规格承认书

SPECIFICATION FOR APPROVAL

客户名称： Customer	深圳市立创电子商务有限公司
客户料号： CSR P/N	C46638941
产品名称： Product Name	PCB 用 DC-Link 电容器 DC-Link Capacitors for PCB
型号规格： Type & Spec.	WDC-3μF±10%-1200 VDC
物料简码： Part Simple Code	DC501755
万盛料号： Walson's P/N	CDC3A805KZ270155
文档编号： Document No.	SP25031812CE
发布日期： Issue Date	2025-03-18

无锡万盛电子有限公司 Wuxi Walson Electronics Co.,Ltd.			客户确认 Customer Confirm
拟制 Prepared by	审核 Checked by	批准 Approval by	
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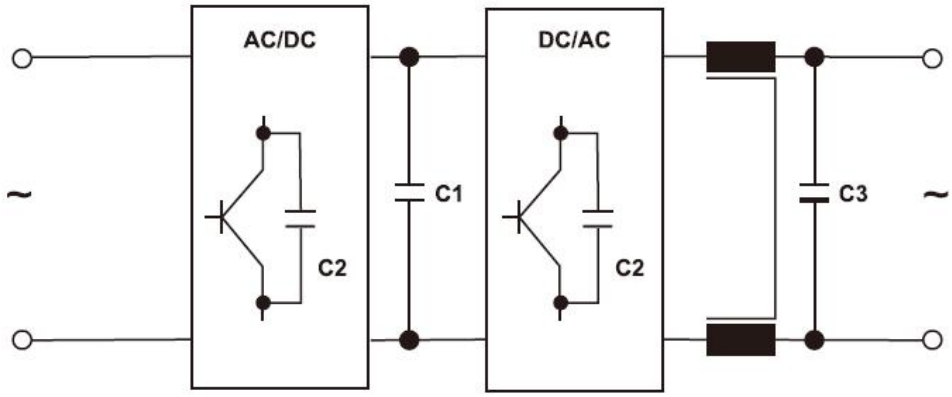
版本更新记录

Version update records

版本号 Version	日　期 Date	更改说明 Change description	编制人 Prepared by	确认人 Approval by
1.0	2025-03-18	新版发行 New edition release	张　徽 Hui.Zhang	张东泽 Dongze.Zhang

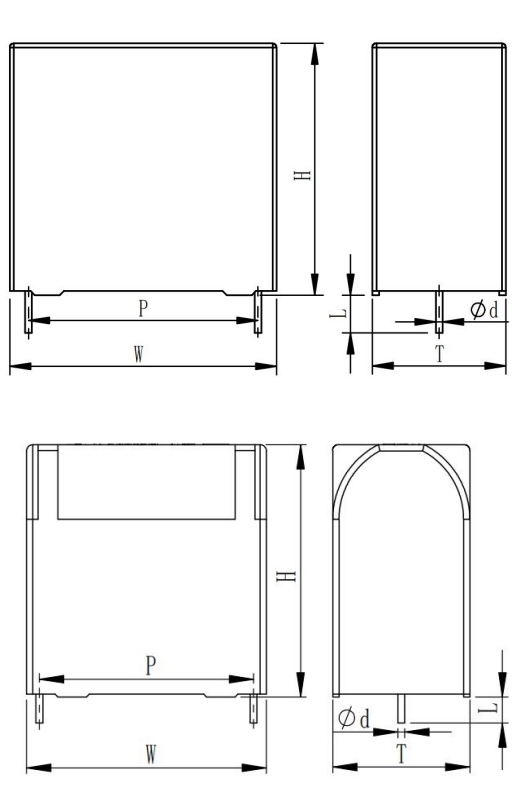
■ 特点和用途 Features and applications

- ❖ 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.
- ❖ 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



