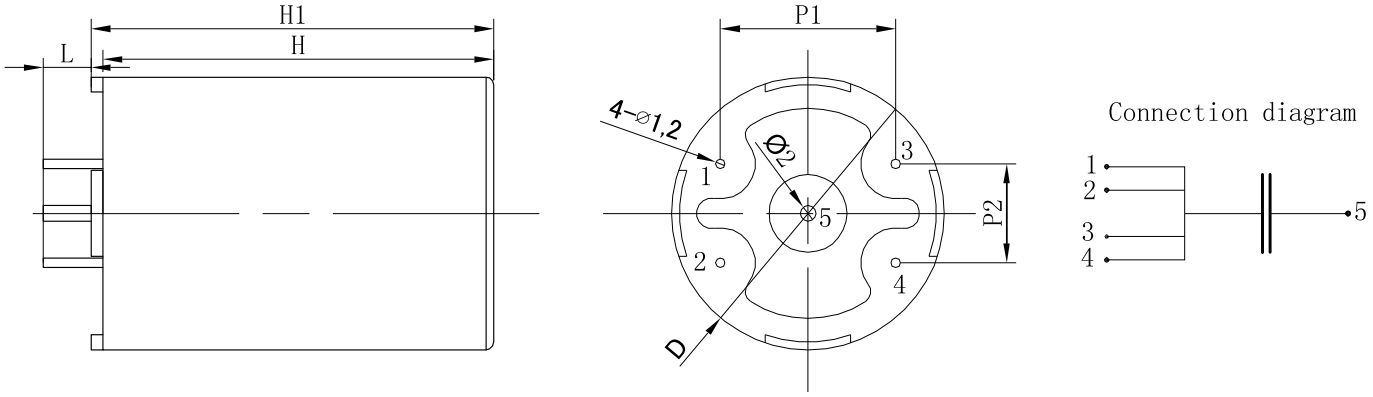
PCB用DC-Link电容器
DC-Link Capacitor for PCB

■ 外形图 Outline Drawing

Style 1



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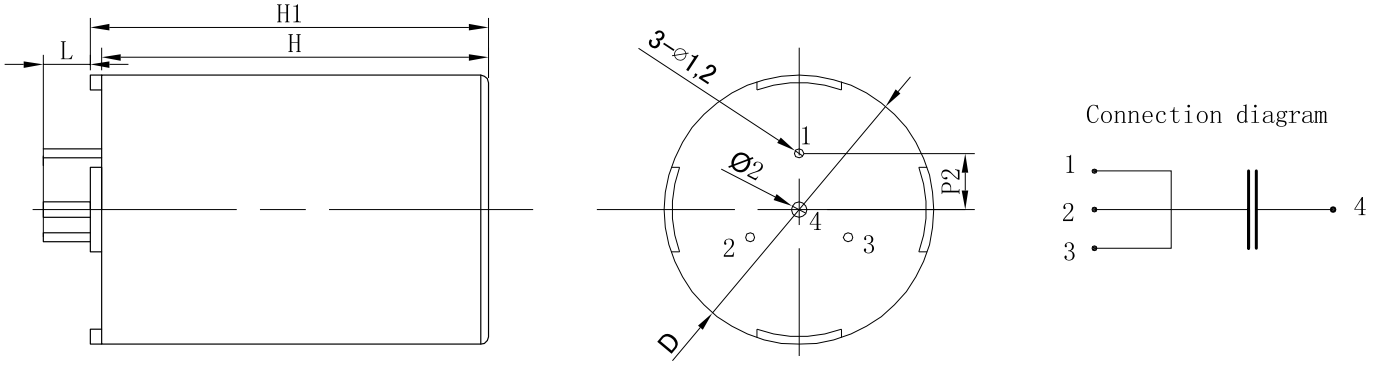

