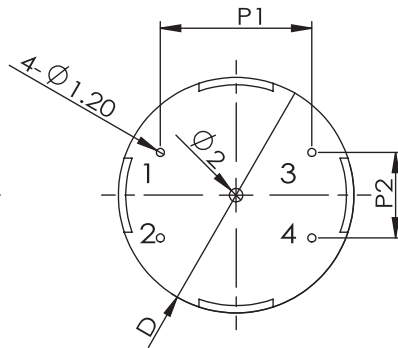
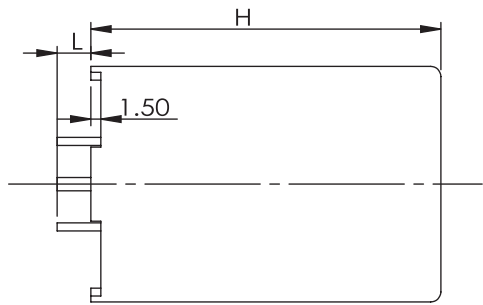




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PCB用DC-Link电容器 DC-Link Capacitor for PCB

■ 外形图 Outline Drawing



Connection diagram

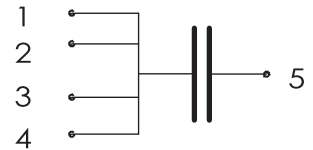
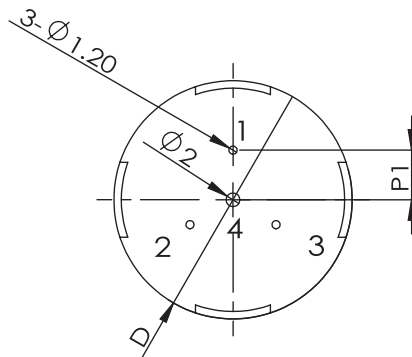
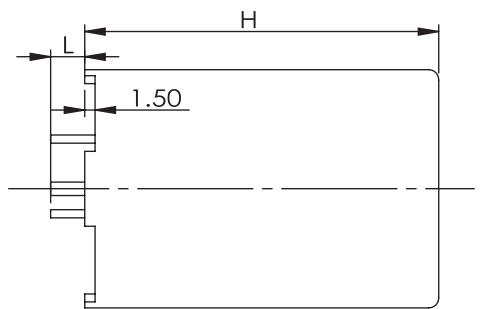


图1 (Type 1)



Connection diagram

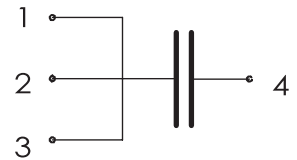


图2 (Type 2)