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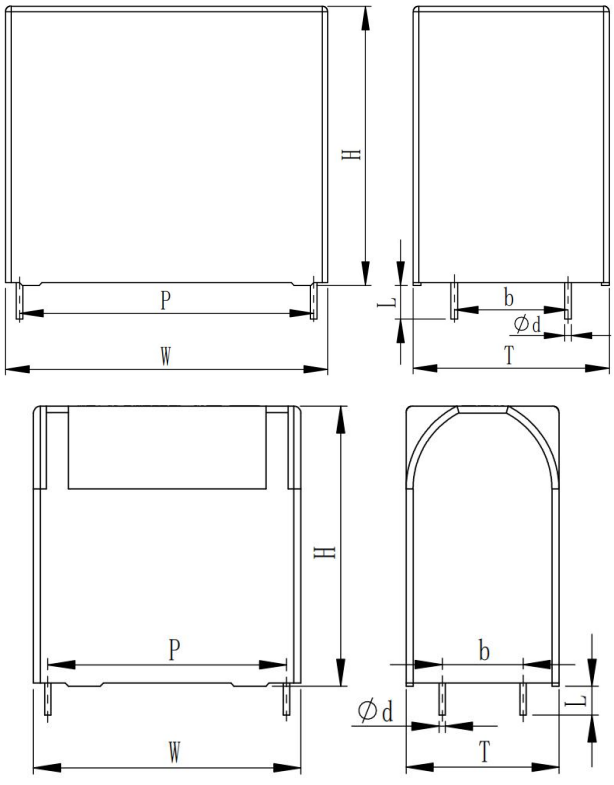

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■ 技术数据 Technical Data

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

■ 技术数据表 Technical data table

C_N μF	W ±1 mm	H ±1 mm	T ±1 mm	P ±0.5 mm	b ±0.5 mm	d ±0.05 mm	dV/dt V/μs	tanδ 1kHz 10^{-4}	tanδ 10kHz 10^{-4}	R_{esr} 10kHz mΩ	I_{max} A	物料编码 P/N
U_{NDC}=500/450/550 VDC @85 ℃												
4.7	32	24.5	15	27.5	-	0.8	65	10	90	15.0	6.5	CDC2H475*Z27****
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_{NDC}=600/700 VDC @85 ℃												
C_N μF	W ±1 mm	H ±1 mm	T ±1 mm	P ±0.5 mm	b ±0.5 mm	d ±0.05 mm	dV/dt V/μs	tanδ 1kHz 10^{-4}	tanδ 10kHz 10^{-4}	R_{esr} 10kHz mΩ	I_{max} A	物料编码 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	45	30	52.5	12.7/20.3	1.2	15	36	350	7.5	17.0	CDC1U556*E5*****
60	57	45	30	52.5	12.7/20.3	1.2	15	36	350	6.5	18.5	CDC1U606*E5****

65	57	50	35	52.5	20.3	1.2	15	36	350	6.0	20.0	CDC1U656*E5C****
80	57	50	35	52.5	20.3	1.2	15	36	350	5.0	24.0	CDC1U806*E5C****
85	57	55	45	52.5	20.3	1.2	15	36	350	5.0	25.0	CDC1U856*E5C****
90	57	55	45	52.5	20.3	1.2	15	36	350	5.0	25.5	CDC1U906*E5C****
100	57	55	45	52.5	20.3	1.2	15	36	350	4.5	28.0	CDC1U107*E5C****
110	57	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_{NDC}=800 VDC @85 ℃												
C_N μF	W ±1 mm	H ±1 mm	T ±1 mm	P ±0.5 mm	b ±0.5 mm	d ±0.05 mm	dV/dt V/μs	tanδ 1kHz 10^{-4}	tanδ 10kHz 10^{-4}	R_{esr} 10kHz mΩ	I_{max} A	物料编码 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	45	30	52.5	12.7/20.3	1.2	15	33	320	9.0	13.5	CDC2K406*E5*****
45	57	45	30	52.5	12.7/20.3	1.2	15	33	320	8.0	15.5	CDC2K456*E5*****
50	57	50	35	52.5	20.3	1.2	15	33	320	7.5	17.0	CDC2K506*E5C****
60	57	50	35	52.5	20.3	1.2	15	33	320	6.0	20.5	CDC2K606*E5C****
65	57	55	45	52.5	20.3	1.2	15	33	320	5.5	22.0	CDC2K656*E5C****
70	57	55	45	52.5	20.3	1.2	15	33	320	5.5	23.5	CDC2K706*E5C****
80	57	55	45	52.5	20.3	1.2	15	33	320	5.0	26.0	CDC2K806*E5C****
90	57	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_{NDC}=900 VDC @85 ℃												

