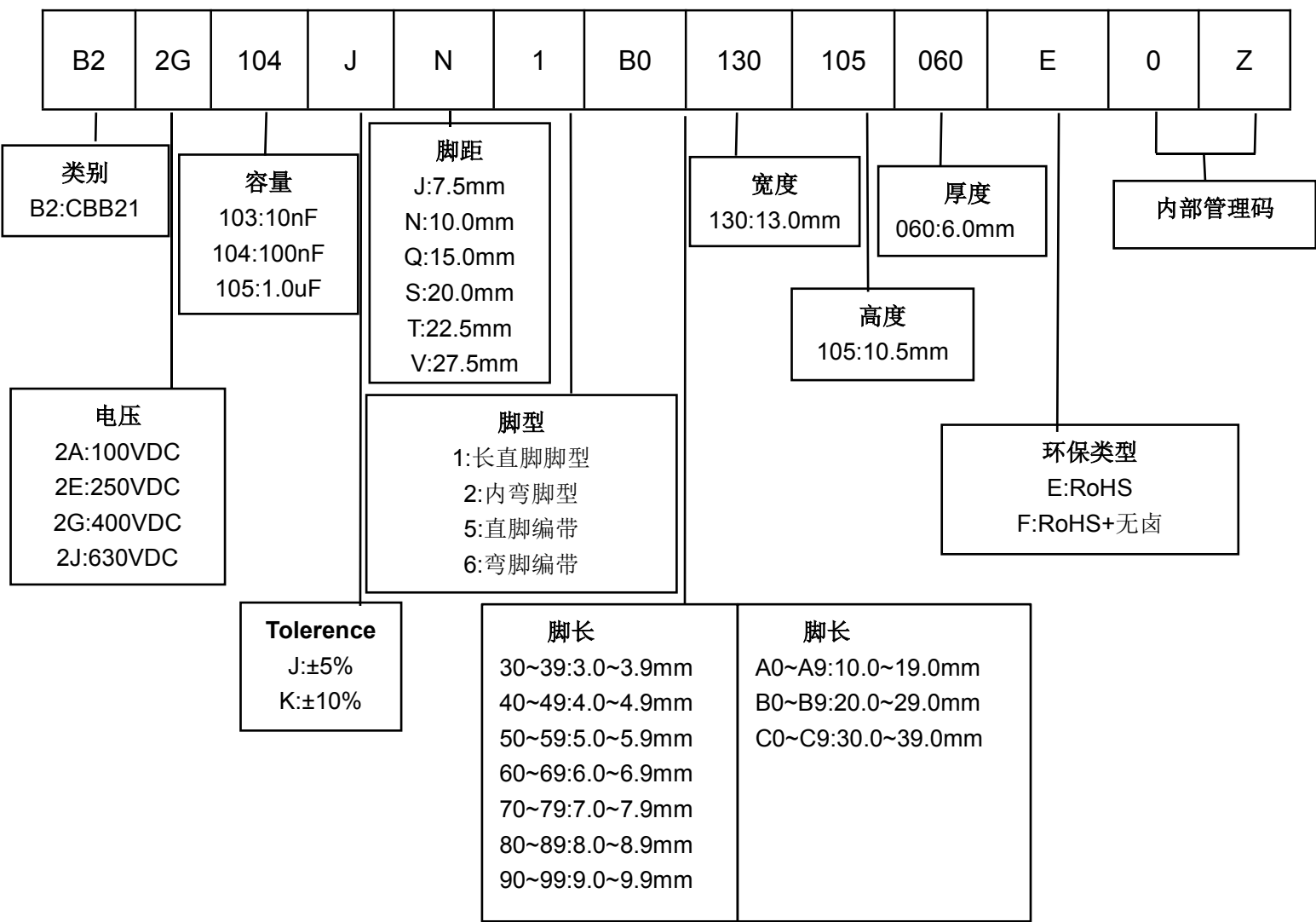
## 特点

- 电容器容量范围从 0.01uF 到 3.3uF。
- 工作温度：-40℃~105℃
- 储存温度： 15℃~35℃
- 损耗少，内部温升小。
- 金属化聚丙烯膜组成，无感结构。
- 承受高脉冲，大电流，耐高频 100KHz。
- 容量变化小，负温度系数。
- 环氧树脂包封。

