

## 系列：LHU

### 产品特点

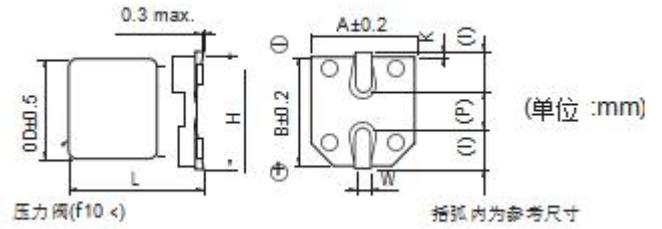
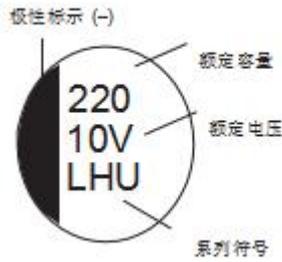
- 高温无铅回流焊产品
- 保证时间：125℃ 1000~2000 小时
- 适用于高温用途
- 符合 RoHS 标准

项目 Items	特性 Characteristics												
工作温度范围 Operating Temperature Range	-40℃ ~ +125℃												
额定电压范围 Rated Voltage Range	10V ~ 250V												
标称电容量范围 Nominal Capacitance Range	22 ~ 4700 μF												
标称电容量允许偏差 Nominal Capacitance Tolerance	±20% (20℃, 120Hz)												
漏电流 Leakage Current	10V~100V $I \leq 0.01C_R U_R$ or 3(μA), 取较大者 (2分钟) $C_R$ : 标称电容量 (μF) $U_R$ : 额定电压 (V) $I \leq 0.01C_R U_R$ or 3(μA) Whichever is greater (at 20℃, after 2 minutes) $C_R$ : Nominal Capacitance (μF) $U_R$ : Rated voltages (V) 160-250 VDC: $I \leq 0.04 C_R U_R + 100\mu A$ at 2minutes												
损耗角正切 (tg δ) Dissipation Factor (Max) 20℃, 120Hz	$U_R$ (V)	10	16	25	35	50	63	80	100	160	200	250	
	tg δ	0.32	0.24	0.21	0.18	0.15	0.13	0.12	0.12	0.20	0.20	0.25	
耐久性 Load Life	+125℃施加额定电压 1000~2000 小时后, 电容器应满足以下要求: After 1000~2000 hours application of rated voltage at 125℃, the capacitor shall meet the following requirement:												
	规定时间 Specified time	$\phi D \leq 8 \times 6.5$ 1000 小时 1000Hrs for $\phi D \leq 8 \times 6.5$ $\phi D \geq 8 \times 10.5$ 2000 小时 2000Hrs for $\phi D \geq 8 \times 10.5$											
	电容量变化率 Capacitance Change	±30%初始值以内 Within ±30% of the initial value											
	损耗角正切 Dissipation Factor	≤ 300%初始规定值 Not more than 300% of the initial specified value											
	漏电流 Leakage Current	≤ 初始规定值 Not more than the initial specified value											
高温贮存 Shelf Life	+125℃贮存 1000 小时后, 电容器应满足以上耐久性要求 After storage for 1000 hours at +125℃, the capacitors shall meet the requirement of load life above												
低温特性 Low Temperature Stability 阻抗比 Impedance Ratio (120Hz)	$U_R$ (V)	10	16	25	35	50	63	80	100	160	200	250	
	Z(-25℃)/Z(+20℃)	3	3	2	2	2	2	2	2	4	4	4	
	Z(-40℃)/Z(+20℃)	6	6	4	4	4	3	3	3	8	8	8	
耐焊接热 Resistance to Soldering Heat	在 250℃的条件下, 电容器在热板上保持 30 秒, 然后从热板上取出电容器, 让其在室温下恢复, 电容器应满足以下要求: The capacitors shall be kept on the hot plate maintained at 250℃ for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement.												
	电容量变化率 Capacitance Change	±10%初始值以内 Within ±10% of the initial value											
	损耗角正切 (tg δ) Dissipation Factor	≤ 初始规定值 Not more than the initial specified value											
	漏电流 Leakage Current	≤ 初始规定值 Not more than the initial specified value											
AEC-Q200	符合 AEC-Q200												