C_N μF	W ±1 mm	H ±1 mm	T ±1 mm	P ±0.5 mm	b ±0.5 mm	d ±0.05 mm	dV/dt V/μs	tanδ 1kHz 10^{-4}	tanδ 10kHz 10^{-4}	R_{esr} 10kHz mΩ	I_{max} A	物料编码 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	45	30	52.5	12.7/20.3	1.2	15	31	300	11.5	11.0	CDC1X306*E5*****
35	57	45	30	52.5	12.7/20.3	1.2	15	31	300	10.0	12.5	CDC1X356*E5*****
40	57	50	35	52.5	20.3	1.2	15	31	300	8.5	14.5	CDC1X406*E5C****
42	57	50	35	52.5	20.3	1.2	19	25	230	5.0	18.0	CDC1M426*E5C****
50	57	50	35	52.5	20.3	1.2	15	31	300	7.0	18.0	CDC1X506*E5C****
55	57	55	45	52.5	20.3	1.2	15	31	300	6.5	20.0	CDC1X556*E5C****
60	57	55	45	52.5	20.3	1.2	15	31	300	6.0	21.5	CDC1X606*E5C****
65	57	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	25.5	CDC1X706*E5C****
80	57.5	65	45	52.5	20.3	1.2	15	31	300	4.5	27.5	CDC1X806*E5C****
85	57.5	65	45	52.5	20.3	1.2	15	31	300	4.5	29.0	CDC1X856*E5C****
U_{NDC}=1000 VDC @85 ℃												
C_N μF	W ±1 mm	H ±1 mm	T ±1 mm	P ±0.5 mm	b ±0.5 mm	d ±0.05 mm	dV/dt V/μs	tanδ 1kHz 10^{-4}	tanδ 10kHz 10^{-4}	R_{esr} 10kHz mΩ	I_{max} A	物料编码 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	-	0.8	75	10	80	13.0	11.0	CDC3A805*Z27****
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****
10	42	24	39	37.5	10.2	1.0	25	15	90	8.0	10.5	CDC3A106JH3A****

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	45	30	52.5	12.7/20.3	1.2	17	28	280	10.5	12.0	CDC3A306*E3*****
35	57	50	35	52.5	20.3	1.2	17	28	280	9.0	14.0	CDC3A356*E5C****
40	57	50	35	52.5	20.3	1.2	17	28	280	8.0	16.0	CDC3A406*E5C****
45	57	55	45	52.5	20.3	1.2	17	28	280	7.0	18.0	CDC3A456*E5C****
50	57	55	45	52.5	20.3	1.2	17	28	280	6.5	20.0	CDC3A506*E5C****
55	57	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_{NDC}=1100 VDC @85 ℃

C_N μF	W ±1 mm	H ±1 mm	T ±1 mm	P ±0.5 mm	b ±0.5 mm	d ±0.05 mm	dV/dt V/μs	tanδ 1kHz 10^{-4}	tanδ 10kHz 10^{-4}	R_{esr} 10kHz mΩ	I_{max} A	物料编码 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	32	37	22	27.5	-	1.0	80	10	70	14.0	10.5	CDC1M505*H27****
5	32	37	22	27.5	10.2/12.7	0.8	80	10	70	12.5	11.0	CDC1M605*Z2*****
6	32	37	22	27.5	-	1.0	80	10	70	12.5	11.5	CDC1M605*H27****
6	32	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	45	30	52.5	12.7/20.3	1.2	20	27	260	14.5	8.5	CDC1M206*E5*****
25	57	50	35	52.5	20.3	1.2	20	27	260	12.0	10.5	CDC1M256*E5C****
30	57	50	35	52.5	20.3	1.2	20	27	260	10.0	12.5	CDC1M306*E5C****
35	57	55	45	52.5	20.3	1.2	20	27	260	8.5	14.5	CDC1M356*E5C****
40	57	55	45	52.5	20.3	1.2	20	27	260	8.0	16.0	CDC1M406*E5C****
45	57	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_{NDC}=1200 VDC @85 ℃