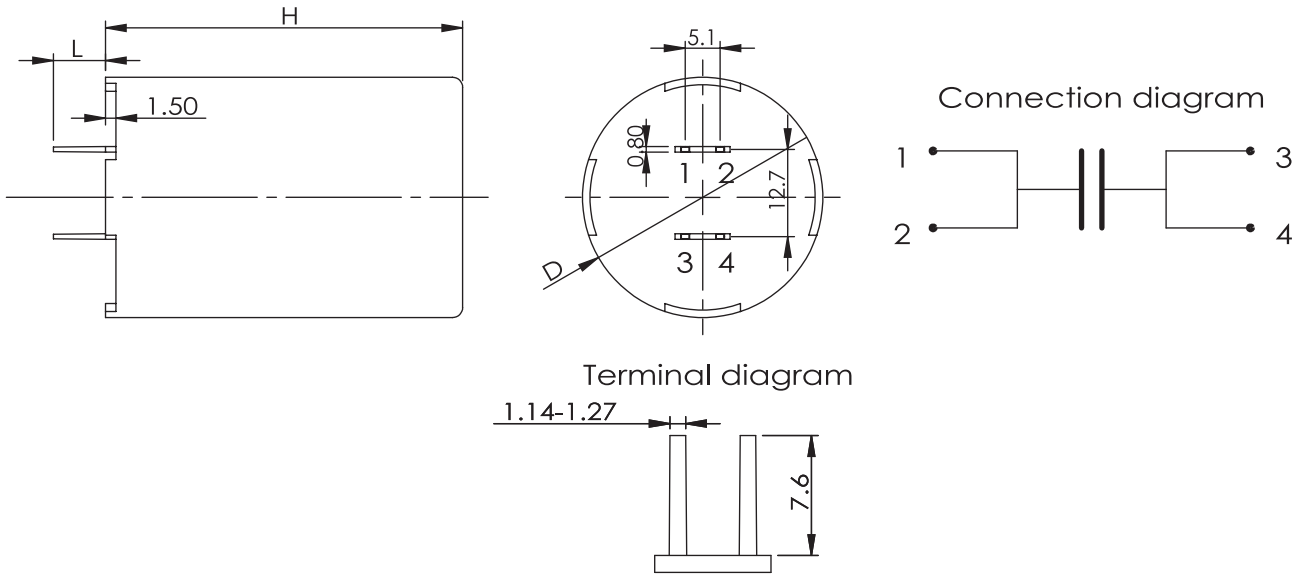


图3 (Type 3)

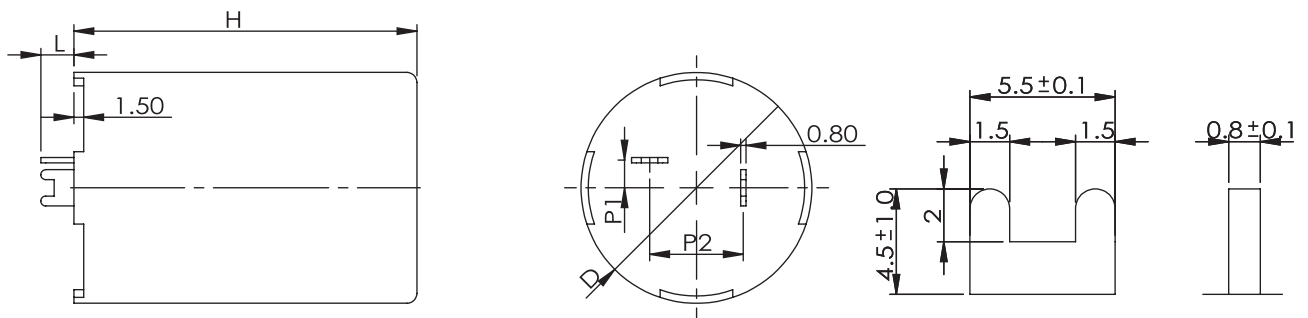


图4 (Type 4)

■ 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

■ 应用场合

- 用于DC-Link电路替代电解电容
- 用于中小功率太阳能逆变器
- 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

■ Features

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

■ 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



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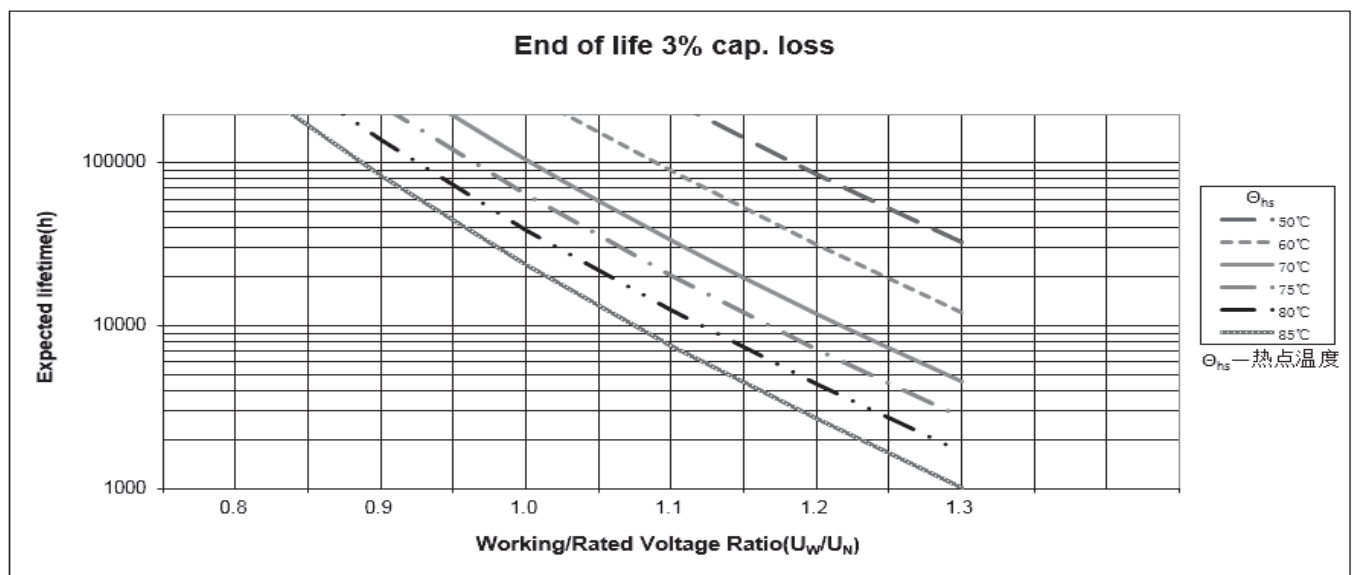
■ 技术要求 Specifications

