



# 规格承认书

## SPECIFICATION FOR APPROVAL

|                           |                                              |
|---------------------------|----------------------------------------------|
| 客户名称:<br>Customer         | 深圳市立创电子商务有限公司                                |
| 客户料号:<br>CSR P/N          | C46638930                                    |
| 产品名称:<br>Product Name     | PCB 用 DC-Link 电容器 DC-Link Capacitors for PCB |
| 型号规格:<br>Type & Spec.     | WDC(H)-80 $\mu$ F $\pm$ 10%-1100 VDC         |
| 物料简码:<br>Part Simple Code | DC604855                                     |
| 万盛料号:<br>Walson's P/N     | CDC1X806KE5C1155                             |
| 文档编号:<br>Document No.     | SP25031813CE                                 |
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|                                                 |                  |                   |                          |
|-------------------------------------------------|------------------|-------------------|--------------------------|
| 无锡万盛电子有限公司<br>Wuxi Walson Electronics Co., Ltd. |                  |                   | 客户确认<br>Customer Confirm |
| 拟制<br>Prepared by                               | 审核<br>Checked by | 批准<br>Approval by |                          |
| 张傲                                              | 陈志强              | 张东泽               |                          |

**无锡万盛电子有限公司**

WUXI WALSON ELECTRONICS CO., LTD.

地址 addr.: 江苏省无锡市江阴市长泾镇兴业路 22 号  
No.22, Xingye RD, Changjing town, Jiangyin city, Wuxi city, Jiangsu province

电话 Tel.: 0510-88719928 传真 Fax: 0510-88716718

网址 Website: www.walson-elec.com 邮 E-mail: walson@walson-elec.com

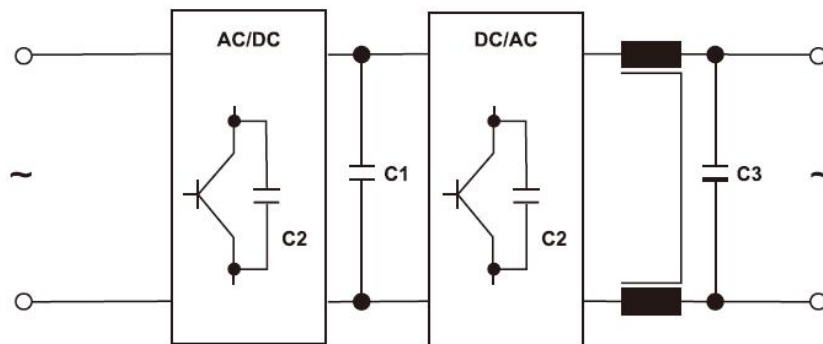
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## Version update records

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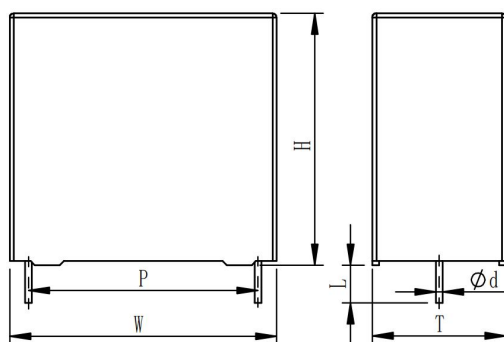
## ■ 特点和用途 Features and applications

- ❖ 金属化聚丙烯膜，良好的电气性能，可靠性高。  
Metallized polypropylene film, good electric property and high reliability.
- ❖ 阻燃塑料外壳和环氧树脂封装，镀锡铜线引出端。  
Flame-retardant plastic case and epoxy resin sealing, tinned copper wire terminals.
- ❖ 在严苛的环境下（如高温高湿）长期应用容量稳定性优异。  
High capacitance stability under severe ambient condition, such as high temperature & humidity.
- ❖ 用于高性能直流滤波应用场合，作直流支撑、储能、滤波用。  
Used in high performance DC-filter applications for DC-link, energy storage and filtering.
- ❖ 广泛应用于变频器、工业和高端电源、光伏逆变器等。  
Widely used for transducers, industrial and high-end power supplies and solar inverters etc.
- ❖ 执行标准 Standard adopted: GB/T 17702 (idt IEC 61071)。

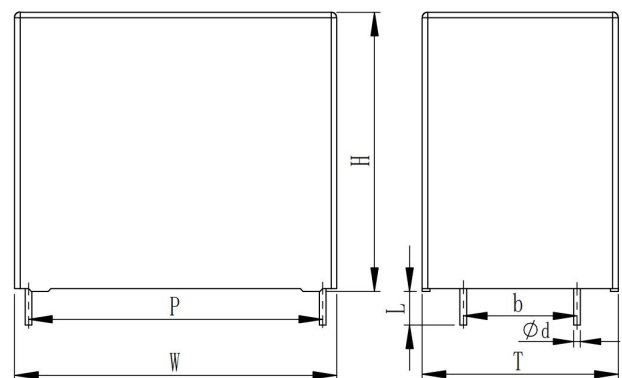


DC-Link Capacitor (C1)

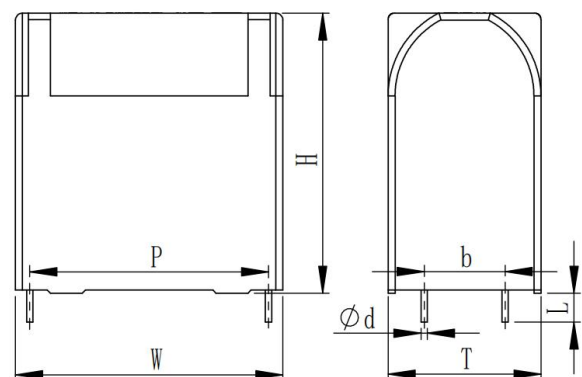
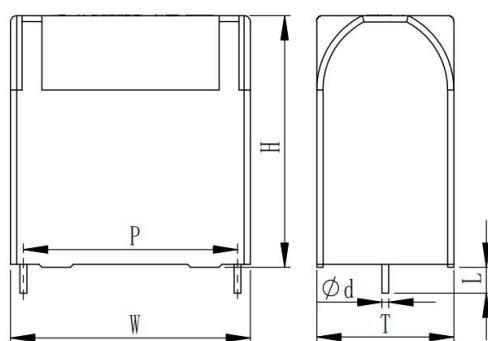
## ■ 外形尺寸 Outline dimensions



2 Pins



4 Pins



## ■ 技术数据 Technical Data

| 序 No. | 项 Items                                           | 要求 Requirement                                                                                                                                                                                          |
|-------|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | 参考标准<br>Reference standard                        | GB/T 17702, IEC 61071                                                                                                                                                                                   |
| 2     | 气候类别<br>Climatic category                         | 40/85/56                                                                                                                                                                                                |
| 3     | 额定电容量范围<br>Nominal capacitance range              | $C_N$ 1~140 $\mu$ F                                                                                                                                                                                     |
| 4     | 电容量允许偏差<br>Permissible capacitance tolerance      | $\pm 5\%$ (J)、 $\pm 10\%$ (K)                                                                                                                                                                           |
| 5     | 额定直流电压范围<br>Rated DC voltage range                | $U_{NDC}$ 500~1200 VDC                                                                                                                                                                                  |
| 6     | 最大纹波电压<br>Maximum ripple voltage (peak to peak)   | $U_r$ $0.3U_{NDC}$                                                                                                                                                                                      |
| 7     | 非周期冲击电压<br>Non-recurrent surge voltage            | $U_s$ $1.5U_{NDC}$                                                                                                                                                                                      |
| 8     | 额定能量<br>Rated energy                              | $W_N$ $0.5 \times C_N \times U_{NDC}^2$ (Ws)                                                                                                                                                            |
| 9     | 最大工作电流<br>Maximum operating current               | $I_{max}$ 见技术数据表 See the technical data table                                                                                                                                                           |
| 10    | 最大电压脉冲斜率<br>Maximum voltage pulse slope           | $dV/dt$ 见技术数据表 See the technical data table                                                                                                                                                             |
| 11    | 最大峰值电流<br>Maximum peak current                    | $\hat{I}$ $C_N \times dV/dt$ (A)                                                                                                                                                                        |
| 12    | 最大冲击电流<br>Maximum surge current                   | $\hat{I}_s$ $3 \times C_N \times dV/dt$ (A)                                                                                                                                                             |
| 13    | 损耗角正切值<br>Tangent of loss angle                   | $\tan \delta$ 见技术数据表 See the technical data table                                                                                                                                                       |
| 14    | 等效串联电阻<br>Equivalent series resistance            | $R_{esr}$ 见技术数据表 See the technical data table                                                                                                                                                           |
| 15    | 自感<br>Self inductance                             | $L_s$ <1 nH/mm 脚距和线长 lead pitch and length                                                                                                                                                              |
| 16    | 自放电时间常数<br>Self discharge time constant           | $R_{ins} \times C$ or T $\geq 10000$ s (20 °C, 100 V, 1 min)                                                                                                                                            |
| 17    | 极间耐电压<br>Voltage test between terminals           | $U_{T-T}$ $1.5U_{NDC}$ , 10 s, 无永久性击穿或飞弧<br>Neither permanent puncture nor flash-over occur                                                                                                             |
| 18    | 极壳交流耐电压<br>AC voltage test between terminals&case | $U_{T-C}$ 3000 Vac, 10 s, 无击穿或飞弧<br>Neither puncture nor flash-over occur                                                                                                                               |
| 19    | 额定温度<br>Rated temperature                         | $\theta_N$ 85 °C                                                                                                                                                                                        |
| 20    | 运行温度范围<br>Operating temperature range             | $\theta_{op}$ -40~105 °C (>85 °C: 每升高 1°C 电压降额 1.35% voltage derating 1.35% per °C)                                                                                                                     |
| 21    | 贮存温度范围<br>Storage temperature range               | $\theta_{stor}$ -40~105 °C                                                                                                                                                                              |
| 22    | 预期工作寿命<br>Expected service lifetime               | $t_{SL}$ 100000 h @ $U_{NDC}$ , $\theta_{hs}=70$ °C                                                                                                                                                     |
| 23    | 失效率<br>Failure rate                               | $\lambda$ <100 Fit                                                                                                                                                                                      |
| 24    | 允许过电压<br>Permissible over voltage                 | 1.1 $U_{NDC}$ : 30 %负载时间 of on-load duration<br>1.15 $U_{NDC}$ : 30 min/day 1.2 $U_{NDC}$ : 5 min/day<br>1.3 $U_{NDC}$ : 1 min/day<br>1.5 $U_{NDC}$ : 100 ms, 寿命内 1000 次 1000 times within the lifetime |
| 25    | 最大海拔高度<br>Maximum altitude                        | 3500 m (>1000 m, 每升高 500 m 电压降额 3 % voltage derating 3 % per 500 m)                                                                                                                                     |
| 26    | 高温高湿耐久性<br>High temperature & humidity durability | 温度 Temperature: 85 °C, 湿度 Humidity: 85 %RH, 电压 Voltage: $U_N$ , 时间 Duration: 1000 h; 试验前后容量变化 Capacitance change before and after the test: $\Delta C/C \leq 10\%$                                      |