C_N μF	W ±1 mm	H ±1 mm	T ±1 mm	P ±0.5 mm	b ±0.5 mm	d ±0.05 mm	dV/dt V/μs	tanδ 1kHz 10^{-4}	tanδ 10kHz 10^{-4}	R_{esr} 10kHz mΩ	I_{max} A	物料编码 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	45	30	52.5	12.7/20.3	1.2	23	24	200	12.0	10.0	CDC3L206*E5*****
25	57	50	35	52.5	20.3	1.2	23	24	200	10.0	12.5	CDC3L256*E5C****
30	57	55	45	52.5	20.3	1.2	23	24	200	8.0	15.0	CDC3L306*E5C****
35	57	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 No.	检验项目 Check Item	抽样数 Sampling quantity			判定准则 Judge criteria	
		n≤1000	1000＜n≤10000	n＞10000	Ac	Re
1	外观检查 External inspection	21	35	46	0	1
2	尺寸检测 Dimensions measurement	29	42	60	0	1
3	极间耐电压试验 Voltage test between terminals	48	73	108	0	1
4	绝缘电阻测试 Insulation resistance test				0	1
5	电容量测量 Capacitance measurement				0	1
6	损耗角正切测量 tanδ measurement				0	1
7	等效串联电阻测量 R_{esr} 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 No.	第 1 位 1st	第 2～3 位 2nd～3rd	第 4～5 位 4th～5th	第 6～8 位 6th～8th	第 9 位 9th	第 10 位 10th	第 11～12 位 11th～12th	第 13～14 位 13th～14th	第 15～16 位 15th～16th
代码 Code	C	DC	3A	805	K	Z	27	01	55
内容 Content	产品类别 Category	产品型号 Type	额定电压 U_{NDC}	标称容量 C_N	容量偏差 △C/C	引线规格 Lead type	引线间距 Lead space (P/b)	内部代码 Internal code	引线长度 Lead length (L)
说明 Explain	C：电容 Capacitor	DC：WDC	2S：450V 2H：500V 3T：550V 1U：600V 1V：700V 2K：800V 1X：900V 3A：1000V 1M：1100V 3L：1200V	三位数法,即： 3 digits method I.e.: ab*10^c pF 例如：e.g.: 805=80*10^5 pF=8 μF 117=11*10^7 pF=110 μF	J：±5 % K：±10 %	Z：0.8CU H：1.0CU E：1.2CU	22：22.5 27：27.5 37：37.5 52：52.5 2A：27.5/10.2 2B：27.5/12.7 3A：37.5/10.2 3B：37.5/12.7 3C：37.5/20.3 5C：52.5/20.3	内部设计代码 Internal design code	数字或数字和字母组合，如： Number or combination of number and letter E.g.: 50=5.0 A5=15 B0=20 2A=12.5 00=15min