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°C ~ 85°C ($\Theta_{hs} \leq 85^\circ\text{C}$)
贮存温度范围 Storage Temperature Range	-40°C ~ 85°C
电压范围 Voltage Range	500Vdc ~ 1 500Vdc
容量范围 Capacitance Range	5.8 μF ~ 290 μF
电容量允许偏差 Capacitance Tolerance	$\pm 5\%$ (J), $\pm 10\%$ (K)
耐电压 (两极之间) Test Voltage Between Terminals	1.5U _N (10s, 20°C $\pm 5^\circ\text{C}$)
耐电压 (极壳之间) Test Voltage Between Terminals And Case	U _N < 1 500Vdc, 3 000Vac(10s, 50Hz, 20°C $\pm 5^\circ\text{C}$) U _N \geq 1 500Vdc, ($\sqrt{2}$ U _N +1 000)Vac(10s, 50Hz, 20°C $\pm 5^\circ\text{C}$)
介质损耗角正切 $\tan \delta_d$	2×10^{-4}
IR \times C _N	$\geq 5\ 000\text{s}$ (20°C ,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 000h @ U _N , $\Theta_{hs}=70^\circ\text{C}$
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	L															

第1~3位	型号代码	Digit 1 to 3	Series code
第4~5位	直流额定电压	Digit 4 to 5	DC rated voltage
	2H=500V 1U=600V 1V=700V		2H=500V 1U=600V 1V=700V
	1X=900V 3A=1 000V 1M=1 100V		1X=900V 3A=1 000V 1M=1 100V
	3L=1 200V 2M=1 300V 4M=1 500V		3L=1 200V 2M=1 300V 4M=1 500V
第6~8位	标称容量	Digit 6 to 8	Rated capacitance value
	举例：127=12 × 10 ⁷ pF=120μF		For example: 127=12 × 10 ⁷ pF=120μF
第9位	容量等级	Digit 9	Capacitance tolerance
	J= ± 5% K= ± 10%		J= ± 5% K= ± 10%
第10~11位	外形尺寸	Digit 10 to 11	Dimension code

ΦD	H	Code
35	52	10
50	57	20
50	63	30
50	120	50

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	Type 1	1	P1=22.5, P2=12.7 (type 1 D35)	1	4.0mm	0	± 0.5mm
2	Type 2	2	P1=37.5, P2=16.0 (type 1 D50)	2	4.5mm	1	0~-1mm
4	Type 3	3	P1=7.3 (type 2 D35 or D50)	3	5.0mm	2	± 1.0mm
5	Type 4	4	P1=12.7, P2=5.1 (type 3 D35 or D50)	4	7.6 mm		
		5	P1=4.2, P2=14.2 (type 4 D35 or D50)				

第16~18位 内部特征码

Digit 16 to 18 Internal use



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■ 技术参数 Technical data (mm)