## ■ 技术数据表 Technical data table

| U <sub>NDC</sub> =500/450/550 VDC @85 °C |               |               |               |                 |                 |                  |               |                                  |                                   |                                 |                       |                  |
|------------------------------------------|---------------|---------------|---------------|-----------------|-----------------|------------------|---------------|----------------------------------|-----------------------------------|---------------------------------|-----------------------|------------------|
| C <sub>N</sub><br>μF                     | W<br>±1<br>mm | H<br>±1<br>mm | T<br>±1<br>mm | P<br>±0.5<br>mm | b<br>±0.5<br>mm | d<br>±0.05<br>mm | dV/dt<br>V/μs | tanδ<br>1kHz<br>10 <sup>-4</sup> | tanδ<br>10kHz<br>10 <sup>-4</sup> | R <sub>esr</sub><br>10kHz<br>mΩ | I <sub>max</sub><br>A | 物料编码<br>P/N      |
| 5                                        | 32            | 20            | 11            | 27.5            | -               | 0.8              | 65            | 10                               | 100                               | 22.0                            | 5.0                   | CDC2H505*Z27**** |
| 10                                       | 32            | 24.5          | 15            | 27.5            | -               | 0.8              | 65            | 10                               | 100                               | 11.5                            | 6.5                   | CDC2H106*Z27**** |
| 22                                       | 32            | 37            | 22            | 27.5            | -               | 1.0              | 65            | 10                               | 100                               | 6.0                             | 10.0                  | CDC2H226*H27**** |
| 30                                       | 42            | 40            | 20            | 37.5            | 10.2            | 1.0              | 30            | 15                               | 150                               | 8.0                             | 12.5                  | CDC2H306*H3A**** |
| 40                                       | 42            | 44            | 24            | 37.5            | 10.2/12.7       | 1.0              | 30            | 15                               | 150                               | 5.0                             | 14.5                  | CDC2H406*H3****  |
| 50                                       | 42            | 45            | 30            | 37.5            | 12.7/20.3       | 1.2              | 30            | 15                               | 150                               | 4.0                             | 16.0                  | CDC2H506*E3****  |
| 60                                       | 42            | 50            | 35            | 37.5            | 20.3            | 1.2              | 30            | 15                               | 150                               | 4.0                             | 16.5                  | CDC2H606*E3C**** |
| 75                                       | 57            | 45            | 30            | 52.5            | 12.7/20.3       | 1.2              | 15            | 35                               | 350                               | 5.5                             | 16.0                  | CDC2H756*E5****  |
| 80                                       | 57            | 45            | 30            | 52.5            | 12.7/20.3       | 1.2              | 15            | 35                               | 350                               | 5.0                             | 16.5                  | CDC2H806*E5****  |
| 100                                      | 57            | 50            | 35            | 52.5            | 20.3            | 1.2              | 15            | 35                               | 350                               | 4.0                             | 18.5                  | CDC2H107*E5C**** |
| 110                                      | 57            | 50            | 35            | 52.5            | 20.3            | 1.2              | 15            | 35                               | 350                               | 4.0                             | 20.0                  | CDC2H117*E5C**** |
| U <sub>NDC</sub> =600/700 VDC @85 °C     |               |               |               |                 |                 |                  |               |                                  |                                   |                                 |                       |                  |
| C <sub>N</sub><br>μF                     | W<br>±1<br>mm | H<br>±1<br>mm | T<br>±1<br>mm | P<br>±0.5<br>mm | b<br>±0.5<br>mm | d<br>±0.05<br>mm | dV/dt<br>V/μs | tanδ<br>1kHz<br>10 <sup>-4</sup> | tanδ<br>10kHz<br>10 <sup>-4</sup> | R <sub>esr</sub><br>10kHz<br>mΩ | I <sub>max</sub><br>A | 物料编码<br>P/N      |
| 3                                        | 32            | 20            | 11            | 27.5            | -               | 0.8              | 65            | 11                               | 100                               | 32.0                            | 4.1                   | CDC1U305*Z27**** |
| 4                                        | 32            | 20            | 11            | 27.5            | -               | 0.8              | 65            | 11                               | 100                               | 24.0                            | 5.5                   | CDC1U405*Z27**** |
| 5                                        | 32            | 22            | 13            | 27.5            | -               | 0.8              | 65            | 11                               | 100                               | 19.5                            | 6.5                   | CDC1U505*Z27**** |
| 7                                        | 32            | 24.5          | 15            | 27.5            | -               | 0.8              | 65            | 11                               | 100                               | 16.0                            | 8.5                   | CDC1U705*Z27**** |
| 10                                       | 32            | 30            | 16            | 27.5            | -               | 0.8              | 65            | 11                               | 100                               | 11.5                            | 11.0                  | CDC1U106*Z27**** |
| 12                                       | 32            | 33            | 18            | 27.5            | -               | 0.8              | 65            | 11                               | 100                               | 11.0                            | 12.5                  | CDC1U126*Z27**** |
| 15                                       | 32            | 37            | 22            | 27.5            | -               | 1.0              | 65            | 11                               | 100                               | 9.0                             | 13.0                  | CDC1U156*H27**** |
| 15                                       | 32            | 37            | 22            | 27.5            | 10.2/12.7       | 0.8              | 65            | 11                               | 100                               | 7.5                             | 16.0                  | CDC1U156*Z2****  |
| 18                                       | 32            | 37            | 22            | 27.5            | -               | 1.0              | 65            | 11                               | 100                               | 8.0                             | 14.5                  | CDC1U186*H27**** |
| 18                                       | 32            | 37            | 22            | 27.5            | 10.2/12.7       | 0.8              | 65            | 11                               | 100                               | 6.5                             | 17.0                  | CDC1U186*Z2****  |
| 20                                       | 42            | 40            | 20            | 37.5            | 10.2            | 1.0              | 30            | 20                               | 175                               | 10.0                            | 12.5                  | CDC1U206*H3A**** |
| 25                                       | 42            | 40            | 20            | 37.5            | 10.2            | 1.0              | 30            | 20                               | 175                               | 8.0                             | 15.5                  | CDC1U256*H3A**** |
| 30                                       | 42            | 44            | 24            | 37.5            | 10.2/12.7       | 1.0              | 30            | 20                               | 175                               | 6.5                             | 18.0                  | CDC1U306*H3****  |
| 35                                       | 42            | 45            | 30            | 37.5            | 12.7/20.3       | 1.2              | 30            | 20                               | 175                               | 6.0                             | 20.5                  | CDC1U356*E3****  |
| 40                                       | 42            | 45            | 30            | 37.5            | 12.7/20.3       | 1.2              | 30            | 20                               | 175                               | 5.5                             | 23.0                  | CDC1U406*E3****  |
| 45                                       | 42            | 50            | 35            | 37.5            | 20.3            | 1.2              | 30            | 20                               | 175                               | 5.0                             | 26.0                  | CDC1U456*E3C**** |
| 50                                       | 42            | 50            | 35            | 37.5            | 20.3            | 1.2              | 30            | 20                               | 175                               | 4.5                             | 28.5                  | CDC1U506*E3C**** |
| 55                                       | 42            | 50            | 35            | 37.5            | 20.3            | 1.2              | 30            | 20                               | 175                               | 4.0                             | 30.5                  | CDC1U556*E3C**** |
| 60                                       | 42            | 55            | 40            | 37.5            | 20.3            | 1.2              | 30            | 20                               | 175                               | 3.5                             | 32.0                  | CDC1U606*E3C**** |
| 70                                       | 42            | 55            | 40            | 37.5            | 20.3            | 1.2              | 30            | 20                               | 175                               | 3.0                             | 33.0                  | CDC1U706*E3C**** |
| 75                                       | 42            | 60            | 45            | 37.5            | 20.3            | 1.2              | 30            | 20                               | 175                               | 3.0                             | 34.0                  | CDC1U756*E3C**** |
| 80                                       | 42            | 60            | 45            | 37.5            | 20.3            | 1.2              | 30            | 20                               | 175                               | 3.0                             | 34.5                  | CDC1U806*E3C**** |
| 85                                       | 42            | 60            | 45            | 37.5            | 20.3            | 1.2              | 30            | 20                               | 175                               | 2.5                             | 35.0                  | CDC1U856*E3C**** |
| 55                                       | 57.5          | 45            | 30            | 52.5            | 12.7/20.3       | 1.2              | 15            | 36                               | 350                               | 7.5                             | 17.0                  | CDC1U556*E5****  |
| 60                                       | 57.5          | 45            | 30            | 52.5            | 12.7/20.3       | 1.2              | 15            | 36                               | 350                               | 6.5                             | 18.5                  | CDC1U606*E5****  |
| 65                                       | 57.5          | 50            | 35            | 52.5            | 20.3            | 1.2              | 15            | 36                               | 350                               | 6.0                             | 20.0                  | CDC1U656*E5C**** |