## 标示

## 外观尺寸

例：10V.DC 220uF LHU系列



$\phi D$	L	A, B	H.	l	W	P	K
6.3	$5.4 \pm 0.3$	6.6	7.8	2.4	0.5~0.8	2.2	$0.35 + 0.15 / - 0.20$
6.3	$7.7 \pm 0.3$	6.6	7.8	2.4	0.5~0.8	2.2	
8	$10.5 \pm 0.5$	8.3	10	3.4	0.8~1.1	3.1	$0.70 \pm 0.20$
8	$12.5 \pm 0.5$	8.3	10	3.4	0.8~1.1	3.1	$0.70 \pm 0.20$
10	$10.5 \pm 0.5$	10.3	12	3.5	0.8~1.1	4.5	$0.70 \pm 0.20$
10	$12.5 \pm 0.5$	10.3	12	3.5	0.8~1.1	4.5	$0.70 \pm 0.20$
12.5	$13.5 \pm 0.5$	13.5	15	4.7	1.1~1.4	4.4	$0.70 \pm 0.20$
12.5	$16.5 \pm 0.5$	13.5	15	4.7	1.1~1.4	4.4	$0.70 \pm 0.20$
16	$16.5 \pm 0.5$	17	19	5.5	1.1~1.4	6.4	$0.70 \pm 0.20$
16	$21.5 \pm 0.5$	17	19	5.5	1.1~1.4	6.4	$0.70 \pm 0.20$
18	$16.5 \pm 0.5$	19	21	6.7	1.1~1.4	6.4	$0.70 \pm 0.20$
18	$21.5 \pm 0.5$	19	21	6.7	1.1~1.4	6.4	$0.70 \pm 0.20$

特性一览表 1

额定电压 (V.DC)	静电容量 ( $\pm 20\%$ ) (uF)	产品尺寸(mm)		电气特性		料号	最小包装 数量 (PCS)
		$\phi D$	L	额定纹波电流 (120Hz) (+125°C)	$\tan \delta$ (120Hz) (+20°C)		
10	68	6.3	5.4	50	0.32	LHU1A680ME05400LP0	1000
	100	6.3	7.7	75	0.32	LHU1A101ME07700LP0	1000
	220	8	10.5	130	0.32	LHU1A221MF10500LP0	500
	330	8	10.5	130	0.32	LHU1A331MF10500LP0	500
	470	12.5	13.5	480	0.32	LHU1A471MI13500LP0	200
	680	12.5	13.5	480	0.32	LHU1A681MI13500LP0	200
	1000	12.5	16.5	585	0.32	LHU1A102MI16500LP0	200
	1500	12.5	16.5	585	0.32	LHU1A152MI16500LP0	200
	2200	16	16.5	650	0.32	LHU1A222MJ16500LP0	125
	3300	18	16.5	855	0.32	LHU1A332MK16500LP0	125
4700	18	16.5	855	0.32	LHU1A472MK16500LP0	125	
16	33	6.3	5.4	50	0.24	LHU1A330ME05400LP0	1000
	47	6.3	7.7	70	0.24	LHU1A470ME07700LP0	1000
	68	6.3	7.7	75	0.24	LHU1A680ME07700LP0	1000
	100	6.3	7.7	75	0.24	LHU1A101ME07700LP0	1000
	220	10	10.5	180	0.24	LHU1C221MG10500LP0	500