U _N (Vdc)	C _N (μF)	ESR @1kHz (mΩ)	L _s (nH)	R _{th} (K/W)	I _{hat} (A)	I _{max} (A)			Dimension		Weight (kg)	Part number
						40°C	50°C	60°C	ΦD ±1.0	H ±1.0		
500	36	5.4	30	18.6	460	21	19	16	35	52	0.07	C3L2H366-10****
	110	2.5	25	11	1 220	40	36	31	50	57	0.15	C3L2H117-20****
	125	2.6	35	10.2	1 220	40	37	31	50	63	0.17	C3L2H039-30****
	290	3.8	55	6.2	1 220	40	39	33	50	120	0.30	C3L2H297-50****
600	30	5.9	30	18.6	460	20	18	15	35	52	0.07	C3L1U306-10****
	95	2.6	25	11	1 260	40	35	30	50	57	0.15	C3L1U956-20****
	110	2.7	35	10.2	1 280	40	36	30	50	63	0.17	C3L1U117-30****
	250	4.0	55	6.2	1 260	40	38	32	50	120	0.30	C3L1U257-50****
700	23	6.5	30	18.6	460	19	17	14	35	52	0.07	C3L1V236-10****
	70	2.9	25	11	1 200	38	33	28	50	57	0.15	C3L1V706-20****
	80	3.1	35	10.2	1 200	38	34	29	50	63	0.17	C3L1V806-30****
	180	4.4	55	6.2	1 160	40	36	30	50	120	0.30	C3L1V187-50****
900	19	5.9	30	18.6	460	20	18	15	35	52	0.07	C3L1X196-10****
	56	3.2	25	11	1 170	36	32	27	50	57	0.15	C3L1X566-20****
	65	3.3	35	10.2	1 190	37	32	27	50	63	0.17	C3L1X656-30****
	150	4.7	55	6.2	1 180	40	35	30	50	120	0.30	C3L1X157-50****
1000	15	7.8	30	18.7	450	18	16	13	35	52	0.07	C3L3A156-10****
	45	3.4	25	11	1 150	35	31	26	50	57	0.15	C3L3A456-20****
	50	3.7	35	10.3	1 120	35	31	26	50	63	0.17	C3L3A506-30****
	120	5.0	55	6.2	1 160	38	34	28	50	120	0.30	C3L3A127-50****
1100	12	8.7	30	18.7	430	17	15	12	35	52	0.07	C3L1M126-10****
	36	3.8	25	11	1 100	33	29	25	50	57	0.15	C3L1M366-20****
	41	4.0	35	10.3	1 100	33	29	25	50	63	0.17	C3L1M416-30****
	95	5.6	55	6.2	1 100	36	32	27	50	120	0.30	C3L1M956-50****
1200	10	9.5	30	18.7	420	16	14	12	35	52	0.07	C3L3L106-10****
	30	4.1	25	11	1 090	32	28	24	50	57	0.15	C3L3L306-20****
	34	4.3	35	10.3	1 080	32	28	24	50	63	0.17	C3L3L346-30****
	78	6.0	55	6.2	1 070	35	31	26	50	120	0.30	C3L3L786-50****
1300	8	10.7	30	18.7	410	15	13	11	35	52	0.07	C3L2M805-10****
	24	4.6	25	11.1	1 040	30	26	22	50	57	0.15	C3L2M246-20****
	28	4.7	35	10.3	1 070	31	27	23	50	63	0.17	C3L2M286-30****
	65	6.5	55	6.2	1 040	33	30	25	50	120	0.30	C3L2M656-50****
1500	5.8	12.9	30	18.7	370	14	12	10	35	52	0.07	C3L4M585-10****
	18	5.3	25	11.1	980	28	25	21	50	57	0.15	C3L4M186-20****
	20	5.6	35	10.3	950	28	25	21	50	63	0.17	C3L4M206-30****
	48	7.4	55	6.3	960	31	28	23	50	120	0.30	C3L4M486-50****

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°C, 50°C, 60°C)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°C, 50°C, 60°C). 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.* Θ_{hs}=Θ_{amb} + I_{rms}² × ESR × R_{th}.