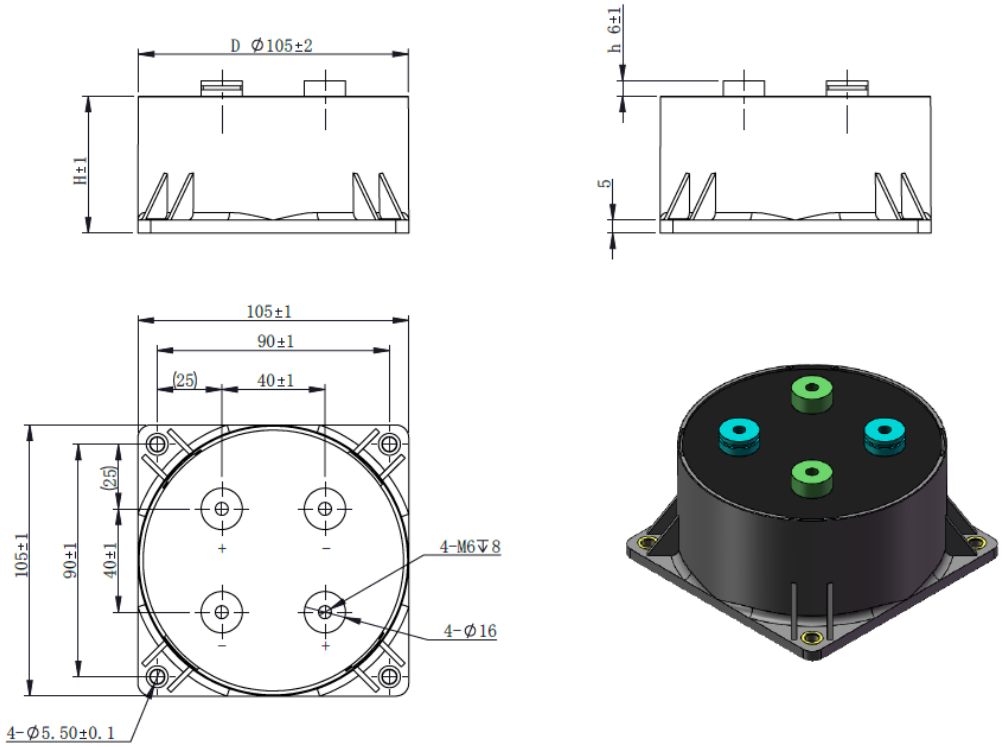
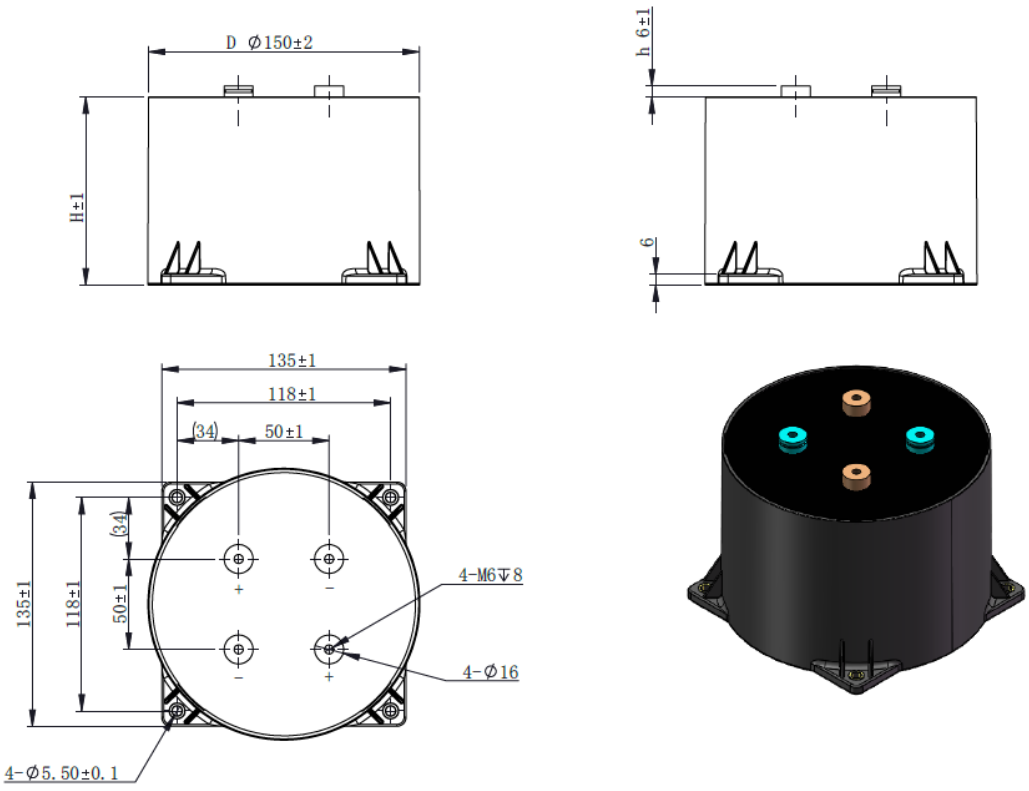
低电感直流滤波电容器（温度 105℃）
Low-ESL DC-Link Capacitor（Temperature 105℃）