## 用途

- 广泛应用于高频、直流、交流和脉冲电路中。
- 广泛用于大电流场合。

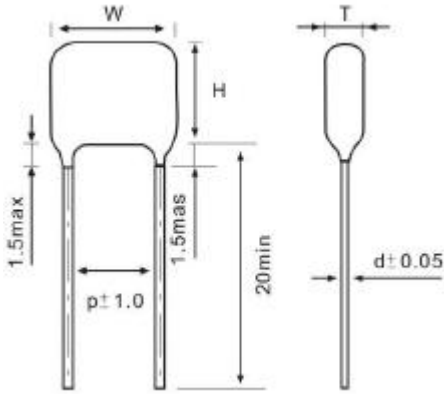
料号编码原则



技术要求

|       |                                                                    |
|-------|--------------------------------------------------------------------|
| 气候类别  | 40/100/21                                                          |
| 额定电压  | 100VDC、250VDC、<br>400VDC、630VDC、                                   |
| 损耗角正切 | ≤0.1%(1KHz、1.0Vrms、20℃)                                            |
| 耐电压   | 1.6U <sub>R</sub> (5s)                                             |
| 绝缘电阻  | C≤0.33uF,IR≥50000MΩ<br>C>0.33uF,IR≥15000S<br>(AT 100VDC、60SEC、20℃) |

## 外形尺寸 (mm)

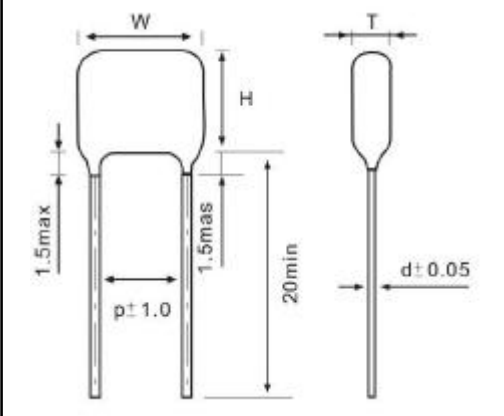
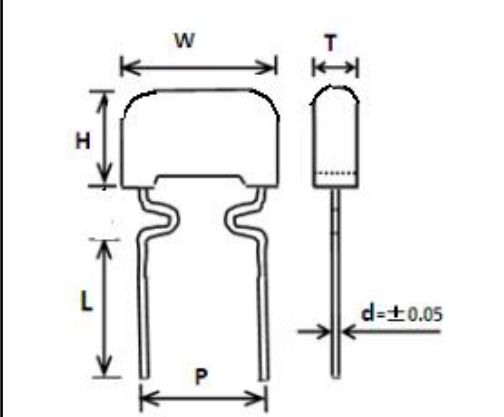


