

# HVA

## 铝电解电容器-贴片型 Aluminum electrolytic capacitor- SMD type

### 特点 Features

- 低阻抗。Low impedance.
- 适用于再流焊。Reflow soldering is available.
- 适用于高密度表面组装。available for high density surface mounting.
- 工作温度范围宽( -55°C ~ +105°C)Operating over wide temperature range.
- RoHS指令(2002/95/EC)已对应完毕。Adapted to the RoHS directive(2002/95/EC) .

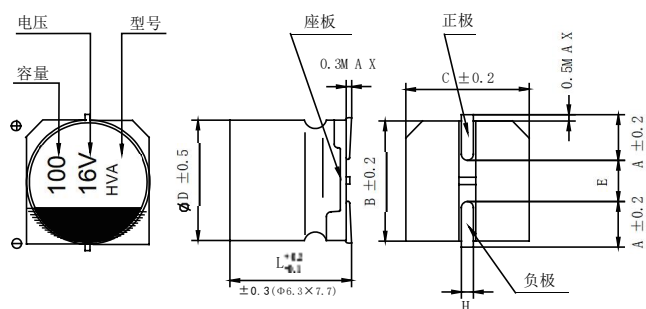


### 主要技术性能 Specifications

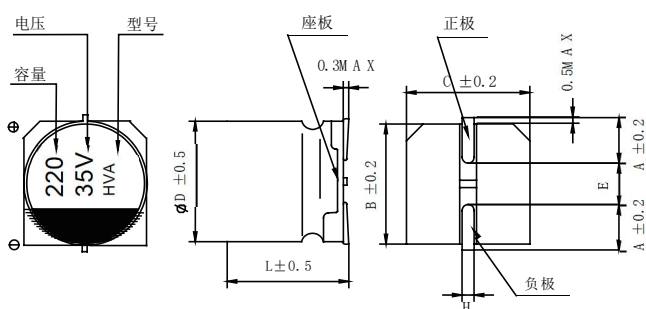
项目 Items	特性 Performance Characteristics						
工作温度范围 Operating Temperature Range	-55~+105°C						
额定电压范围 Rated Voltage Range	6.3~50V						
标称容量范围 Nominal Capacitance Range	1~1000μF						
标称容量允许偏差 Capacitance Tolerance	±20%(20°C, 120Hz)						
漏电流 Leakage Current	$I \leq 0.01 CRVR$ or $3(\mu A)$ , 取较大者(2分钟) CR: 标称容量(μF) UR: 额定电压(V) $I \leq 0.01 CRVR$ or $3(\mu A)$ Whichever is greater(at 20°C, after 2 minutes) CR: Nominal Capacitance (μF) UR: Rated voltages (V)						
损耗角正切(tgδ) Dissipation Factor (Max) 20°C, 120Hz	$U_r$ (V)	6.3	10	16	25	35	50
	tgδ	0.22	0.19	0.16	0.14	0.12	0.12
耐久性 Load Life	+105°C施加额定电压2000小时后, 电容器应满足以下要求: After 2000 hours application of rated voltage at 105°C, the capacitor shall meet the following requirement:						
	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					
高温贮存 Shelf Life	+105°C 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 +105°C, the capacitors shall meet the requirement of load life above						
	$U_r$ (V)	6.3	10	16	25	35	50
低温特性 Low Temperature Stability 阻抗比 Impedance Ratio (120Hz)	$Z(-25°C)/Z(+20°C)$	2	2	2	2	2	2
	$Z(-55°C)/Z(+20°C)$	4	4	3	3	3	3
耐焊接热 Resistance to Soldering Heat	在250°C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°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement.						
	容量变化率 Capacitance Change	±10%初始值以内 Within ±10% of the initial value					
	损耗角正切 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					

## 外形图及尺寸表 Case Size Table

### Φ4~Φ6.3



### Φ8~Φ10



单位 Unit: mm

	4×5.4	5×5.4	6.3×5.4	6.3×7.7	8×6.5	8×10.5	10×10.5
A	3.0	2.1	2.4	2.4	2.9	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3
E	1.0	1.3	2.2	2.2	2.3	3.1	4.5
L	5.4	5.4	5.4	7.7	6.5	10.5	10.5
H	0.5~0.8				0.8~1.1		

## 标称电容量、额定电压、额定纹波电流与尺寸对应表

## Nominal Capacitance, Rated Voltage, Rated Ripple Current and Case Size Table

V μF	6.3			10			16			25			35			50		
	D×L mm	Impedance Ω	I~ mA	D×L mm	Impedance Ω	I~ mA	D×L mm	Impedance Ω	I~ mA	D×L mm	Impedance Ω	I~ mA	D×L mm	Impedance Ω	I~ mA	D×L mm	Impedance Ω	I~ mA
1.0																4×5.4	5.0	30
2.2																4×5.4	5.0	30
3.3																4×5.4	5.0	30
4.7													4×5.4	3.0	60	5×5.4	3.0	50
10										4×5.4	3.0	60	5×5.4	1.8	95	6.3×5.4	2.0	70
22				4×5.4	3.0	60	5×5.4	1.8	95	5×5.4	1.8	95	5×5.4	1.8	95	6.3×5.4	2.0	70
33	5×5.4	1.8	95	5×5.4	1.8	95	6.3×5.4	1.0	140	6.3×5.4	1.0	140	6.3×5.4	1.0	140	6.3×7.7	1.4	120
47	5×5.4	1.8	95	6.3×5.4	1.0	140	6.3×5.4	1.0	140	6.3×5.4	1.0	140	6.3×5.4	1.0	140	6.3×7.7	1.4	120
100	6.3×5.4	1.0	140	6.3×5.4	1.0	140	6.3×5.4	1.0	140	6.3×7.7	0.7	220	8×10.5	0.3	450	8×10.5	0.6	300
220	6.3×5.4	1.0	140	6.3×7.7	0.7	220	6.3×7.7	0.7	220	8×10.5	0.3	450	8×10.5	0.3	450	10×10.5	0.3	500
330	6.3×7.7	0.7	220	8×10.5	0.3	450	8×10.5	0.3	450	8×10.5	0.3	450	10×10.5	0.15	650			
470	8×10.5	0.3	450	8×10.5	0.3	450	8×10.5	0.3	450	10×10.5	0.15	650	10×12.5	0.13	650			
1000	8×10.5	0.3	450	10×10.5	0.15	650												

I~ = Rated ripple current (mA) (105°C, 100kHz) I~ = 额定纹波电流(mA)(105°C, 100kHz)  
20°C 100 KHz时的电阻(Ω)MAX

## 额定纹波电流频率修正系数

## Frequency correction factor for ripple current

Frequency 频率	50Hz	120Hz	300Hz	1KHz	≥ 10KHz
Coefficient 系数	0.35	0.50	0.64	0.83	1.00