■ 外形图 **Outline Drawing**

D=105mm



D=150mm



注：引出端子根部可能有轻微爬料。

Note: There may be a slight potting material creeping at the bottom of the outside terminals.

■ 特点

- 极低电感，低于 8nH
- 等效电阻小，耐纹波电流能力强
- 自愈性优良
- 塑料外壳，阻燃树脂灌封

■ Features

- Low ESL，less than 8nH
- Low-ESR，high rms current capability
- Self-healing property
- Plastic case, filled with flame retardant resin

■ 应用场合

- 高频逆变器

■ Applications

- High frequency inverter

■ 技术要求 Specifications

引用标准 Reference standards	GB/T 17702(IEC 61071)，AEC-Q200D-2010
额定电压 Rated Voltage(U_N)	500Vdc～1 500Vdc
电容量范围 Capacitance Range(C_N)	51μF~1 100μF
电容量偏差 Capacitance Tolerance	±5%(J)，±10%(K)
介质损耗角正切 Dielectric dissipation factor ($\tan\delta_d$)	2×10^{-4}
运行温度范围 Operating temperature range	-40℃～105℃(θ_{hs}≤105°C)
贮存温度范围 Storage temperature range	-40℃～105℃
过电压 Over Voltage	1.1U_N (30% of on-load-dur.)
	1.15 U_N (30min/day)
	1.2 U_N (5min/day)
	1.3 U_N (1min/day)
	1.5 U_N (30ms every time, 1 000 times during the whole life)
自感 Self-Inductance (Ls)	＜8nH
绝缘电阻 Insulation Resistance(IR×C_N)	≥10 000 s (20℃, 500V, 1min after charging completed)
耐电压(两极之间) Test voltage between terminals	1.5U_N(10s, 20℃±5℃)
外壳类型 Case	Plastic
预期寿命 Expected lifetime	100 000h@Max.U_N, θ_{hs} =70℃
失效率 Failure rate	100 FIT
最大端子扭矩 Max. Torque of terminals	M6: 5.0N.m
最大安装扭矩 Max. Torque of installation	3.0N.m
安装 Installation	任意方向 Any Position

产品编码说明 Part number code system

■ 15 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
C	3	V												

第 1~3 位　型号代码
C3V
第 4~5 位　直流额定电压
2H=500V,1U=600V, 2V=700V
2K=800V,1X=900V, 1M=1 100V
2M=1 300V,4M=1 500V
第 6~8 位　标称容量
举例：387=38×10^7 pF= 380μF
第 9 位　容量偏差
J=±5%,K=±10%
第 10~15 位　内部特征码

Digit 1 to 3　Series code
C3V
Digit 4 to 5　DC rated voltage
2H=500V,1U=600V, 2V=700V
2K=800V,1X=900V, 1M=1 100V
2M=1 300V,4M=1 500
Digit 6 to 8　Rated capacitance value
For example: 387=38×10^7 pF= 380μF
Digit 9　Capacitance tolerance
J=±5%,K=±10%
Digit 10 to 15　Internal use