| 容量(uF) | 电压     | 尺寸(mm) |       |       |         |          |
|--------|--------|--------|-------|-------|---------|----------|
|        |        | W Max  | H Max | T Max | P ± 1.0 | d ± 0.05 |
| 0.01   | 100VDC | 10.0   | 9.0   | 5.0   | 7.5     | 0.6      |
|        | 250VDC | 10.0   | 9.0   | 5.0   | 7.5     | 0.6      |
|        | 400VDC | 13.0   | 9.0   | 5.5   | 10.0    | 0.6      |
|        | 630VDC | 13.0   | 9.0   | 5.5   | 10.0    | 0.6      |
| 0.015  | 100VDC | 10.0   | 9.0   | 5.5   | 7.5     | 0.6      |
|        | 250VDC | 10.0   | 9.0   | 5.5   | 7.5     | 0.6      |
|        | 400VDC | 13.0   | 9.0   | 5.5   | 10.0    | 0.6      |
|        | 630VDC | 13.0   | 11.0  | 6.0   | 10.0    | 0.6      |
| 0.018  | 100VDC | 10.0   | 9.5   | 5.5   | 7.5     | 0.6      |
|        | 250VDC | 10.0   | 9.5   | 5.5   | 7.5     | 0.6      |
|        | 400VDC | 13.0   | 9.0   | 5.5   | 10.0    | 0.6      |
|        | 630VDC | 13.0   | 9.0   | 5.5   | 10.0    | 0.6      |
| 0.022  | 100VDC | 10.0   | 8.5   | 5.5   | 7.5     | 0.6      |
|        | 250VDC | 10.0   | 8.5   | 5.5   | 7.5     | 0.6      |
|        | 400VDC | 13.0   | 9.0   | 5.5   | 10.0    | 0.6      |
|        | 630VDC | 13.0   | 9.0   | 5.5   | 10.0    | 0.6      |
| 0.027  | 100VDC | 10.0   | 9.5   | 5.5   | 7.5     | 0.6      |
|        | 250VDC | 10.0   | 9.5   | 5.5   | 7.5     | 0.6      |
|        | 400VDC | 13.0   | 9.0   | 5.5   | 10.0    | 0.6      |
|        | 630VDC | 13.0   | 9.0   | 5.5   | 10.0    | 0.6      |
| 0.033  | 100VDC | 10.0   | 9.5   | 6.0   | 7.5     | 0.6      |
|        | 250VDC | 10.0   | 9.5   | 6.0   | 7.5     | 0.6      |
|        | 400VDC | 13.0   | 10.0  | 6.0   | 10.0    | 0.6      |
|        | 630VDC | 13.0   | 10.0  | 6.0   | 10.0    | 0.6      |