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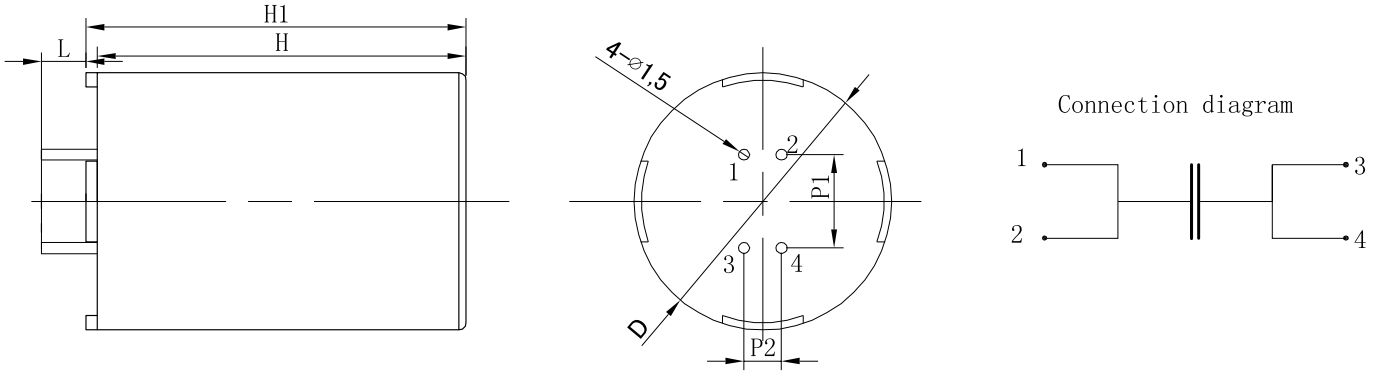

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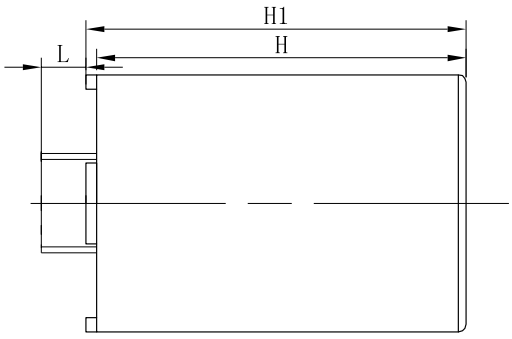

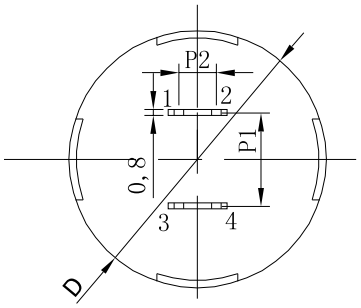

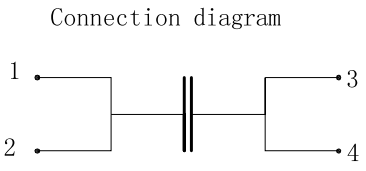

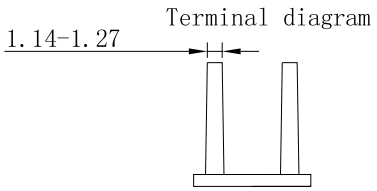

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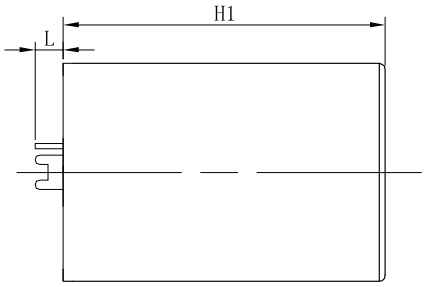
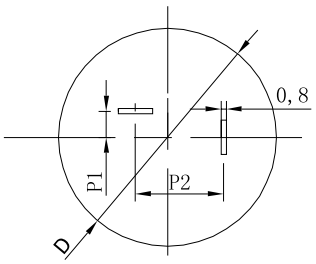
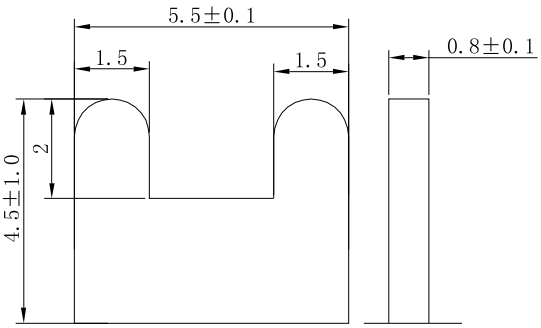






■ 特点

- 塑料外壳，干式封装
- 等效串联电阻小，能承受较大的纹波电流
- 自感小
- 寿命长

■ Features

- Plastic case, dry construction
- Low ESR, high ripple current ability
- Low L_s
- Long life