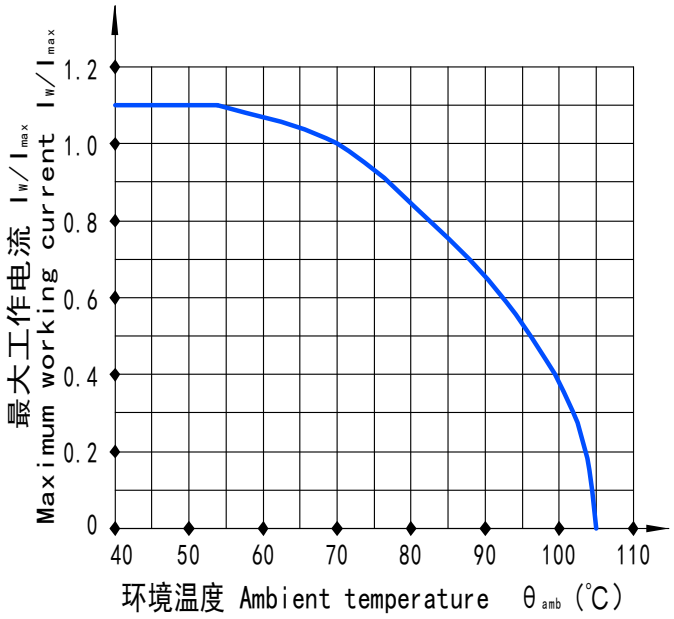
■ 可靠性测试 Reliability test

序号 No.	测试项目 Test Item	测试方法 Test method	要求 Requirement
1	外部检查 Outline check	目视检查，卡尺测量 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 Initial measurement	电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ$_0$：10 kHz, 20 ℃	
	引出端强度 Robustness of terminations	（1）拉力试验 Ua1 Tensile test Ua1 d≤0.8 mm： 10 N 0.8 mm＜d≤1.2 mm： 20 N （2）弯曲试验 Ub1 Bending test Ub1 d≤0.8 mm： 5N 0.8 mm＜d≤1.2 mm： 10N 90 °反复弯曲 2 次，持续时间 2～3 s 90 °repeated bending twice, lasting for 2 to 3 s	外观无可见损伤 No visible damage
	耐焊接热 Resistance to soldering heat	槽焊法 Tb 方法 1A Solder bath test Tb, method 1A 焊槽温度 Solder bath temp.：260±5 ℃ 浸渍时间 Dip time：10±1 s	外观无可见损伤 No visible damage
	最后测量 Final measurement	电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ：10 kHz, 20 ℃	|△C/C|≤0.5 % △tanδ≤0.005
2	初始测量 Initial measurement	电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ$_0$：10 kHz, 20 ℃	
	振动 Vibration	频率 Frequency：10～55 Hz 振幅 Amplitude：0.35 mm	外观无可见损伤 No visible damage

		扫频循环次数 Sweep cycle times：10 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 Test procedure: take three mutually perpendicular directions, each direction lasts for 10 frequency cycles, with 1 octave per minute	
	最后测量 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 电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ：10 kHz, 20 ℃	|△C/C|≤0.5 % △tanδ≤0.005
3	初始测量 Initial measurement	电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ：10 kHz, 20 ℃	
	冲击放电 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 Neither permanent puncture nor flash-over occur
	最后测量 Final measurement	极间耐电压试验 U_{T-T}：1.5U_{NDC}, 10 s 电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ：10 kHz, 20 ℃	无永久性击穿或飞弧 Neither permanent puncture nor flash-over occur |△C/C|≤1.0 % △tanδ≤0.2×tanδ$_0$+0.001
4	初始测量 Initial measurement	电容量：1 kHz, 20 ℃ 损耗角正切 Tanδ$_0$：10 kHz, 20 ℃	
	自愈性 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 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 No visible damage
	最后测量 Final measurement	电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ：10 kHz, 20 ℃	|△C/C|≤0.5 % △tanδ≤0.1×tanδ$_0$+0.001
5	初始测量 Initial measurement	电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ：10 kHz 20 ℃	
	温度快速变化 Fast temperature change	T_A=-40 ℃，T_B=105 ℃ 5 次循环，持续时间 t=30 min 5 cycles, duration t=30 min	外观无可见损伤 No visible damage
	最后测量 Final measurement	电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ：10 kHz, 20 ℃	|△C/C|≤2.0 % △tanδ≤0.015
6	初始测量 Initial measurement	电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ$_0$：10 kHz, 20 ℃	
	恒定湿热 Damp heat, steady state	温度 Temperature：40±2 ℃ 湿度 Humidity：93±3 %RH 持续时间 Duration：56 days	外观无可见损伤 No visible damage
	最后测量 Final measurement	极间耐电压 U_{T-T}：1.5U_{NDC}，10 s 极壳耐电压 U_{T-C}：3000 VAC，10 s 电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ：10 kHz, 20 ℃	极间耐电压：无永久性击穿或闪络 U_{T-T}: Neither permanent puncture nor flash-over occur 极壳耐电压：无击穿或闪络 U_{T-C}: Neither puncture nor flash-over occur |△C/C|≤2.0 %, △tanδ≤0.015