|     |      |    |    |      |      |     |    |    |     |     |      |                  |
|-----|------|----|----|------|------|-----|----|----|-----|-----|------|------------------|
| 80  | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 | 15 | 36 | 350 | 5.0 | 24.0 | CDC1U806*E5C**** |
| 85  | 57.5 | 55 | 45 | 52.5 | 20.3 | 1.2 | 15 | 36 | 350 | 5.0 | 25.0 | CDC1U856*E5C**** |
| 90  | 57.5 | 55 | 45 | 52.5 | 20.3 | 1.2 | 15 | 36 | 350 | 5.0 | 25.5 | CDC1U906*E5C**** |
| 100 | 57.5 | 55 | 45 | 52.5 | 20.3 | 1.2 | 15 | 36 | 350 | 4.5 | 28.0 | CDC1U107*E5C**** |
| 110 | 57.5 | 55 | 45 | 52.5 | 20.3 | 1.2 | 15 | 36 | 350 | 4.0 | 30.5 | CDC1U117*E5C**** |
| 120 | 57.5 | 65 | 45 | 52.5 | 20.3 | 1.2 | 15 | 36 | 350 | 3.5 | 32.5 | CDC1U127*E5C**** |
| 130 | 57.5 | 65 | 45 | 52.5 | 20.3 | 1.2 | 15 | 36 | 350 | 3.5 | 34.0 | CDC1U137*E5C**** |
| 140 | 57.5 | 65 | 45 | 52.5 | 20.3 | 1.2 | 15 | 36 | 350 | 3.0 | 35.0 | CDC1U147*E5C**** |

**U<sub>NDC</sub>=800 VDC @85 °C**

| C <sub>N</sub><br>μF | W<br>±1<br>mm | H<br>±1<br>mm | T<br>±1<br>mm | P<br>±0.5<br>mm | b<br>±0.5<br>mm | d<br>±0.05<br>mm | dV/dt<br>V/μs | tanδ<br>1kHz<br>10 <sup>-4</sup> | tanδ<br>10kHz<br>10 <sup>-4</sup> | R <sub>esr</sub><br>10kHz<br>mΩ | I <sub>max</sub><br>A | 物料编码<br>P/N      |
|----------------------|---------------|---------------|---------------|-----------------|-----------------|------------------|---------------|----------------------------------|-----------------------------------|---------------------------------|-----------------------|------------------|
| 3                    | 32            | 20            | 11            | 27.5            | -               | 0.8              | 65            | 10                               | 95                                | 30.5                            | 4.4                   | CDC2K305*Z27**** |
| 5                    | 32            | 24.5          | 15            | 27.5            | -               | 0.8              | 65            | 10                               | 95                                | 18.5                            | 7.2                   | CDC2K505*Z27**** |
| 7                    | 32            | 30            | 16            | 27.5            | -               | 0.8              | 65            | 10                               | 95                                | 13.0                            | 9.5                   | CDC2K705*Z27**** |
| 9                    | 32            | 33            | 18            | 27.5            | -               | 0.8              | 65            | 10                               | 95                                | 11.5                            | 12.0                  | CDC2K905*Z27**** |
| 10                   | 32            | 37            | 22            | 27.5            | -               | 1.0              | 65            | 10                               | 95                                | 11.0                            | 12.5                  | CDC2K106*H27**** |
| 14                   | 32            | 37            | 22            | 27.5            | -               | 1.0              | 65            | 10                               | 95                                | 8.5                             | 14.0                  | CDC2K146*H27**** |
| 14                   | 32            | 37            | 22            | 27.5            | 10.2/12.7       | 0.8              | 65            | 10                               | 95                                | 8.0                             | 16.5                  | CDC2K146*Z2****  |
| 15                   | 42            | 40            | 20            | 37.5            | 10.2            | 1.0              | 30            | 18                               | 160                               | 12.0                            | 10.5                  | CDC2K156*H3A**** |
| 20                   | 42            | 44            | 24            | 37.5            | 10.2/12.7       | 1.0              | 30            | 18                               | 160                               | 9.0                             | 13.5                  | CDC2K206*H3****  |
| 25                   | 42            | 44            | 24            | 37.5            | 10.2/12.7       | 1.0              | 30            | 18                               | 160                               | 7.5                             | 16.5                  | CDC2K256*H3****  |
| 30                   | 42            | 45            | 30            | 37.5            | 12.7/20.3       | 1.2              | 30            | 18                               | 160                               | 6.0                             | 20.0                  | CDC2K306*E3****  |
| 35                   | 42            | 50            | 35            | 37.5            | 20.3            | 1.2              | 30            | 18                               | 160                               | 5.5                             | 22.0                  | CDC2K356*E3C**** |
| 40                   | 42            | 50            | 35            | 37.5            | 20.3            | 1.2              | 30            | 18                               | 160                               | 5.0                             | 25.0                  | CDC2K406*E3C**** |
| 45                   | 42            | 55            | 40            | 37.5            | 20.3            | 1.2              | 30            | 18                               | 160                               | 4.5                             | 28.0                  | CDC2K456*E3C**** |
| 50                   | 42            | 55            | 40            | 37.5            | 20.3            | 1.2              | 30            | 18                               | 160                               | 4.0                             | 31.0                  | CDC2K506*E3C**** |
| 55                   | 42            | 60            | 45            | 37.5            | 20.3            | 1.2              | 30            | 18                               | 160                               | 3.5                             | 33.0                  | CDC2K556*E3C**** |
| 60                   | 42            | 60            | 45            | 37.5            | 20.3            | 1.2              | 30            | 18                               | 160                               | 3.5                             | 34.5                  | CDC2K606*E3C**** |
| 65                   | 42            | 60            | 45            | 37.5            | 20.3            | 1.2              | 30            | 18                               | 160                               | 3.0                             | 35.0                  | CDC2K656*E3C**** |
| 40                   | 57.5          | 45            | 30            | 52.5            | 12.7/20.3       | 1.2              | 15            | 33                               | 320                               | 9.0                             | 13.5                  | CDC2K406*E5****  |
| 45                   | 57.5          | 45            | 30            | 52.5            | 12.7/20.3       | 1.2              | 15            | 33                               | 320                               | 8.0                             | 15.5                  | CDC2K456*E5****  |
| 50                   | 57.5          | 50            | 35            | 52.5            | 20.3            | 1.2              | 15            | 33                               | 320                               | 7.5                             | 17.0                  | CDC2K506*E5C**** |
| 60                   | 57.5          | 50            | 35            | 52.5            | 20.3            | 1.2              | 15            | 33                               | 320                               | 6.0                             | 20.5                  | CDC2K606*E5C**** |
| 65                   | 57.5          | 55            | 45            | 52.5            | 20.3            | 1.2              | 15            | 33                               | 320                               | 5.5                             | 22.0                  | CDC2K656*E5C**** |
| 70                   | 57.5          | 55            | 45            | 52.5            | 20.3            | 1.2              | 15            | 33                               | 320                               | 5.5                             | 23.5                  | CDC2K706*E5C**** |
| 80                   | 57.5          | 55            | 45            | 52.5            | 20.3            | 1.2              | 15            | 33                               | 320                               | 5.0                             | 26.0                  | CDC2K806*E5C**** |
| 90                   | 57.5          | 55            | 45            | 52.5            | 20.3            | 1.2              | 15            | 33                               | 320                               | 4.5                             | 28.5                  | CDC2K906*E5C**** |
| 95                   | 57.5          | 65            | 45            | 52.5            | 20.3            | 1.2              | 15            | 33                               | 320                               | 4.0                             | 30.0                  | CDC2K956*E5C**** |
| 100                  | 57.5          | 65            | 45            | 52.5            | 20.3            | 1.2              | 15            | 33                               | 320                               | 4.0                             | 31.0                  | CDC2K107*E5C**** |
| 110                  | 57.5          | 65            | 45            | 52.5            | 20.3            | 1.2              | 15            | 33                               | 320                               | 3.5                             | 33.5                  | CDC2K117*E5C**** |
| 120                  | 57.5          | 72            | 45            | 52.5            | 20.3            | 1.2              | 15            | 33                               | 320                               | 3.5                             | 35.0                  | CDC2K127*E5C**** |
| 140                  | 57.5          | 72            | 45            | 52.5            | 20.3            | 1.2              | 15            | 33                               | 320                               | 3.0                             | 35.0                  | CDC2K147*E5C**** |