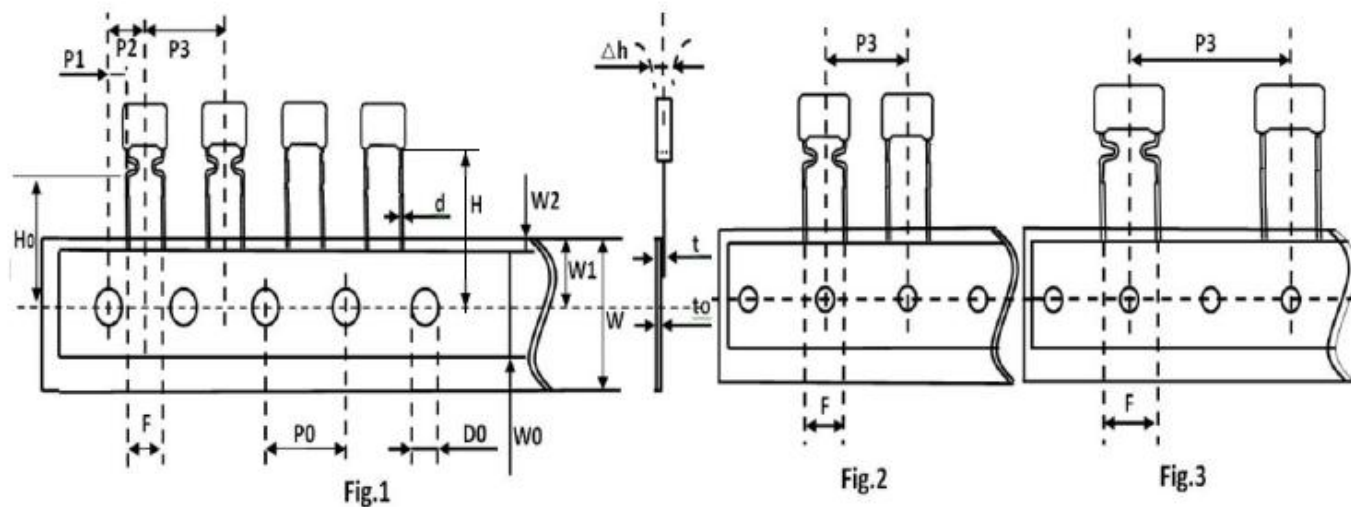
| 容量(uF) | 电压     | 尺寸(mm) |       |       |         |          |
|--------|--------|--------|-------|-------|---------|----------|
|        |        | W Max  | H Max | T Max | P ± 1.0 | d ± 0.05 |
| 0.047  | 100VDC | 10.0   | 9.5   | 5.5   | 7.5     | 0.6      |
|        | 250VDC | 10.0   | 9.5   | 5.5   | 7.5     | 0.6      |
|        | 400VDC | 13.0   | 9.0   | 5.5   | 10.0    | 0.6      |
|        | 630VDC | 13.0   | 10.5  | 6.5   | 10.0    | 0.6      |
| 0.056  | 100VDC | 10.0   | 9.0   | 5.5   | 7.5     | 0.6      |
|        | 250VDC | 10.0   | 9.0   | 5.5   | 7.5     | 0.6      |
|        | 400VDC | 13.0   | 8.5   | 5.5   | 10.0    | 0.6      |
|        | 630VDC | 13.0   | 11.5  | 7.5   | 10.0    | 0.6      |
| 0.068  | 100VDC | 10.0   | 9.5   | 6.0   | 7.5     | 0.6      |
|        | 250VDC | 10.0   | 9.5   | 6.0   | 7.5     | 0.6      |
|        | 400VDC | 13.0   | 9.5   | 6.0   | 10.0    | 0.6      |
|        | 630VDC | 18.0   | 11.0  | 6.0   | 15.0    | 0.8      |
| 0.1    | 100VDC | 10.0   | 10.0  | 6.5   | 7.5     | 0.6      |
|        | 250VDC | 10.0   | 10.0  | 6.5   | 7.5     | 0.6      |
|        | 400VDC | 13.0   | 10.5  | 6.0   | 10.0    | 0.6      |
|        | 630VDC | 18.0   | 10.5  | 7.0   | 15.0    | 0.8      |
| 0.15   | 100VDC | 13.0   | 10.5  | 6.5   | 10.0    | 0.6      |
|        | 250VDC | 13.0   | 10.5  | 6.5   | 10.0    | 0.6      |
|        | 400VDC | 13.0   | 11.5  | 7.0   | 10.0    | 0.6      |
|        | 630VDC | 18.0   | 13.0  | 7.5   | 15.0    | 0.8      |
| 0.22   | 100VDC | 13.0   | 11.0  | 7.0   | 10.0    | 0.6      |
|        | 250VDC | 13.0   | 11.0  | 7.0   | 10.0    | 0.6      |
|        | 400VDC | 18.0   | 13.0  | 7.5   | 15.0    | 0.8      |
|        | 630VDC | 18.0   | 14.5  | 8.5   | 15.0    | 0.8      |
| 0.33   | 100VDC | 13.0   | 12.5  | 8.5   | 10.0    | 0.6      |
|        | 250VDC | 13.0   | 12.5  | 8.5   | 10.0    | 0.6      |
|        | 400VDC | 18.0   | 14.5  | 7.0   | 15.0    | 0.8      |
|        | 630VDC | 18.0   | 17.5  | 10.0  | 15.0    | 0.8      |
| 0.47   | 100VDC | 18.0   | 12.5  | 7.0   | 15.0    | 0.8      |
|        | 250VDC | 18.0   | 12.5  | 7.0   | 15.0    | 0.8      |
|        | 400VDC | 18.0   | 15.5  | 8.5   | 15.0    | 0.8      |
|        | 630VDC | 23.0   | 18.5  | 11.0  | 20.0    | 0.8      |
| 0.68   | 100VDC | 18.0   | 14.5  | 8.0   | 15.0    | 0.8      |
|        | 250VDC | 18.0   | 14.5  | 8.0   | 15.0    | 0.8      |
|        | 400VDC | 18.0   | 17.0  | 10.0  | 15.0    | 0.8      |
|        | 630VDC | 25.0   | 19.5  | 10.5  | 22.5    | 0.8      |