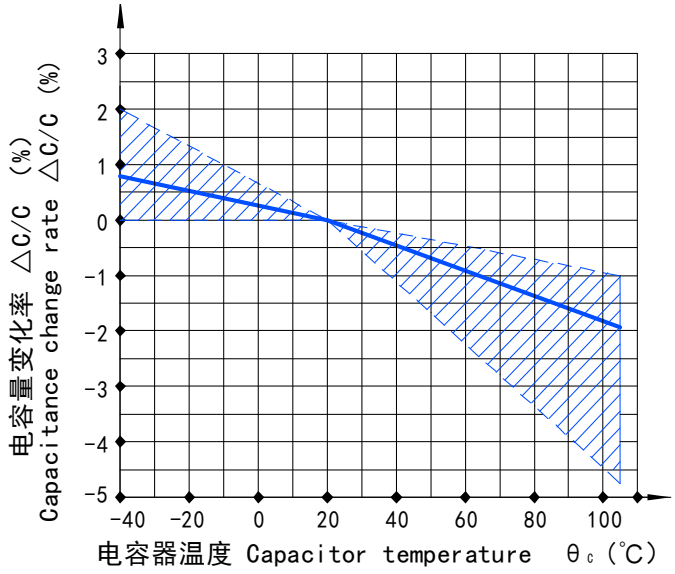
7	初始测量 Initial measurement	电容量 C：1 kHz 20 ℃ 损耗角正切 Tanδ$_0$：10 kHz 20 ℃	
	热稳定性 Thermal stability test	试验温度 Test temperature：70±2 ℃ 试验电流 Test current：I_{max} 测试频率 Test frequency：10 kHz 持续时间 Duration： 48 h 中间每 2 h 测量一次电容器表面热点温度 Intermediate measure the temperature of capacitor surface hot-spot every 2 h within the last 6 h	6 h 期间测得电容器表面热点温升变化△^{2}T≤1 K The temperature rise change measured during 6 h on capacitor surface hot-spot △^{2}T≤ 1 K 表面温升 Surface temperature rise △T≤15 ℃
	最后测量 Final measurement	电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ：10 kHz, 20 ℃	|△C/C|≤1.0 % △tanδ≤0.2×tanδ$_0$+0.0015
8	初始测量 Initial measurement	电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ$_0$：10 kHz, 20 ℃	
	耐久性 Endurance test	试验电压 Test voltage：1.3U_{NDC} 烘箱温度 Oven temperature：85±2 ℃ 试验时间 Test time：500 h+500 h 中间充放电：1.4Î，1000 次 Intermediate charge and discharge：1.4Î, 1000 times	外观无可见损伤 No visible damage
	最后测量 Final measurement	电容量 C：1 kHz, 20 ℃ 损耗角正切 Tanδ：10 kHz, 20 ℃	|△C/C|≤3.0 % △tanδ≤0.015

■ 温度特性曲线 Temperature characteristic curve



最大工作电流与环境温度关系曲线图

Maximum working current I_W VS ambient temperature θ_{amb}



电容量变化率与温度关系曲线图

Capacitance change rate VS capacitor temperature θ_C

注：I_{max} 是 f=10 kHz θ_{amb}=70 ℃ △θ_{case}=15 ℃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 ℃。

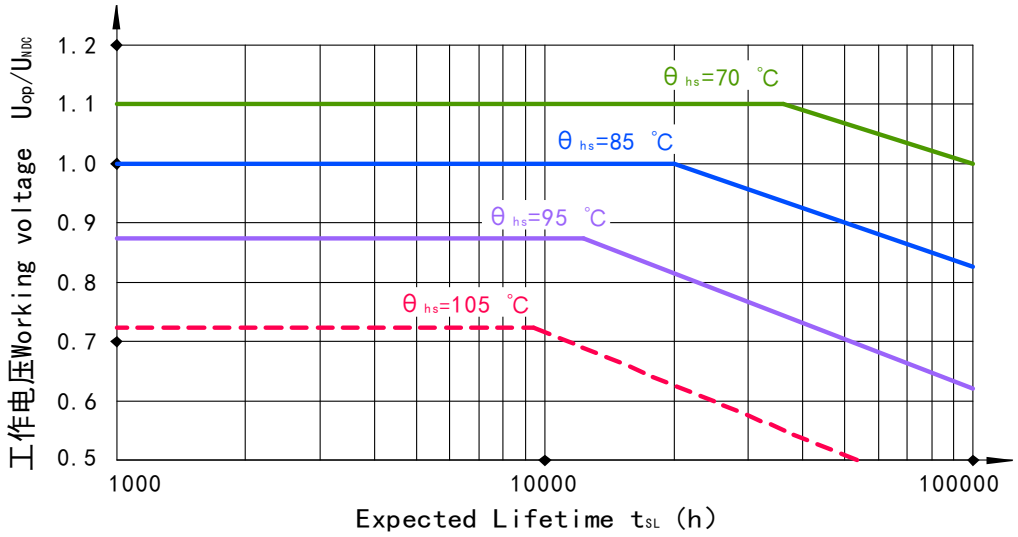
Note: I_{max} is the maximum RMS current when f=10 kHz θ_{amb} =70 ℃ and △θ_{case}=15 ℃.Too high temperature will accelerates electrochemical degradation of the dielectric.