**U<sub>NDC</sub>=900 VDC @85 °C**

| C <sub>N</sub><br>μF | W<br>±1<br>mm | H<br>±1<br>mm | T<br>±1<br>mm | P<br>±0.5<br>mm | b<br>±0.5<br>mm | d<br>±0.05<br>mm | dV/dt<br>V/μs | tanδ<br>1kHz<br>10 <sup>-4</sup> | tanδ<br>10kHz<br>10 <sup>-4</sup> | R <sub>esr</sub><br>10kHz<br>mΩ | I <sub>max</sub><br>A | 物料编码<br>P/N |
|----------------------|---------------|---------------|---------------|-----------------|-----------------|------------------|---------------|----------------------------------|-----------------------------------|---------------------------------|-----------------------|-------------|
|----------------------|---------------|---------------|---------------|-----------------|-----------------|------------------|---------------|----------------------------------|-----------------------------------|---------------------------------|-----------------------|-------------|

|    |      |      |    |      |           |     |    |    |     |      |      |                  |
|----|------|------|----|------|-----------|-----|----|----|-----|------|------|------------------|
| 2  | 32   | 20   | 11 | 27.5 | -         | 0.8 | 70 | 10 | 90  | 43.0 | 3.0  | CDC1X205*Z27**** |
| 3  | 32   | 22   | 13 | 27.5 | -         | 0.8 | 70 | 10 | 90  | 29.0 | 4.6  | CDC1X305*Z27**** |
| 4  | 32   | 24.5 | 15 | 27.5 | -         | 0.8 | 70 | 10 | 90  | 21.5 | 6.0  | CDC1X405*Z27**** |
| 5  | 32   | 30   | 16 | 27.5 | -         | 0.8 | 70 | 10 | 90  | 17.5 | 7.5  | CDC1X505*Z27**** |
| 7  | 32   | 33   | 18 | 27.5 | -         | 0.8 | 70 | 10 | 90  | 13.0 | 9.5  | CDC1X705*Z27**** |
| 8  | 32   | 37   | 22 | 27.5 | -         | 1.0 | 70 | 10 | 90  | 12.0 | 10.5 | CDC1X805*H27**** |
| 10 | 32   | 37   | 22 | 27.5 | -         | 1.0 | 70 | 10 | 90  | 11.5 | 12.5 | CDC1X106*H27**** |
| 10 | 32   | 37   | 22 | 27.5 | 10.2/12.7 | 0.8 | 70 | 10 | 90  | 9.0  | 15.0 | CDC1X106*Z2****  |
| 10 | 42   | 40   | 20 | 37.5 | 10.2      | 1.0 | 35 | 17 | 150 | 17.0 | 7.5  | CDC1X106*H3A**** |
| 15 | 42   | 44   | 24 | 37.5 | 10.2/12.7 | 1.0 | 35 | 17 | 150 | 11.5 | 11.0 | CDC1X156*H3****  |
| 20 | 42   | 44   | 24 | 37.5 | 10.2/12.7 | 1.0 | 35 | 17 | 150 | 8.5  | 14.5 | CDC1X206*H3****  |
| 25 | 42   | 45   | 30 | 37.5 | 12.7/20.3 | 1.2 | 35 | 17 | 150 | 7.0  | 18.0 | CDC1X256*E3****  |
| 30 | 42   | 50   | 35 | 37.5 | 20.3      | 1.2 | 35 | 17 | 150 | 6.0  | 21.0 | CDC1X36*E3C****  |
| 35 | 42   | 55   | 40 | 37.5 | 20.3      | 1.2 | 35 | 17 | 150 | 5.5  | 24.0 | CDC1X356*E3C**** |
| 40 | 42   | 55   | 40 | 37.5 | 20.3      | 1.2 | 35 | 17 | 150 | 4.5  | 27.0 | CDC1X406*E3C**** |
| 45 | 42   | 60   | 45 | 37.5 | 20.3      | 1.2 | 35 | 17 | 150 | 4.0  | 30.0 | CDC1X456*E3C**** |
| 50 | 42   | 60   | 45 | 37.5 | 20.3      | 1.2 | 35 | 17 | 150 | 4.0  | 33.0 | CDC1X506*E3C**** |
| 30 | 57.5 | 45   | 30 | 52.5 | 12.7/20.3 | 1.2 | 15 | 31 | 300 | 11.5 | 11.0 | CDC1X306*E5****  |
| 35 | 57.5 | 45   | 30 | 52.5 | 12.7/20.3 | 1.2 | 15 | 31 | 300 | 10.0 | 12.5 | CDC1X356*E5****  |
| 40 | 57.5 | 50   | 35 | 52.5 | 20.3      | 1.2 | 15 | 31 | 300 | 8.5  | 14.5 | CDC1X406*E5C**** |
| 50 | 57.5 | 50   | 35 | 52.5 | 20.3      | 1.2 | 15 | 31 | 300 | 7.0  | 18.0 | CDC1X506*E5C**** |
| 55 | 57.5 | 55   | 45 | 52.5 | 20.3      | 1.2 | 15 | 31 | 300 | 6.5  | 20.0 | CDC1X556*E5C**** |
| 60 | 57.5 | 55   | 45 | 52.5 | 20.3      | 1.2 | 15 | 31 | 300 | 6.0  | 21.5 | CDC1X606*E5C**** |
| 65 | 57.5 | 55   | 45 | 52.5 | 20.3      | 1.2 | 15 | 31 | 300 | 5.5  | 23.5 | CDC1X656*E5C**** |
| 70 | 57.5 | 65   | 45 | 52.5 | 20.3      | 1.2 | 15 | 31 | 300 | 5.0  | 24.5 | CDC1X706*E5C**** |
| 80 | 57.5 | 65   | 45 | 52.5 | 20.3      | 1.2 | 15 | 31 | 300 | 5.0  | 25.0 | CDC1X806*E5C**** |

**U<sub>NDC</sub>=1000 VDC @85 °C**

| C <sub>N</sub> | W<br>±1<br>mm | H<br>±1<br>mm | T<br>±1<br>mm | P<br>±0.5<br>mm | b<br>±0.5<br>mm | d<br>±0.05<br>mm | dV/dt<br>V/μs | tanδ<br>1kHz<br>10 <sup>-4</sup> | tanδ<br>10kHz<br>10 <sup>-4</sup> | R <sub>esr</sub><br>10kHz<br>mΩ | I <sub>max</sub><br>A | 物料编码<br>P/N      |
|----------------|---------------|---------------|---------------|-----------------|-----------------|------------------|---------------|----------------------------------|-----------------------------------|---------------------------------|-----------------------|------------------|
| 1.5            | 32            | 20            | 11            | 27.5            | -               | 0.8              | 75            | 10                               | 80                                | 57.5                            | 3.0                   | CDC3A155*Z27**** |
| 2              | 32            | 22            | 13            | 27.5            | -               | 0.8              | 75            | 10                               | 80                                | 38.5                            | 3.5                   | CDC3A205*Z27**** |
| 3              | 32            | 24.5          | 15            | 27.5            | -               | 0.8              | 75            | 10                               | 80                                | 25.5                            | 5.0                   | CDC3A305*Z27**** |
| 4              | 32            | 30            | 16            | 27.5            | -               | 0.8              | 75            | 10                               | 80                                | 19.5                            | 6.5                   | CDC3A405*Z27**** |
| 6              | 32            | 33            | 18            | 27.5            | -               | 0.8              | 75            | 10                               | 80                                | 15.0                            | 9.5                   | CDC3A605*Z27**** |
| 7              | 32            | 37            | 22            | 27.5            | -               | 1.0              | 75            | 10                               | 80                                | 14.5                            | 10.0                  | CDC3A705*H27**** |
| 7              | 32            | 37            | 22            | 27.5            | 10.2/12.7       | 0.8              | 75            | 10                               | 80                                | 11.5                            | 11.5                  | CDC3A705*Z2****  |
| 8              | 32            | 37            | 22            | 27.5            | -               | 1.0              | 75            | 10                               | 80                                | 13.0                            | 11.0                  | CDC3A805*H27**** |
| 8              | 32            | 37            | 22            | 27.5            | 10.2/12.7       | 0.8              | 75            | 10                               | 80                                | 10.0                            | 12.5                  | CDC3A805*Z2****  |
| 10             | 42            | 40            | 20            | 37.5            | -               | 1.0              | 37            | 15                               | 140                               | 17.0                            | 7.0                   | CDC3A106*H37**** |
| 10             | 42            | 40            | 20            | 37.5            | 10.2            | 1.0              | 37            | 15                               | 140                               | 16.0                            | 8.0                   | CDC3A106*H3A**** |
| 15             | 42            | 44            | 24            | 37.5            | 10.2/12.7       | 1.0              | 37            | 15                               | 140                               | 10.5                            | 12.0                  | CDC3A156*H3****  |
| 18             | 42            | 45            | 30            | 37.5            | 12.7/20.3       | 1.2              | 37            | 15                               | 140                               | 9.0                             | 14.0                  | CDC3A186*E3****  |
| 20             | 42            | 45            | 30            | 37.5            | 12.7/20.3       | 1.2              | 37            | 15                               | 140                               | 8.0                             | 15.5                  | CDC3A206*E3****  |
| 25             | 42            | 50            | 35            | 37.5            | 20.3            | 1.2              | 37            | 15                               | 140                               | 6.5                             | 19.0                  | CDC3A256*E3C**** |
| 30             | 42            | 55            | 40            | 37.5            | 20.3            | 1.2              | 37            | 15                               | 140                               | 5.5                             | 22.5                  | CDC3A306*E3C**** |
| 35             | 42            | 55            | 40            | 37.5            | 20.3            | 1.2              | 37            | 15                               | 140                               | 5.0                             | 25.5                  | CDC3A356*E3C**** |

|    |      |    |    |      |           |     |    |    |     |      |      |                  |
|----|------|----|----|------|-----------|-----|----|----|-----|------|------|------------------|
| 40 | 42   | 60 | 45 | 37.5 | 20.3      | 1.2 | 37 | 15 | 140 | 4.5  | 28.5 | CDC3A406*E3C**** |
| 30 | 57.5 | 45 | 30 | 52.5 | 12.7/20.3 | 1.2 | 17 | 28 | 280 | 10.5 | 12.0 | CDC3A306*E3****  |
| 35 | 57.5 | 50 | 35 | 52.5 | 20.3      | 1.2 | 17 | 28 | 280 | 9.0  | 14.0 | CDC3A356*E5C**** |
| 40 | 57.5 | 50 | 35 | 52.5 | 20.3      | 1.2 | 17 | 28 | 280 | 8.0  | 16.0 | CDC3A406*E5C**** |
| 45 | 57.5 | 55 | 45 | 52.5 | 20.3      | 1.2 | 17 | 28 | 280 | 7.0  | 18.0 | CDC3A456*E5C**** |
| 50 | 57.5 | 55 | 45 | 52.5 | 20.3      | 1.2 | 17 | 28 | 280 | 6.5  | 20.0 | CDC3A506*E5C**** |
| 55 | 57.5 | 55 | 45 | 52.5 | 20.3      | 1.2 | 17 | 28 | 280 | 6.0  | 22.0 | CDC3A556*E5C**** |
| 60 | 57.5 | 65 | 45 | 52.5 | 20.3      | 1.2 | 17 | 28 | 280 | 5.5  | 23.5 | CDC3A606*E5C**** |
| 70 | 57.5 | 65 | 45 | 52.5 | 20.3      | 1.2 | 17 | 28 | 280 | 4.5  | 27.0 | CDC3A706*E5C**** |