■ 技术参数 Technical data

$U_{N,105℃}$ (V)	C_N (μF)	ΦD ±1.0	H ±1.0	ESL (nH)	ESR @10kHz (mΩ)	R_{th} (K/W)	I_{max} (A)	Î (A)	f_r (kHz)	Weight (kg)	Part number
500	450	105	53	6	0.61	5.9	81	2 650	97	0.9	C3V2H457-******
	1 100	105	104	8	0.82	4.4	80	2 500	54	1.4	C3V2H118-******
600	290	105	53	6	0.68	5.9	76	2 630	121	0.9	C3V1U297-******
	740	105	104	8	0.9	4.4	77	2 590	65	1.4	C3V1U747-******
700	220	105	53	6	0.75	5.9	72	2 520	139	0.9	C3V1V227-******
	600	105	104	8	0.95	4.4	75	2 590	73	1.4	C3V1V607-******
800	160	105	53	6	0.83	5.9	70	2 350	162	0.9	C3V2K167-******
	430	105	104	8	1.07	4.4	70	2 390	86	1.4	C3V2K437-******
900	140	105	53	6	0.76	5.9	72	2 370	174	0.9	C3V1X147-******
	380	105	104	8	1.03	4.4	71	2 430	91	1.4	C3V1X387-******
1 100	95	105	53	6	0.85	5.9	68	2 300	211	0.9	C3V1M956-******
	250	105	104	8	1.22	4.4	65	2 240	113	1.4	C3V1M257-******
	600	150	104	8	0.55	2.8	122	5 340	73	2.6	C3V1M607-******
1 300	67	105	53	6	0.98	5.9	63	2 030	251	0.9	C3V2M676-******
	180	105	104	8	1.38	4.4	62	2 010	133	1.4	C3V2M187-******
	430	150	104	8	0.63	2.8	114	4 770	86	2.6	C3V2M437-******
1 500	51	105	53	6	1.09	5.9	60	1 770	288	0.9	C3V4M516-******
	140	105	104	8	1.51	2.8	59	1 800	150	1.4	C3V4M147-******
	330	150	104	8	0.69	4.4	108	4 200	98	2.6	C3V4M337-******

备注：1. “-”表示容量偏差，J=±5%, K=±10%。 “-”=capacitance tolerance code, J=±5%,K=±10%.

2.“*******”表示内部特征码，请联系技术工程师确认完整代码。

“*******”=Internal use, please contact the technical engineer to confirm the complete code.

3. “R_{th}”指在自然冷却条件下，电容器热点到环境的热阻。

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

4. “I_{max}”为电容器连续运行时通过端子的最大有效值电流，表格中数值是基于温升不超过 30℃计算所得。

“I_{max}” = Maximum r.m.s current passing through the terminals during continuous operation, which is calculated depended on the temperature rise of no more than 30℃.

5. “Î”指在连续运行中允许重复出现的最大峰值电流。

“Î” = The Max. permitted repetitive peak current during continuous operation.

6. “f_r”指电容器的谐振频率。

“f_r” =The resonance frequency of capacitor.

■ 预期寿命曲线 Lifetime expectancy curve

在电容器的应用中，有多种因素会影响到电容器的使用寿命，比如电压、温度、电流、电网谐波、光照或辐射以及其它一些未知的因

素。以下预期寿命曲线仅考虑电压、温度的关系，基于长期耐久性试验的合格结果，再通过预期寿命理论计算公式计算该电容在不同工况下的预期寿命。因此，预期寿命曲线仅作为选型参考，而不代表电容器的实际使用寿命，也不代表质保要求。

For capacitors application, various factors will affect the expected life of capacitors such as voltage, temperature, current, network harmonics, lighting or radiation and other unknown factors. The following lifetime curve only considers the effects of voltage and temperature. Based on the qualified results of long-term durability test, the lifetime curve of the capacitor under different working conditions is calculated by using the theoretical calculation formula of lifetime. Therefore, the lifetime curve is only used as a reference for selection, and does not represent the actual service life of the capacitor, nor does it represent the quality assurance requirements.