For this type of capacitor, the maximum internal hot spot temperature shall not exceed 105 ℃ in actual operation.

注：电容器温度θ_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）。

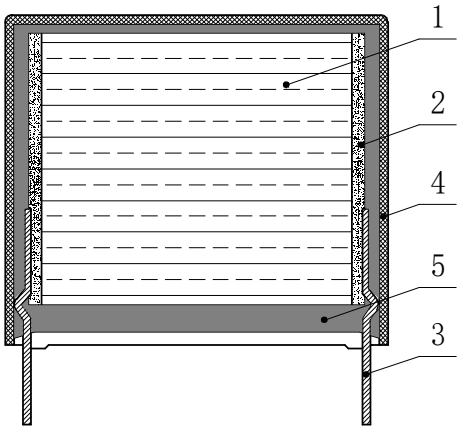
Note: θ_C is the dielectric temperature of the capacitor (It may be assumed that the dielectric temperature is the same as the ambient temperature, provided that the capacitor has been left in an nu-energized state at constant ambient temperature of an adequate period.)

■ 预期寿命曲线 Lifetime expectancy curve



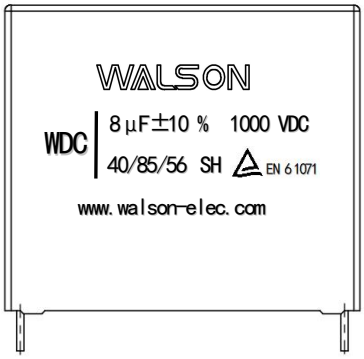
■ 产品结构 Product construction

编号 No.	组件 Components	说明 description
1	电容器芯子 Capacitor cell	金属化聚丙烯膜 Metallized polypropylene film
2	喷金层 Spray metal layer	焊料颗粒 Solder particle
3	引线 Lead wire	镀锡铜线 Tinned copper wire
4	外壳 Case	阻燃塑料外壳 Flame-retardant plastic case
5	灌封料 Filler	阻燃环氧树脂 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	产品型号 Product type
8 μF	标称容量 Nominal capacitance
±10 %	容量偏差 Capacitance tolerance
1000 VDC	额定电压 Rated DC voltage
40/85/56	气候类别 Climate category
SH	自 愈 性 Self-healing property
EN 61071	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≤75 %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。

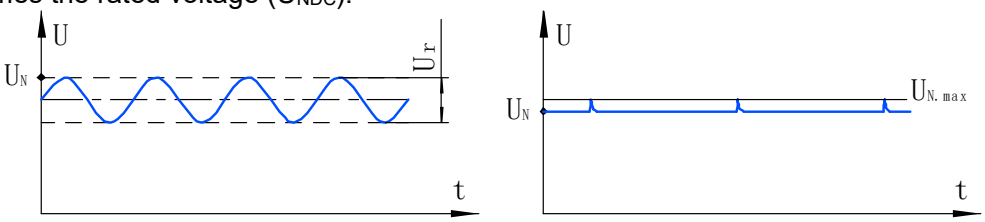
In the process of taking and installing, protection shall be provided to prevent the lead from being punctured; In addition, avoid repeatedly squeezing and bending capacitor leads.

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 3 s 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 3 s.

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:

2 Pins　　4 Pins

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.