■ 应用场合

- 用于DC-Link电路替代电解电容
- 用于中小功率大阳能逆变器
- 用于焊接设备，中央空调，商用空调变频器，电梯设备，工业电机驱动器

■ Applications

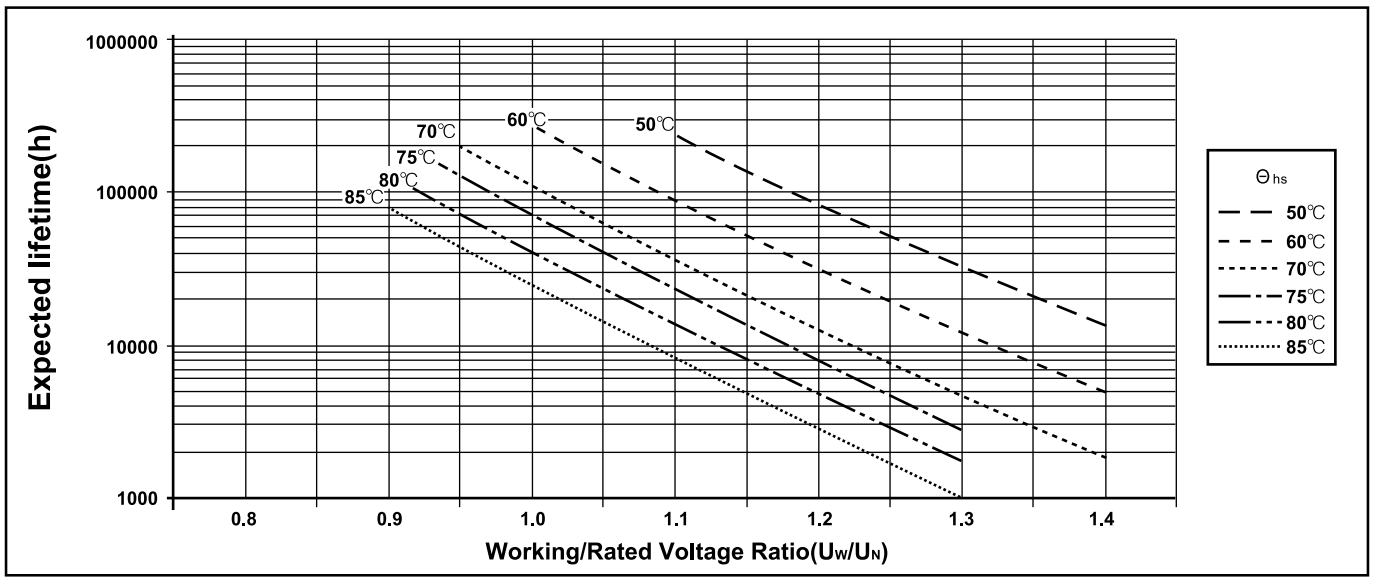
- Used to replace electrolytic capacitor in DC-Link circuits
- Used in small and medium power solar inverter
- Used in welding instruments, central air-conditioning inverter, commercial air conditioning inverter, elevator driver, industrial motor driver

■ 技术要求 **Specifications**

引用标准 Reference Standard	GB/T 17702（IEC 61071）
气候类别 Climatic Category	40/85/56
工作温度范围 Operating Temperature Range	–40℃ ~ 85℃（Θ_{hs} ≤ 85℃）
贮存温度范围 Storage Temperature Range	–40℃ ~ 85℃
电压范围 Voltage Range	500Vdc ~ 1 500Vdc
容量范围 Capacitance Range	4.7μF ~ 260μF
电容量允许偏差 Capacitance Tolerance	±5%(J)； ±10%(K)
耐电压（两极之间） Test Voltage Between Terminals	1.5U_N (10s, 20℃ ±5℃)
耐电压（极壳之间） Test Voltage Between Terminals And Case	U_N < 1 500Vdc, 3 000Vac(10s，50Hz, 20℃ ±5℃) U_N ≥ 1 500Vdc, ($\sqrt{2}$ U_N+1 000)Vac(10s，50Hz, 20℃ ±5℃)
介质损耗角正切 $tg\delta_d$	0.0002
IR × C_N	≥ 5 000s (20℃ ,500Vdc,1min)
过电压 Over Voltage	1.1U_N (30% of on–load–dur.)
	1.15U_N (30min/day)
	1.2U_N (5min/day)
	1.3U_N (1min/day)
	1.5U_N (30ms every time, 1 000 times during the life of the capacitor)
最高使用海拔 Max. Altitude	2 000m
安装 Installation	任意方向 Any Position
预期寿命 Expected lifetime	100 000hrs @ U_N, Θ_{hs}=70℃
失效率 Failure rate	50FIT

