

HL series

- Low ESR, high ripple current 低等效串联电阻，耐高纹波电流
- Load life of 15000 hours at 105°C 工作寿命 105°C-15000 小时
- Compliant to the RoHS2.0 directive 符合 RoHS2.0 规范
- Compliant to AEC-Q200, contact us for more information 符合 AEC-Q200 标准，详情请另行咨询



Specifications 系列参数

Items 项目	Characteristics 特性	
Operating Temp. Range 工作温度范围	-55°C ~ +105°C	
Capacitance Range 容量范围	6.8~330 μ F	
Capacitance Tolerance 容量偏差	M : \pm 20%	
Rated Voltage Range 额定电压范围	25V ~ 80V DC	
Dissipation Factor 损耗角正切	Not to exceed the value specified 不超过规格值	
Leakage Current 漏电流	$I \leq 0.01CV$ (after 2 minutes) 充电 2 分钟后测试漏电流不超过 $0.01 \times (\text{静电容量 } \mu\text{F}) \times (\text{额定电压 } V)$	
ESR (100K~300KHz) 等效串联电阻	Not to exceed the value specified 不超过规格值	
Endurance: 105°C, 15000h at rated voltage (with rated ripple current) 寿命: 105°C, 15000 小时 加载额定电压 (叠加额定纹波电流)	Capacitance Change 容量变化	Within \pm 30% of the value before test 初始值 \pm 30%以内
	Dissipation Factor 损耗角正切	Not to exceed 200% of the value specified 不超过 2 倍规格值
	ESR 等效串联电阻	Not to exceed 200% of the value specified 不超过 2 倍规格值
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Moisture Resistance 85°C, RH85%, 2000h, at rated voltage 耐湿性 85°C, RH85%加载额定电压连续工作 2000 小时	Capacitance Change 容量变化	Within \pm 30% of the value before test 初始值 \pm 30%以内
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	Leakage Current 漏电流	Not to exceed the value specified 不超过规格值

Dimensions 尺寸 (Unit单位:mm)

Standard 标准产品		<table border="1"> <thead> <tr> <th>ΦD</th> <th>L</th> <th>W</th> <th>H</th> <th>C</th> <th>P</th> <th>R</th> <th>T₁, T₂</th> </tr> </thead> <tbody> <tr> <td>6.3</td> <td>6.2</td> <td>6.6</td> <td>6.6</td> <td>7.2</td> <td>2.1</td> <td>0.5~0.8</td> <td>0.2max.</td> </tr> <tr> <td>6.3</td> <td>7.7</td> <td>6.6</td> <td>6.6</td> <td>7.2</td> <td>2.1</td> <td>0.5~0.8</td> <td>0.2max.</td> </tr> <tr> <td>8</td> <td>10.5</td> <td>8.3</td> <td>8.3</td> <td>9.0</td> <td>3.2</td> <td>0.8~1.1</td> <td>0.2max.</td> </tr> <tr> <td>10</td> <td>10.5</td> <td>10.3</td> <td>10.3</td> <td>11.0</td> <td>4.6</td> <td>0.8~1.1</td> <td>0.2max.</td> </tr> </tbody> </table>	Φ D	L	W	H	C	P	R	T ₁ , T ₂	6.3	6.2	6.6	6.6	7.2	2.1	0.5~0.8	0.2max.	6.3	7.7	6.6	6.6	7.2	2.1	0.5~0.8	0.2max.	8	10.5	8.3	8.3	9.0	3.2	0.8~1.1	0.2max.	10	10.5	10.3	10.3	11.0	4.6	0.8~1.1	0.2max.
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Capacitance List 容量对照表

W.V (S.V) SIZE	25 (31)	35 (44)	50 (63)	63 (79)	80 (100)
6.3x6.2	47 ~ 56 μ F	22 ~ 47 μ F	10 ~ 22 μ F	6.8 ~ 15 μ F	6.8 ~ 10 μ F
6.3x7.7	68 ~ 100 μ F	47 ~ 68 μ F	22 ~ 33 μ F	10 ~ 22 μ F	10 ~ 15 μ F
8x10.5	150 ~ 220 μ F	100 ~ 150 μ F	47 ~ 82 μ F	33 ~ 56 μ F	22 ~ 33 μ F
10x10.5	180 ~ 330 μ F	120 ~ 270 μ F	56 ~ 120 μ F	47 ~ 82 μ F	27 ~ 47 μ F

Characteristics List 规格特性表

W.V. 工作电压 (V)	Capacitance 容量 (μ F)	tg δ 损耗角正切 (120Hz, 20 $^{\circ}$ C)	ESR 等效串联电阻 (m Ω , 100kHz)	Rated Ripple Current 额定纹波电流 (105 $^{\circ}$ C, mA, r.m.s)	Size 尺寸 Φ DxL(mm)	Part Number 物料编码
25	47	0.12	50	1300	6.3x6.2	PHL470M025E62TR□□□□
	100	0.12	30	2000	6.3x7.7	PHL101M025E77TR□□□□
	220	0.12	27	2300	8x10.5	PHL221M025F1ETR□□□□
	330	0.12	20	2500	10x10.5	PHL331M025G1ETR□□□□
35	47	0.12	60	1300	6.3x6.2	PHL470M035E62TR□□□□
	68	0.12	35	2000	6.3x7.7	PHL680M035E77TR□□□□
	150	0.12	27	2300	8x10.5	PHL151M035F1ETR□□□□
	270	0.12	20	2500	10x10.5	PHL271M035G1ETR□□□□
50	22	0.10	80	1100	6.3x6.2	PHL220M050E62TR□□□□
	33	0.10	40	1600	6.3x7.7	PHL330M050E77TR□□□□
	82	0.10	30	1800	8x10.5	PHL820M050F1ETR□□□□
	120	0.10	25	2400	10x10.5	PHL121M050G1ETR□□□□
63	10	0.08	120	1000	6.3x6.2	PHL100M063E62TR□□□□
	22	0.08	80	1500	6.3x7.7	PHL220M063E77TR□□□□
	56	0.08	40	1700	8x10.5	PHL560M063F1ETR□□□□
	82	0.08	30	2000	10x10.5	PHL820M063G1ETR□□□□
80	10	0.08	120	900	6.3x6.2	PHL100M080E62TR□□□□
	15	0.08	85	1400	6.3x7.7	PHL150M080E77TR□□□□
	33	0.08	45	1600	8x10.5	PHL330M080F1ETR□□□□
	47	0.08	35	1900	10x10.5	PHL470M080G1ETR□□□□

* For the last 4 digits of the part number, please refer to the part number system on page 154.

物料编码的最后 4 位，请参考 154 页物料编码系统。

Frequency Coefficient for Ripple Current 纹波电流频率系数

Frequency 频率	120Hz \leq freq.<1KHz	1KHz \leq freq.<10KHz	10KHz \leq freq.<50KHz	50KHz \leq freq.<100KHz	100KHz \leq freq.<1000KHz
Coefficient 系数 (C \leq 47 μ F)	0.05	0.25	0.55	0.80	1.00
Coefficient 系数 (C>47 μ F)	0.05	0.30	0.70	0.85	1.00