**U<sub>NDC</sub>=1100 VDC @85 °C**

| C <sub>N</sub><br>μF | W<br>±1<br>mm | H<br>±1<br>mm | T<br>±1<br>mm | P<br>±0.5<br>mm | b<br>±0.5<br>mm | d<br>±0.05<br>mm | dV/dt<br>V/μs | tanδ<br>1kHz<br>10 <sup>-4</sup> | tanδ<br>10kHz<br>10 <sup>-4</sup> | R <sub>esr</sub><br>10kHz<br>mΩ | I <sub>max</sub><br>A | 物料编码<br>P/N      |
|----------------------|---------------|---------------|---------------|-----------------|-----------------|------------------|---------------|----------------------------------|-----------------------------------|---------------------------------|-----------------------|------------------|
| 1                    | 32            | 20            | 11            | 27.5            | -               | 0.8              | 80            | 10                               | 70                                | 59.5                            | 2.5                   | CDC1M105*Z27**** |
| 1.5                  | 32            | 22            | 13            | 27.5            | -               | 0.8              | 80            | 10                               | 70                                | 56.0                            | 3.5                   | CDC1M155*Z27**** |
| 2                    | 32            | 24.5          | 15            | 27.5            | -               | 0.8              | 80            | 10                               | 70                                | 28.0                            | 4.5                   | CDC1M205*Z27**** |
| 3                    | 32            | 30            | 16            | 27.5            | -               | 0.8              | 80            | 10                               | 70                                | 20.5                            | 6.5                   | CDC1M305*Z27**** |
| 4                    | 32            | 33            | 18            | 27.5            | -               | 0.8              | 80            | 10                               | 70                                | 15.5                            | 8.5                   | CDC1M405*Z27**** |
| 5                    | 31            | 37            | 22            | 27.5            | -               | 0.8              | 80            | 10                               | 70                                | 14.0                            | 10.5                  | CDC1M505*H27**** |
| 5                    | 31            | 37            | 22            | 27.5            | 10.2/12.7       | 0.8              | 80            | 10                               | 70                                | 12.5                            | 11.0                  | CDC1M605*Z2****  |
| 6                    | 31            | 37            | 22            | 27.5            | -               | 1.0              | 80            | 10                               | 70                                | 12.5                            | 11.5                  | CDC1M605*H27**** |
| 6                    | 31            | 37            | 22            | 27.5            | 10.2/12.7       | 0.8              | 80            | 10                               | 70                                | 10.5                            | 12.5                  | CDC1M605*Z2****  |
| 7                    | 42            | 40            | 20            | 37.5            | -               | 1.0              | 40            | 15                               | 130                               | 23.0                            | 6.0                   | CDC1M705*H37**** |
| 7                    | 42            | 40            | 20            | 37.5            | 10.2            | 1.0              | 40            | 15                               | 130                               | 21.0                            | 6.5                   | CDC1M705*H3A**** |
| 10                   | 42            | 44            | 24            | 37.5            | -               | 1.0              | 40            | 15                               | 130                               | 16.0                            | 8.5                   | CDC1M106*H37**** |
| 10                   | 42            | 44            | 24            | 37.5            | 10.2/12.7       | 1.0              | 40            | 15                               | 130                               | 14.5                            | 9.0                   | CDC1M106*H3****  |
| 12                   | 42            | 44            | 24            | 37.5            | 10.2/12.7       | 1.0              | 40            | 15                               | 130                               | 14.0                            | 10.5                  | CDC1M126*H3****  |
| 14                   | 42            | 45            | 30            | 37.5            | -               | 1.2              | 40            | 15                               | 130                               | 10.5                            | 11.5                  | CDC1M146*E37**** |
| 15                   | 42            | 45            | 30            | 37.5            | 12.7/20.3       | 1.2              | 40            | 15                               | 130                               | 10.0                            | 13.0                  | CDC1M156*E3****  |
| 18                   | 42            | 50            | 35            | 37.5            | 20.3            | 1.2              | 40            | 15                               | 130                               | 8.5                             | 15.0                  | CDC1M166*E3C**** |
| 20                   | 42            | 50            | 35            | 37.5            | 20.3            | 1.2              | 40            | 15                               | 130                               | 7.5                             | 16.5                  | CDC1M206*E3C**** |
| 25                   | 42            | 55            | 40            | 37.5            | 20.3            | 1.2              | 40            | 15                               | 130                               | 6.0                             | 20.5                  | CDC1M256*E3C**** |
| 30                   | 42            | 60            | 45            | 37.5            | 20.3            | 1.2              | 40            | 15                               | 130                               | 5.0                             | 24.5                  | CDC1M306*E3C**** |
| 20                   | 57.5          | 45            | 30            | 52.5            | 12.7/20.3       | 1.2              | 20            | 27                               | 260                               | 14.5                            | 8.5                   | CDC1M206*E5****  |
| 25                   | 57.5          | 50            | 35            | 52.5            | 20.3            | 1.2              | 20            | 27                               | 260                               | 12.0                            | 10.5                  | CDC1M256*E5C**** |
| 30                   | 57.5          | 50            | 35            | 52.5            | 20.3            | 1.2              | 20            | 27                               | 260                               | 10.0                            | 12.5                  | CDC1M306*E5C**** |
| 35                   | 57.5          | 55            | 45            | 52.5            | 20.3            | 1.2              | 20            | 27                               | 260                               | 8.5                             | 14.5                  | CDC1M356*E5C**** |
| 40                   | 57.5          | 55            | 45            | 52.5            | 20.3            | 1.2              | 20            | 27                               | 260                               | 8.0                             | 16.0                  | CDC1M406*E5C**** |
| 45                   | 57.5          | 55            | 45            | 52.5            | 20.3            | 1.2              | 20            | 27                               | 260                               | 7.0                             | 18.0                  | CDC1M456*E5C**** |
| 50                   | 57.5          | 65            | 45            | 52.5            | 20.3            | 1.2              | 20            | 27                               | 260                               | 6.5                             | 20.0                  | CDC1M506*E5C**** |
| 55                   | 57.5          | 65            | 45            | 52.5            | 20.3            | 1.2              | 20            | 27                               | 260                               | 6.0                             | 22.0                  | CDC1M556*E5C**** |

**U<sub>NDC</sub>=1200 VDC @85 °C**

| C <sub>N</sub><br>μF | W<br>±1<br>mm | H<br>±1<br>mm | T<br>±1<br>mm | P<br>±0.5<br>mm | b<br>±0.5<br>mm | d<br>±0.05<br>mm | dV/dt<br>V/μs | tanδ<br>1kHz<br>10 <sup>-4</sup> | tanδ<br>10kHz<br>10 <sup>-4</sup> | R <sub>esr</sub><br>10kHz<br>mΩ | I <sub>max</sub><br>A | 物料编码<br>P/N      |
|----------------------|---------------|---------------|---------------|-----------------|-----------------|------------------|---------------|----------------------------------|-----------------------------------|---------------------------------|-----------------------|------------------|
| 1                    | 32            | 20            | 11            | 27.5            | -               | 0.8              | 90            | 10                               | 55                                | 39.5                            | 3.0                   | CDC3L105*Z27**** |
| 2                    | 32            | 24.5          | 15            | 27.5            | -               | 0.8              | 90            | 10                               | 55                                | 26.5                            | 5.0                   | CDC3L205*Z27**** |