| 容量(uF) | 电压     | 尺寸(mm) |       |       |         |          |
|--------|--------|--------|-------|-------|---------|----------|
|        |        | W Max  | H Max | T Max | P ± 1.0 | d ± 0.05 |
| 1.0    | 100VDC | 18.0   | 16.5  | 10.0  | 15.0    | 0.8      |
|        | 250VDC | 18.0   | 16.5  | 10.0  | 15.0    | 0.8      |
|        | 400VDC | 23.0   | 17.5  | 9.5   | 20.0    | 0.8      |
|        | 630VDC | 31.0   | 21.0  | 12.5  | 27.5    | 0.8      |
| 1.5    | 100VDC | 23.0   | 17.5  | 9.5   | 20.0    | 0.8      |
|        | 250VDC | 23.0   | 17.5  | 9.5   | 20.0    | 0.8      |
|        | 400VDC | 31.0   | 17.5  | 9.0   | 27.5    | 0.8      |
|        | 630VDC | 31.0   | 24.5  | 14.5  | 27.5    | 0.8      |
| 2.0    | 100VDC | 23.0   | 19.5  | 10.5  | 20.0    | 0.8      |
|        | 250VDC | 23.0   | 19.5  | 10.5  | 20.0    | 0.8      |
|        | 400VDC | 31.0   | 19.5  | 10.5  | 27.5    | 0.8      |
| 2.2    | 100VDC | 23.0   | 19.5  | 11.5  | 20.0    | 0.8      |
|        | 250VDC | 23.0   | 19.5  | 11.5  | 20.0    | 0.8      |
|        | 400VDC | 31.0   | 20.0  | 11.5  | 27.5    | 0.8      |
| 3.0    | 100VDC | 31.0   | 19.5  | 11.0  | 27.5    | 0.8      |
|        | 250VDC | 31.0   | 19.5  | 11.0  | 27.5    | 0.8      |
|        | 400VDC | 31.0   | 22.5  | 13.5  | 27.5    | 0.8      |
| 3.3    | 100VDC | 31.0   | 20.0  | 11.5  | 27.5    | 0.8      |
|        | 250VDC | 31.0   | 20.0  | 11.5  | 27.5    | 0.8      |
|        | 400VDC | 31.0   | 24.0  | 14.5  | 27.5    | 0.8      |

脚型、脚长说明

| 脚型    | 图示                                                                                  | 脚长 L (mm)                                                                |
|-------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 长直脚脚型 |   | ① $[2.5 \leq L < 6.0] + / - 0.5$ ;<br>② $[6.0 \leq L \leq 10] + / - 1.0$ |
| 内弯脚型  |  | ① $[2.5 \leq L < 6.0] + / - 0.5$ ;<br>② $[6.0 \leq L \leq 10] + / - 1.0$ |