特性一览表 2

额定电压 (V.DC)	静电容量 (±20%) (uF)	产品尺寸(mm)		电气特性		料号	最小包装 数量 (PCS)
		φ D	L	额定纹波电流 (120HZ) (+125℃)	tan δ (120HZ) (+20℃)		
16	330	12.5	13.5	480	0.24	LHU1C331MI13500LP0	200
	470	12.5	13.5	480	0.24	LHU1C471MI13500LP0	200
	680	12.5	13.5	480	0.24	LHU1C681MI13500LP0	200
	1000	12.5	16.5	585	0.24	LHU1C102MI16500LP0	200
	1500	16	16.5	650	0.24	LHU1C152MJ16500LP0	125
	2200	18	16.5	855	0.24	LHU1C222MK16500LP0	125
25	33	6.3	5.4	50	0.21	LHU1E330ME05400LP0	1000
	47	6.3	7.7	70	0.21	LHU1E470ME07700LP0	1000
	68	6.3	7.7	75	0.21	LHU1E680ME07700LP0	1000
	100	8	10.5	130	0.21	LHU1E101MF10500LP0	500
	220	10	10.5	180	0.21	LHU1E221MG10500LP0	500
	330	12.5	13.5	480	0.21	LHU1E331MI13500LP0	200
	470	12.5	13.5	480	0.21	LHU1E471MI13500LP0	200
	680	12.5	16.5	585	0.21	LHU1E681MI16500LP0	200
	1000	16	16.5	650	0.21	LHU1E102MJ16500LP0	125
1500	18	16.5	855	0.21	LHU1E152MK16500LP0	125	
35	22	6.3	5.4	50	0.18	LHU1V220ME05400LP0	1000
	33	6.3	7.7	70	0.18	LHU1V330ME07700LP0	1000
	47	6.3	7.7	75	0.18	LHU1V470ME07700LP0	1000
	68	8	10.5	130	0.18	LHU1V680MF10500LP0	500
	100	10	10.5	180	0.18	LHU1V101MG10500LP0	500
	220	12.5	13.5	357	0.18	LHU1V221MI13500LP0	200
	330	16	16.5	650	0.18	LHU1V331MJ16500LP0	125
	470	16	16.5	650	0.18	LHU1V471MJ16500LP0	125
	680	16	16.5	650	0.18	LHU1V681MJ16500LP0	125
	1000	18	16.5	855	0.18	LHU1V102MK16500LP0	125
50	22	6.3	7.7	75	0.15	LHU1H220ME07700LP0	1000
	33	8	10.5	130	0.15	LHU1H330MF10500LP0	500
	47	8	10.5	130	0.15	LHU1H470MF10500LP0	500
	68	10	10.5	180	0.15	LHU1H680MG10500LP0	500
	100	12.5	13.5	357	0.15	LHU1H101MI13500LP0	200
	220	12.5	16.5	400	0.15	LHU1H221MI16500LP0	200
	330	16	16.5	650	0.15	LHU1H331MJ16500LP0	125
	470	16	16.5	650	0.15	LHU1H471MJ16500LP0	125
	680	18	16.5	855	0.15	LHU1H681MK16500LP0	125
63	10	8	6.2	35	0.13	LHU1J100MF06000LP0	1000
	22	8	10.5	60	0.13	LHU1J220MF10500LP0	500
	33	10	10.5	80	0.13	LHU1J330MG10500LP0	500
	47	10	10.5	95	0.13	LHU1J470MG10500LP0	500
	100	12.5	13.5	180	0.13	LHU1J101MI13500LP0	200
	220	12.5	16.5	270	0.13	LHU1J221MI16500LP0	150
	330	16	16.5	420	0.13	LHU1J331MJ16500LP0	125
	470	16	16.5	500	0.13	LHU1J471MJ16500LP0	125

特性一览表 3

额定电压 (V.DC)	静电容量 (±20%) (uF)	产品尺寸(mm)		电气特性		料号	最小包装 数量 (PCS)
		φ D	L	额定纹波电流 (120HZ) (+125℃)	tan δ (120HZ) (+20℃)		
80	10	8	10.5	40	0.12	LHU1K100MF10500LP0	500
	22	10	10.5	65	0.12	LHU1K220MG10500LP0	500
	33	10	10.5	80	0.12	LHU1K330MG10500LP0	500
	47	10	10.5	95	0.12	LHU1K470MG10500LP0	500
	100	12.5	13.5	180	0.12	LHU1K101MI13500LP0	200
	220	16	16.5	330	0.12	LHU1K221MJ16500LP0	125
	330	18	16.5	440	0.12	LHU1K331MK16500LP0	125
	470	18	16.5	525	0.12	LHU1K471MK16500LP0	125
100	22	10	10.5	70	0.12	LHU2A220MG10500LP0	500
	33	10	10.5	80	0.12	LHU2A330MG10500LP0	500
	47	12.5	13.5	135	0.12	LHU2A470MI13500LP0	200
	100	16	16.5	250	0.12	LHU2A101MJ16500LP0	125
	220	18	16.5	395	0.12	LHU2A221MK16500LP0	125
	330	18	16.5	480	0.12	LHU2A331MK16500LP0	125
160	6.8	8	10.5	42	0.20	LHU2C6R8MF10500 LP0	500
	10	10	10.5	50	0.20	LHU2C100MG10500 LP0	500
	18	10	10.5	65	0.20	LHU2C180MG10500 LP0	500
	22	10	12.5	75	0.20	LHU2C220MG12500 LP0	400
200	4.7	8	10.5	36	0.20	LHU2D4R7MF10500 LP0	500
	6.8	10	10.5	59	0.20	LHU2D6R8MG10500 LP0	500
	10	10	10.5	59	0.20	LHU2D100MG10500 LP0	500
250	3.3	8	10.5	28	0.25	LHU2E3R3MG10500 LP0	500
	4.7	10	10.5	59	0.25	LHU2E4R7MG10500 LP0	500

■ Frequency coefficient of ripple current

Frequency	50Hz	120Hz	300Hz	1KHz	≥ 10KHz
Coefficient	0.70	1.00	1.17	1.36	1.50