|    |      |    |    |      |           |     |    |    |     |      |      |                  |
|----|------|----|----|------|-----------|-----|----|----|-----|------|------|------------------|
| 3  | 32   | 30 | 16 | 27.5 | -         | 0.8 | 90 | 10 | 55  | 17.5 | 7.5  | CDC3L305*Z27**** |
| 4  | 32   | 33 | 18 | 27.5 | -         | 0.8 | 90 | 10 | 55  | 14.0 | 9.5  | CDC3L405*Z27**** |
| 5  | 32   | 37 | 22 | 27.5 | -         | 1.0 | 90 | 10 | 55  | 13.0 | 11.0 | CDC3L505*H27**** |
| 5  | 32   | 37 | 22 | 27.5 | 10.2/12.7 | 0.8 | 90 | 10 | 55  | 11.5 | 11.5 | CDC3L505*Z2****  |
| 6  | 42   | 40 | 20 | 37.5 | -         | 1.0 | 45 | 13 | 100 | 19.0 | 6.5  | CDC3L605*H37**** |
| 8  | 42   | 44 | 24 | 37.5 | 10.2/12.7 | 1.0 | 45 | 13 | 100 | 14.0 | 9.0  | CDC3L805*H3****  |
| 10 | 42   | 44 | 24 | 37.5 | 10.2/12.7 | 1.0 | 45 | 13 | 100 | 12.5 | 11.0 | CDC3L106*H3****  |
| 12 | 42   | 45 | 30 | 37.5 | 12.7/20.3 | 1.2 | 45 | 13 | 100 | 9.5  | 13.0 | CDC3L126*E3****  |
| 15 | 42   | 50 | 35 | 37.5 | 20.3      | 1.2 | 45 | 13 | 100 | 7.5  | 16.0 | CDC3L156*E3C**** |
| 18 | 42   | 50 | 35 | 37.5 | 20.3      | 1.2 | 45 | 13 | 100 | 7.0  | 18.0 | CDC3L186*E3C**** |
| 20 | 42   | 55 | 40 | 37.5 | 20.3      | 1.2 | 45 | 13 | 100 | 6.0  | 20.0 | CDC3L206*E3C**** |
| 25 | 42   | 60 | 45 | 37.5 | 20.3      | 1.2 | 45 | 13 | 100 | 5.0  | 25.0 | CDC3L256*E3C**** |
| 20 | 57.5 | 45 | 30 | 52.5 | 12.7/20.3 | 1.2 | 23 | 24 | 200 | 12.0 | 10.0 | CDC3L206*E5****  |
| 25 | 57.5 | 50 | 35 | 52.5 | 20.3      | 1.2 | 23 | 24 | 200 | 10.0 | 12.5 | CDC3L256*E5C**** |
| 30 | 57.5 | 55 | 45 | 52.5 | 20.3      | 1.2 | 23 | 24 | 200 | 8.0  | 15.0 | CDC3L306*E5C**** |
| 35 | 57.5 | 55 | 45 | 52.5 | 20.3      | 1.2 | 23 | 24 | 200 | 7.0  | 17.5 | CDC3L356*E5C**** |
| 40 | 57.5 | 65 | 45 | 52.5 | 20.3      | 1.2 | 23 | 24 | 200 | 6.0  | 20.0 | CDC3L406*E5C**** |
| 45 | 57.5 | 65 | 45 | 52.5 | 20.3      | 1.2 | 23 | 24 | 200 | 5.5  | 22.5 | CDC3L456*E5C**** |

注 Notes: 其他规格尺寸等可按用户要求定制。Other specifications and sizes can be customized according to user requirements.

## ■ 出厂检验 OQC

| 序号<br>No. | 检验项目<br>Check Item                        | 抽样数 Sampling quantity |              |         | 判定准则<br>Judge criteria |    |
|-----------|-------------------------------------------|-----------------------|--------------|---------|------------------------|----|
|           |                                           | n≤1000                | 1000<n≤10000 | n>10000 | Ac                     | Re |
| 1         | 外观检查<br>External inspection               | 21                    | 35           | 46      | 0                      | 1  |
| 2         | 尺寸检测<br>Dimensions measurement            | 29                    | 42           | 60      | 0                      | 1  |
| 3         | 极间耐电压试验<br>Voltage test between terminals | 48                    | 73           | 108     | 0                      | 1  |
| 4         | 绝缘电阻测试<br>Insulation resistance test      |                       |              |         | 0                      | 1  |
| 5         | 电容量测量<br>Capacitance measurement          |                       |              |         | 0                      | 1  |
| 6         | 损耗角正切测量<br>tanδ measurement               |                       |              |         | 0                      | 1  |
| 7         | 等效串联电阻测量<br>Resr measurement              |                       |              |         | 0                      | 1  |

注 Note:

1. n 为批次数量 “n” for batch quantity.
2. 若批次数量超过抽样数，全数检验 If the batch quantity exceeds the sampling quantity, conduct a full inspection.

## ■ 物料编码示例 Material P/N example

| 位序<br>No.     | 第 1 位<br>1st       | 第 2~3 位<br>2nd~3rd | 第 4~5 位<br>4th~5th                                                                                                      | 第 6~8 位<br>6th~8th                                                                                                                                                                           | 第 9 位<br>9th                  | 第 10 位<br>10th                   | 第 11~12 位<br>11th~12th                                                                                                                             | 第 13~14 位<br>13th~14th            | 第 15~16 位<br>15th~16th                                                                                          |
|---------------|--------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------|
| 代码<br>Code    | C                  | DC                 | 1X                                                                                                                      | 806                                                                                                                                                                                          | K                             | E                                | 5C                                                                                                                                                 | 11                                | 55                                                                                                              |
| 内容<br>Content | 产品类别<br>Category   | 产品型号<br>Type       | 额定电压<br>$U_{NDC}$                                                                                                       | 标称容量<br>$C_N$                                                                                                                                                                                | 容量偏差<br>$\Delta C/C$          | 引线规格<br>Lead type                | 引线间距<br>Lead space (P/b)                                                                                                                           | 内部代码<br>Internal code             | 引线长度<br>Lead length (L)                                                                                         |
| 说明<br>Explain | C: 电容<br>Capacitor | DC: WDC            | 2S: 450V<br>2H: 500V<br>3T: 550V<br>1U: 600V<br>1V: 700V<br>2K: 800V<br>1X: 900V<br>3A: 1000V<br>1M: 1100V<br>3L: 1200V | 三位数法, 即:<br>3 digits method<br>I.e.:<br>$ab \times 10^c \text{ pF}$<br>例如: e.g.:<br>$805=80 \times 10^5 \text{ pF}$<br>$8 \text{ pF}$<br>$117=11 \times 10^7 \text{ pF}$<br>$110 \text{ pF}$ | J: $\pm 5\%$<br>K: $\pm 10\%$ | Z: 0.8CU<br>H: 1.0CU<br>E: 1.2CU | 22: 22.5<br>27: 27.5<br>37: 37.5<br>52: 52.5<br>2A: 27.5/10.2<br>2B: 27.5/12.7<br>3A: 37.5/10.2<br>3B: 37.5/12.7<br>3C: 37.5/20.3<br>5C: 52.5/20.3 | 内部设计代码<br>Internal design<br>code | 数字或数字和字母组合, 如:<br>Number or combination of number and letter<br>E.g.:<br>50=5.0<br>A5=15<br>2A=12.5<br>00=15min |

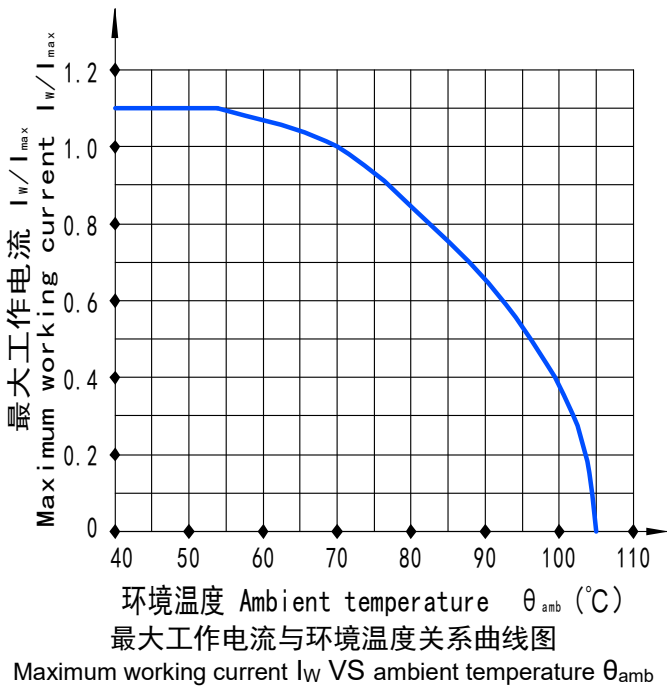
## ■ 可靠性测试 Reliability test

| 序号<br>No. | 测试项目<br>Test Item                    | 测试方法<br>Test method                                                                                                                                                                                                                                                                                                                       | 要求<br>Requirement                                                                                                 |
|-----------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 1         | 外部检查<br>Outline check                | 目视检查, 卡尺测量<br>Visual inspection and caliper measurement                                                                                                                                                                                                                                                                                   | 外形规整, 无可见损伤; 标志端正、清晰、无误。The appearance is regular without visible damage; The mark is regular, clear and correct. |
|           | 初始测量<br>Initial measurement          | 电容量 C: 1 kHz, 20 °C<br>损耗角正切 $\tan\delta_0$ : 10 kHz, 20 °C                                                                                                                                                                                                                                                                               |                                                                                                                   |
|           | 引出端强度<br>Robustness of terminations  | (1) 拉力试验 $U_{a1}$ Tensile test $U_{a1}$<br>$d \leq 0.8 \text{ mm}$ : 10 N<br>$0.8 \text{ mm} < d \leq 1.2 \text{ mm}$ : 20 N<br>(2) 弯曲试验 $U_{b1}$ Bending test $U_{b1}$<br>$d \leq 0.8 \text{ mm}$ : 5N<br>$0.8 \text{ mm} < d \leq 1.2 \text{ mm}$ : 10N<br>90 °反复弯曲 2 次, 持续时间 2~3 s<br>90 °repeated bending twice, lasting for 2 to 3 s | 外观无可见损伤<br>No visible damage                                                                                      |
|           | 耐焊接热<br>Resistance to soldering heat | 槽焊法 $T_b$ 方法 1A Solder bath test $T_b$ , method 1A<br>焊槽温度 Solder bath temp.: $260 \pm 5 \text{ }^\circ\text{C}$<br>浸渍时间 Dip time: $10 \pm 1 \text{ s}$                                                                                                                                                                                   | 外观无可见损伤<br>No visible damage                                                                                      |
|           | 最后测量<br>Final measurement            | 电容量 C: 1 kHz, 20 °C<br>损耗角正切 $\tan\delta$ : 10 kHz, 20 °C                                                                                                                                                                                                                                                                                 | $ \Delta C/C  \leq 0.5\%$<br>$\Delta \tan\delta \leq 0.005$                                                       |
| 2         | 初始测量<br>Initial measurement          | 电容量 C: 1 kHz, 20 °C<br>损耗角正切 $\tan\delta_0$ : 10 kHz, 20 °C                                                                                                                                                                                                                                                                               |                                                                                                                   |
|           | 振动<br>Vibration                      | 频率 Frequency: 10~55 Hz<br>振幅 Amplitude: 0.35 mm<br>扫频循环次数 Sweep cycle times: 10<br>试验程序: 取三个互相垂直的方向, 每个方向持续时间为 10 个频率周期, 每分钟 1 倍频程                                                                                                                                                                                                        | 外观无可见损伤<br>No visible damage                                                                                      |