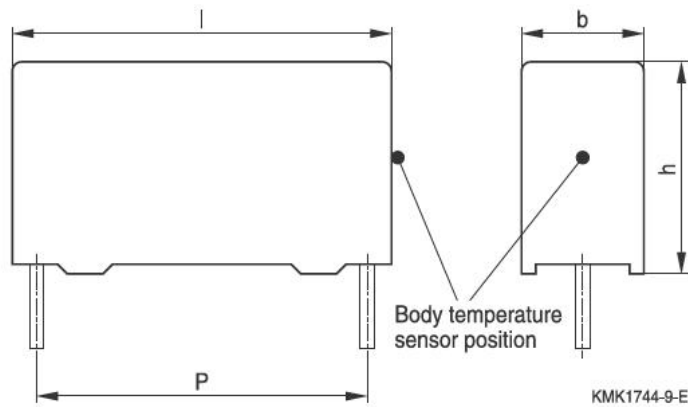
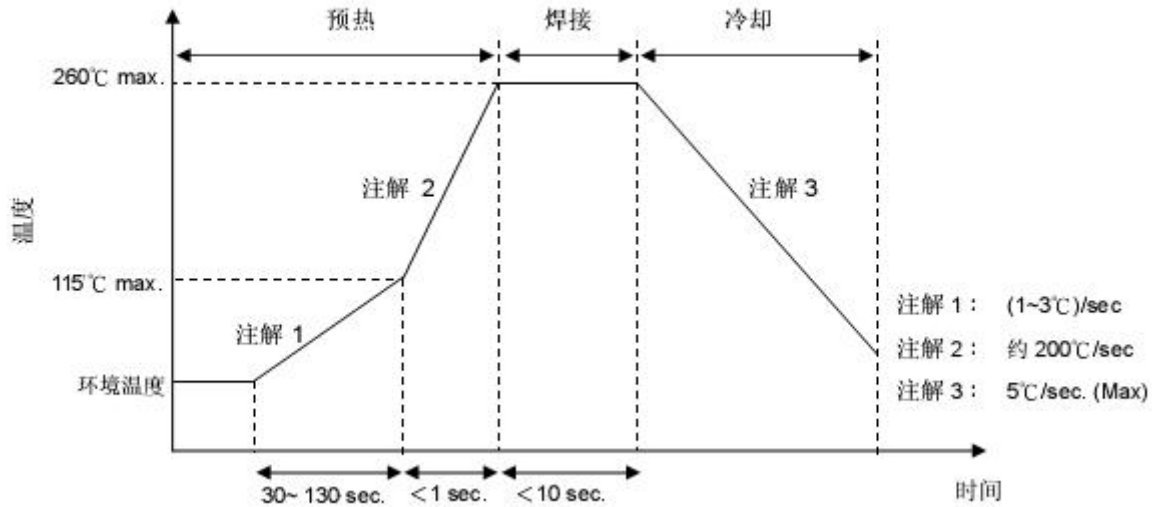
## 编带尺寸 (mm)



| 代码  | Fig.1 | Fig.2 | Fig.2 | Fig.3 | Fig.3     | 误差        |
|-----|-------|-------|-------|-------|-----------|-----------|
|     | P=5.0 | P=7.5 | P=10  | P=15  | P=20/22.5 |           |
| P3  | 12.7  | 12.7  | 12.7  | 25.4  | 30.0      | ±1.0      |
| P2  | 6.35  | /     | /     | /     | /         | ±1.3      |
| P0  | 12.7  | 12.7  | 12.7  | 12.7  | 15.0      | ±0.3      |
| P1  | 3.85  | /     | /     | /     | /         | ±0.7      |
| F   | 5.0   | 7.5   | 10.0  | 15.0  | 20.0/22.5 | ±1.0      |
| H   | 20.0  | 20.0  | 20.0  | 20.0  | 20.0      | ±1.0      |
| H0  | 16.5  | 16.5  | 16.5  | 16.5  | 16.5      | ±0.5      |
| Δ h | 0     | 0     | 0     | 0     | 0         | ±2.0      |
| W   | 18.0  | 18.0  | 18.0  | 18.0  | 18.0      | +1.0/-0.5 |
| W0  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0      | ±1.0      |
| W1  | 9.0   | 9.0   | 9.0   | 9.0   | 9.0       | ±0.5      |
| W2  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0       | Max       |
| D0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0       | ±0.3      |
| d   | 0.5   | 0.6   | 0.6   | 0.8   | 0.8       | ±0.05     |
| t   | 1.0   | 1.1   | 1.1   | 1.4   | 1.4       | ±0.2      |
| t0  | 0.38  | 0.38  | 0.38  | 0.47  | 0.47      | ±0.04     |

焊接条件:

波峰焊曲线



PP:  
During pre-heating:  $T_p \leq 110^{\circ}\text{C}$   
During soldering:  $T_s \leq 120^{\circ}\text{C}$ ,  $t_s \leq 15\text{ s}$   
PE:  
During pre-heating:  $T_p \leq 125^{\circ}\text{C}$   
During soldering:  $T_s \leq 160^{\circ}\text{C}$ ,  $t_s \leq 15\text{ s}$

## 烙铁重工焊接条件

| 项目         | 条件           |
|------------|--------------|
| 烙铁头部温度     | 350°C (max.) |
| 焊接时间       | 3 sec (max.) |
| 焊接位置与涂装层距离 | 2 mm (min.)  |

注：薄膜电容器不适合回流焊焊接，否则产品会因热收缩导致性能问题。