*如果海拔使用高度超过了2 000m，应该考虑海拔对对流冷却和外绝缘的影响。
*The effect of altitude on convection cooling and external insulation should be taken into consideration, if the altitude exceeds 2 000m.

预期寿命曲线 **Expected lifetime curve**



产品编码说明 Part number system

■ 18位产品代码如下：

The 15 digits part number is formed as follow:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
C	3	B															

第1~3位 型号代码

第4~5位 直流额定电压

2H=500V 1U=600V 1V=700V

1X=900V 3A=1 000V 1M=1 100V

3L=1 200V 2M=1 300V 4M=1 500V

第6~8位 标称容量

举例：127=12×10^7pF=120μF

第9位 容量等级

J=±5% K=±10%

第10~11位 外形尺寸

Digit 1 to 3 Series code

Digit 4 to 5 DC rated voltage

2H=500V 1U=600V 1V=700V

1X=900V 3A=1 000V 1M=1 100V

3L=1 200V 2M=1 300V 4M=1 500V

Digit 6 to 8 Rated capacitance value

For example: 127=12×10^7pF=120μF

Digit 9 Capacitance tolerance

J=±5% K=±10%,

Digit 10 to 11 Dimension code

ΦD	H	Code	ϕD	H	Code
35	52	10	35	57	70
50	57	20	35	67	80
50	63	30			
50	95	40			
50	120	50			
60	51.4	60			

第12~15位 引出端代码

Digit 12 to 15 Terminals code

■ Table 1 引出端代码 Terminals code

第 12 位 Digit 12		第 13 位 Digit 13		第 14 位 Digit 14		第 15 位 Digit 15	
代码 Code	类型 Style	代码 Code	间距 Pitch 1 and Pitch 2 P1 and P2	代码 Code	引出端长度 Length of terminals	代码 Code	长度偏差范围 Length tolerance
1	Style 1	**1**	P1=22.5，P2=12.7 （Style 1 D35）	**1**	**4.0mm**	**0**	±0.5mm
2	Style 2	**2**	P1=37.5，P2=16.0 (Style 1 D50)	**2**	**4.5mm**	**1**	0~−1mm
3	Style 3	**3**	P1=12.7，P2=7.3 （Style 2 D35 or D50）	**3**	**5.0mm**	**2**	±1.0mm
4	Style 4	**4**	P1=12.7，P2=5.1 （Style 3 Style 4 D35 or D50）	**4**	**7.6 mm**		
5	Style 5	**5**	P1=4.2，P2=14.2 （Style 5 D35 or D50）				