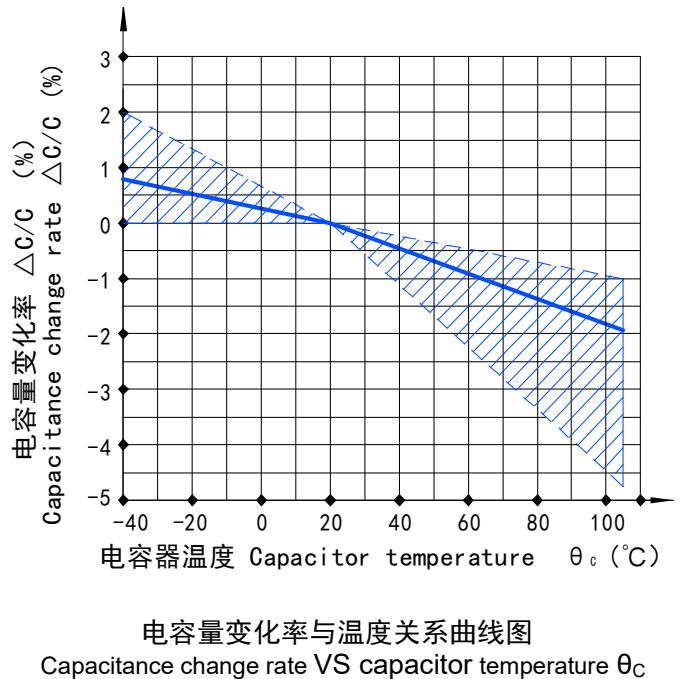
|   |                                   |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                              |
|---|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                                   | Test procedure: take three mutually perpendicular directions, each direction lasts for 10 frequency cycles, with 1 octave per minute                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                              |
|   | 最后测量<br>Final measurement         | 极壳间耐电压试验 $U_{T-C}$ : 无击穿或飞弧 Neither puncture nor flash-over occur<br>电容量 C: 1 kHz, 20 °C<br>损耗角正切 $\tan\delta$ : 10 kHz, 20 °C                                                                                                                                                                                                                                                                            | $ \Delta C/C  \leq 0.5\%$<br>$\Delta \tan\delta \leq 0.005$                                                                                                                                                                  |
| 3 | 初始测量<br>Initial measurement       | 电容量 C: 1 kHz, 20 °C<br>损耗角正切 $\tan\delta_0$ : 10 kHz, 20 °C                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                              |
|   | 冲击放电<br>Surge discharge test      | $\hat{I}_1 = 1.1\hat{I}_S$ , 若未给出 $\hat{I}_S$ 则 $1.1U_{NDC}$ 充电后短路放电, 5 次 $\hat{I}_1 = 1.1\hat{I}_S$ , If $\hat{I}_S$ is not given, short circuit discharge after charged with $1.1U_{NDC}$ , 5 times                                                                                                                                                                                                     | 无永久性击穿或闪络<br>Neither permanent puncture nor flash-over occur                                                                                                                                                                 |
|   | 最后测量<br>Final measurement         | 极间耐电压试验 $U_{T-T}$ : $1.5U_{NDC}$ , 10 s<br>电容量 C: 1 kHz, 20 °C<br>损耗角正切 $\tan\delta$ : 10 kHz, 20 °C                                                                                                                                                                                                                                                                                                      | 无永久性击穿或飞弧 Neither permanent puncture nor flash-over occur<br>$ \Delta C/C  \leq 1.0\%$<br>$\Delta \tan\delta \leq 0.2 \times \tan\delta_0 + 0.001$                                                                           |
| 4 | 初始测量<br>Initial measurement       | 电容量: 1 kHz, 20 °C<br>损耗角正切 $\tan\delta_0$ : 10 kHz, 20 °C                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                              |
|   | 自愈性<br>Self-healing test          | 承受 $1.1U_S$ 和 $1.5U_{NDC}$ 二者较高电压 10 s, 若试验期间发生自愈性击穿少于 5 次, 则缓慢升高电压直至发生 5 次自愈性击穿或电压达到 $2.5U_{NDC}$ 且最多保持 10 s<br>Withstand the higher voltage of $1.1U_S$ and $1.5U_{NDC}$ for 10 s. If the self-healing breakdown occurs less than 5 times during the test, slowly increase the voltage until the self-healing breakdown occurs 5 times or the voltage reaches $2.5U_{NDC}$ and remains for 10 s at most | 外观无可见损伤<br>No visible damage                                                                                                                                                                                                 |
|   | 最后测量<br>Final measurement         | 电容量 C: 1 kHz, 20 °C<br>损耗角正切 $\tan\delta$ : 10 kHz, 20 °C                                                                                                                                                                                                                                                                                                                                                 | $ \Delta C/C  \leq 0.5\%$<br>$\Delta \tan\delta \leq 0.1 \times \tan\delta_0 + 0.001$                                                                                                                                        |
| 5 | 初始测量<br>Initial measurement       | 电容量 C: 1 kHz, 20 °C<br>损耗角正切 $\tan\delta$ : 10 kHz 20 °C                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                              |
|   | 温度快速变化<br>Fast temperature change | $T_A = -40\text{ °C}$ , $T_B = 105\text{ °C}$<br>5 次循环, 持续时间 $t = 30\text{ min}$<br>5 cycles, duration $t = 30\text{ min}$                                                                                                                                                                                                                                                                                | 外观无可见损伤<br>No visible damage                                                                                                                                                                                                 |
|   | 最后测量<br>Final measurement         | 电容量 C: 1 kHz, 20 °C<br>损耗角正切 $\tan\delta$ : 10 kHz, 20 °C                                                                                                                                                                                                                                                                                                                                                 | $ \Delta C/C  \leq 2.0\%$<br>$\Delta \tan\delta \leq 0.015$                                                                                                                                                                  |
| 6 | 初始测量<br>Initial measurement       | 电容量 C: 1 kHz, 20 °C<br>损耗角正切 $\tan\delta_0$ : 10 kHz, 20 °C                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                              |
|   | 恒定湿热<br>Damp heat, steady state   | 温度 Temperature: $40 \pm 2\text{ °C}$<br>湿度 Humidity: $93 \pm 3\%RH$<br>持续时间 Duration: 56 days                                                                                                                                                                                                                                                                                                             | 外观无可见损伤<br>No visible damage                                                                                                                                                                                                 |
|   | 最后测量<br>Final measurement         | 极间耐电压 $U_{T-T}$ : $1.5U_{NDC}$ , 10 s<br>极壳耐电压 $U_{T-C}$ : 3000 VAC, 10 s<br>电容量 C: 1 kHz, 20 °C<br>损耗角正切 $\tan\delta$ : 10 kHz, 20 °C                                                                                                                                                                                                                                                                    | 极间耐电压: 无永久性击穿或闪络 $U_{T-T}$ : Neither permanent puncture nor flash-over occur<br>极壳耐电压: 无击穿或闪络 $U_{T-C}$ : Neither puncture nor flash-over occur<br>$ \Delta C/C  \leq 2.0\%$ , $\Delta \tan\delta \leq 0.015$                |
| 7 | 初始测量<br>Initial measurement       | 电容量 C: 1 kHz 20 °C<br>损耗角正切 $\tan\delta_0$ : 10 kHz 20 °C                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                              |
|   | 热稳定性<br>Thermal stability test    | 试验温度 Test temperature: $70 \pm 2\text{ °C}$<br>试验电流 Test current: $I_{max}$<br>测试频率 Test frequency: 10 kHz<br>持续时间 Duration: 48 h<br>中间每 2 h 测量一次电容器表面热点温度                                                                                                                                                                                                                                                | 6 h 期间测得电容器表面热点温升变化 $\Delta^2 T \leq 1\text{ K}$<br>The temperature rise change measured during 6 h on capacitor surface hot-spot $\Delta^2 T \leq 1\text{ K}$<br>表面温升 Surface temperature rise $\Delta T \leq 15\text{ °C}$ |

|   |                                                   |                                                                                                                                                                                       |                                                                                           |
|---|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
|   |                                                   | Intermediate measure the temperature of capacitor surface hot-spot every 2 h within the last 6 h                                                                                      |                                                                                           |
|   | 最后测量<br>Final measurement                         | 电容量 C: 1 kHz, 20 °C<br>损耗角正切 Tanδ: 10 kHz, 20 °C                                                                                                                                      | $ \Delta C/C  \leq 1.0 \%$<br>$\Delta \tan \delta \leq 0.2 \times \tan \delta_0 + 0.0015$ |
| 8 | 初始测量<br>Initial measurement                       | 电容量 C: 1 kHz, 20 °C<br>损耗角正切 Tanδ <sub>0</sub> : 10 kHz, 20 °C                                                                                                                        |                                                                                           |
|   | 耐久性<br>Endurance test                             | 试验电压 Test voltage: 1.3U <sub>NDC</sub><br>烘箱温度 Oven temperature: 85±2 °C<br>试验时间 Test time: 500 h+500 h<br>中间充放电: 1.4Ĵ, 1000 次<br>Intermediate charge and discharge: 1.4Ĵ, 1000 times | 外观无可见损伤<br>No visible damage                                                              |
|   | 最后测量<br>Final measurement                         | 电容量 C: 1 kHz, 20 °C<br>损耗角正切 Tanδ: 10 kHz, 20 °C                                                                                                                                      | $ \Delta C/C  \leq 3.0 \%$<br>$\Delta \tan \delta \leq 0.015$                             |
|   | 高温高湿耐久性<br>High temperature & humidity durability | 温度 Temperature: 85 °C, 湿度 Humidity: 85 %RH<br>电压 Voltage: U <sub>n</sub> , 时间 Duration: 1000 h                                                                                        | 试验前后容量变化 Capacitance change before and after the test: $\Delta C/C \leq 10 \%$            |

## ■ 温度特性曲线 Temperature characteristic curve

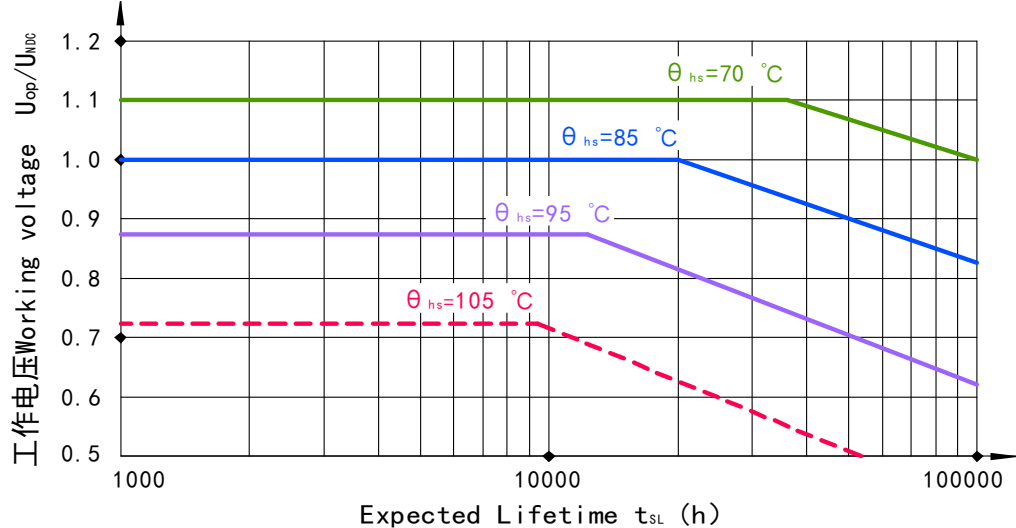


注:  $I_{max}$  是  $f=10 \text{ kHz}$   $\theta_{amb}=70^\circ\text{C}$   $\Delta\theta_{case}=15^\circ\text{C}$  时最大电流有效值。温度过高将加速电容器介质的电化学老化。对于该型号电容器, 实际运行中, 电容器的内部热点温度最高不应超过  $105^\circ\text{C}$ 。  
Note:  $I_{max}$  is the maximum RMS current when  $f=10 \text{ kHz}$   $\theta_{amb}=70^\circ\text{C}$  and  $\Delta\theta_{case}=15^\circ\text{C}$ . Too high temperature will accelerates electrochemical degradation of the dielectric.  
For this type of capacitor, the maximum internal hot spot temperature shall not exceed  $105^\circ\text{C}$  in actual operation.



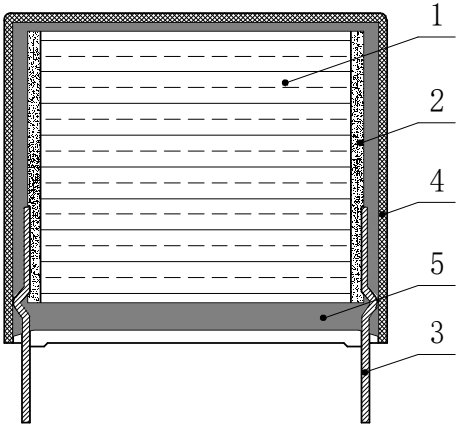
注: 电容器温度 $\theta_c$ 是指电容器的介质温度(电容器在不通电状态下在恒定环境温度中放置足够长的时间, 则可认为电容器的介质温度与环境温度相同)。  
Note:  $\theta_c$  is the dielectric temperature of the capacitor (It may be assumed that the dielectric temperature is the same as the ambient temperature, provided that the capacitor has been left in an nu-energized state at constant ambient temperature of an adequate period.)

■ 预期寿命曲线 Lifetime expectancy curve



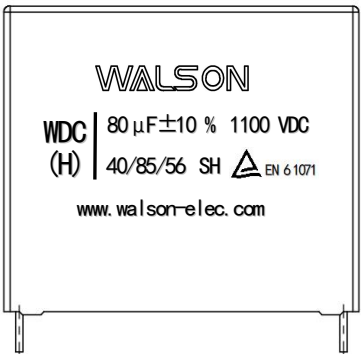
■ 产品结构 Product construction

| 编号<br>No. | 组件<br>Components         | 说明<br>description                        |
|-----------|--------------------------|------------------------------------------|
| 1         | 电容器芯子<br>Capacitor cell  | 金属化聚丙烯膜<br>Metallized polypropylene film |
| 2         | 喷金层<br>Spray metal layer | 焊料颗粒<br>Solder particle                  |
| 3         | 引线<br>Lead wire          | 镀锡铜线<br>Tinned copper wire               |
| 4         | 外壳<br>Case               | 阻燃塑料外壳<br>Flame-retardant plastic case   |
| 5         | 灌封料<br>Filler            | 阻燃环氧树脂<br>Flame-retardant epoxy resin    |



■ 产品标志示例 Product marking example

| 标志内容 Mark                                                                           | 说明 description                        |
|-------------------------------------------------------------------------------------|---------------------------------------|
| WALSON                                                                              | 万盛商标 Walson logo                      |
| WDC (H)                                                                             | 产品型号 Product type                     |
| 80 $\mu$ F                                                                          | 标称容量 Nominal capacitance              |
| $\pm 10\%$                                                                          | 容量偏差 Capacitance tolerance            |
| 1100 VDC                                                                            | 额定电压 Rated DC voltage                 |
| 40/85/56                                                                            | 气候类别 Climate category                 |
| SH                                                                                  | 自愈性 Self-healing property             |
|  | 认证标志和标准 Certification mark & standard |



## ■ 注意事项 Cautions

1. 包装好的电容器允许以任何方式运输，但应避免雨雪淋袭、腐蚀、挤压跌落损伤等。

Packaged capacitors are allowed to be transported in any way, but shall be protected from rain and snow, corrosion, crushing and falling damage, etc.

2. 电容器应保存在环境温度-10℃~40℃，相对湿度≤85%的室内，避免阳光直射、温度剧烈变化、凝露和有腐蚀性气体等。

Capacitors shall be stored indoors with ambient temperature -10℃ to 40℃ and relative humidity ≤75%, avoid direct sunlight, sharp temperature changes, condensation and corrosive gases.

3. 存贮时间超过半年的电容器，应检查确认常规电气性能和可焊性合格后方可投入使用。

Capacitors that have been stored for more than half a year shall be checked and confirmed to be qualified in conventional electrical performance and solderability before being put into use.

4. 拿取和安装过程中，应做好防护，避免引线扎伤；另应避免多次挤压、弯曲电容器引线。

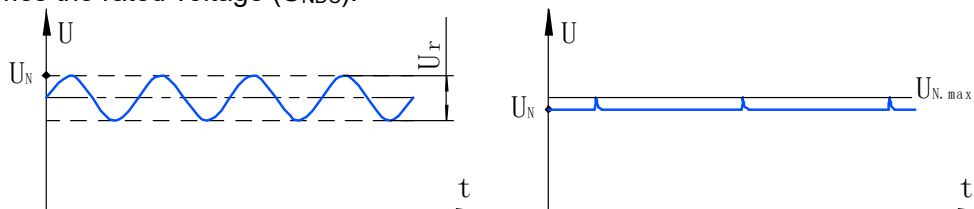
In the process of taking and installing, protection shall be provided to prevent the lead from being punctured; In addition, avoid repeatedly squeezing and bending capacitor leads.

5. 焊接电容器引线时，应避免长时间过热以免影响到电容器性能。如禁止与 SMD 产品一起做回流焊接；电烙铁焊接时烙铁尖端温度应不超过 400℃，焊接时间 3s 以内。

When welding capacitor leads, avoid overheating for a long time to avoid affecting capacitor performance. For example, reflow welding with SMD products is prohibited. The tip temperature of electric soldering iron shall not exceed 400℃, and the welding time shall be within 3s.

6. 该款电容器仅适用于直流场合，施加在电容器上的电压必须是单向纹波电压（如下图所示），且纹波电压（ $U_r$ ）不超过 0.3 倍额定电压（ $U_{NDC}$ ）。

This capacitor is only suitable for DC applications. The voltage applied to the capacitor must be unidirectional ripple voltage (as shown in the figure below), and the peak to peak ripple voltage ( $U_r$ ) shall not exceed 0.3 times the rated voltage ( $U_{NDC}$ ).



7. 这类电容器的电气连接方式如下图所示：

The electrical connection method of this type of capacitor is shown in the following figure:



8. 该款电容器不得用于其他不适宜的应用场合，如谐振、吸收、XY 抗干扰等；设计电路时，电容器勿贴近其他发热源（如功率管、变压器等），以免引起电容器温度过高。

This capacitor shall not be used in other unsuitable applications, such as resonance, absorption, X or Y EMI, etc; When designing the circuit, the capacitor shall not be close to other heat sources (such as power tube, transformer, etc.), so as not to cause excessive temperature of the capacitor.

9. 电容器不得过载使用，如超过规定值的电压、电流、温度等。

Capacitors shall not be used with overload, such as voltage, current, temperature, etc. exceeding the specified value.