第16~18位 内部特征码

Digit 16 to 18 Internal use

■ 技术参数 Technical data（mm）

U_N (Vdc)	C_N (μF)	ESR @1kHz (mΩ)	L_s (nH)	R_{th} (K/W)	Î (A)	I_{max} (A)			Dimension			Weight (kg)	Part number
						40℃	50℃	60℃	ΦD	H	H1		
500	35	4.6	40	19.0	1 050	20	17	13	35	50.5	52	0.08	C3L2H356–10****
	44	4.5	40	18.0	1 100	22	19	16	35	–	57	0.08	C3L2H446–70****
	55	5.3	45	15.5	1 100	22	19	16	35	–	67	0.09	C3L2H556–80****
	85	2.7	35	10.9	2 125	34	29	23	50	55.5	57	0.15	C3L2H856–20****
	100	3	45	10.0	2 000	34	29	22	50	61.5	63	0.17	C3L2H107–30****
	200	3.6	50	7.4	2 000	35	31	24	50	93.5	95	0.24	C3L2H207–40****
	260	4.7	65	6.1	1 300	35	30	23	50	118.5	120	0.30	C3L2H267–50****
600	30	4.6	40	19.0	900	20	17	13	35	50.5	52	0.08	C3L1U306–10****
	38	4.5	40	18.0	950	22	19	16	35	–	57	0.08	C3L1U386–70****
	50	5.0	45	15.5	1 000	23	20	16	35	–	67	0.09	C3L1U506–80****
	80	3.2	45	10.0	1 600	33	28	22	50	61.5	63	0.17	C3L1U806–30****
700	28	6.0	40	18.0	700	19	17	14	35	–	57	0.08	C3L1V286–70****
	36	6.8	45	15.5	720	19	17	14	35	–	67	0.09	C3L1V366–80****
	58	2.7	35	10.9	1 450	34	29	23	50	55.5	57	0.15	C3L1V586–20****
	150	3.1	50	7.4	1 400	35	35	30	50	–	95	0.23	C3L1V157–40****
	190	4.6	60	6.1	950	35	30	23	50	118.5	120	0.29	C3L1V197–50****
900	14	6.7	40	19.0	420	17	14	11	35	50.5	52	0.08	C3L1X146–10****
	35	4.7	45	10.0	875	27	23	18	50	61.5	63	0.15	C3L1X356–30****
	36	3.4	35	10.9	900	31	26	20	50	55.5	57	0.15	C3L1X366–20****
	45	2.8	35	10.9	1 125	34	29	22	50	55.5	57	0.15	C3L1X456–20****
	48	2.7	35	10.9	960	34	29	23	50	55.5	57	0.17	C3L1X486–20****
	110	3.9	50	7.4	1 100	35	29	23	50	93.5	95	0.23	C3L1X117–40****
	150	4.9	60	6.1	300	34	29	22	50	118.5	120	0.28	C3L1X157–50****
1000	10	7.3	40	19.0	300	16	13	10	35	50.5	52	0.08	C3L3A106–10****
	25	5.6	45	10.0	500	25	21	16	50	61.5	63	0.17	C3L3A256–30****
1100	30	3.1	35	10.9	750	32	27	21	50	55.5	57	0.15	C3L1M306–20****
	73	4.3	50	7.4	730	33	28	22	50	93.5	95	0.23	C3L1M736–40****
	100	5.6	60	6.1	500	32	27	21	50	118.5	120	0.28	C3L1M107–50****
1200	7.5	7.4	40	19.0	225	16	13	10	35	50.5	52	0.08	C3L3L755–10****
	20	5.4	45	10.0	400	25	22	17	50	61.5	63	0.17	C3L3L206–30****
1300	12	5.5	40	10.9	300	24	20	16	50	55.5	57	0.16	C3L2M126–20****
	17	4	35	10.9	425	28	24	19	50	55.5	57	0.15	C3L2M176–20****
	41	5.8	50	7.4	410	29	24	19	50	93.5	95	0.23	C3L2M416–40****
	50	7.8	60	6.1	250	27	23	18	50	118.5	120	0.29	C3L2M506–50****
1500	4.7	8.2	40	19.0	141	15	13	10	35	50.5	52	0.08	C3L4M475–10****
	13	5.9	45	10.0	260	24	21	16	50	61.5	63	0.17	C3L4M136–30****

备注：1.“–”表示容量偏差。 “–” =capacitance tolerance code, J= ± 5.0%,K= ± 10%.

2.“****”表示引出端代码（见table1）.

“****” =terminals code(refer to table1).

3.“I_{max}”是指在环境温度（40℃，50℃，60℃）下的最大允许电流有效值。在这种条件下，热点温度将达到最大值。

“I_{max}” = Maxium allowable r.m.s current at Θ_{amb}(40℃，50℃，60℃). Θ_{hs} will reach the maximum value on this condition.

4.“R_{th}”是指在自然冷却条件下，电容器热点到环境的热阻。

“R_{th}” = R_{th} between hotspot and ambient on natural cooling condition.

5.上表中所列的尺寸为本产品系列中的常用壳号尺寸，其它规格尺寸也可以生产。引出端子尺寸参照国家标准。

Sizes above are normally used dimension,other dimension can be produced in pursuance of customer's request.

Sizes of terminals please refer to corresponding national standard.

6.* $\Theta_{hs} = \Theta_{amb} + I_{rms}^2 \times ESR \times R_{th}$.