

# HVT

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

### 特点 Features

- 产品直径 Case diameter:  $\Phi$  4mm –  $\Phi$  13mm.
- 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( -40 ~ +105°C) Operating over wide temperature range.
- RoHS指令已对应完毕。 Adapted to the RoHS directive.

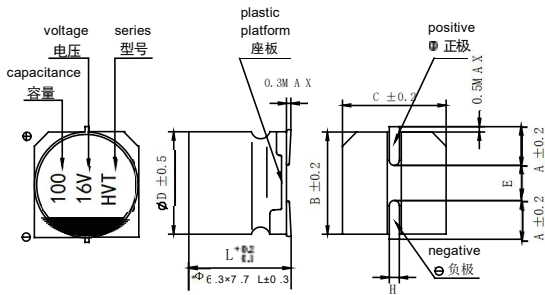


### 主要技术性能 Specifications

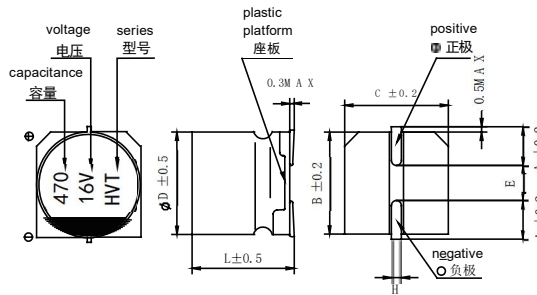
项目 Items	特性 Performance Characteristics									
工作温度范围 Operating Temperature Range	-40~+105°C									
额定电压范围 Rated Voltage Range	6.3~100V									
标称容量范围 Nominal Capacitance Range	0.1~3300 $\mu$ F									
标称容量允许偏差 Capacitance Tolerance	$\pm$ 20%(20°C, 120Hz)									
漏电流 Leakage Current	$I \leq 0.01 CRVR$ or 3( $\mu$ A), 取较大者(2分钟) CR: 标称容量( $\mu$ F) 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 ( $\mu$ F) UR: Rated voltages (V)									
损耗角正切(tg $\delta$ ) Dissipation Factor (Max) 20°C, 120Hz	$U_r$ (V)	6.3	10	16	25	35	50	63	80	100
	tg $\delta$	0.28	0.24	0.20	0.16	0.14	0.12	0.12	0.10	0.10
耐久性 Load Life	+105°C施加额定电压1000小时后, 电容器应满足以下要求: After 1000 hours' application of rated voltage at 105°C, the capacitor shall meet the following requirement:									
	容量变化率 Capacitance Change	$\pm$ 20%初始值以内 Within $\pm$ 20% of the initial value								
	损耗角正切 Dissipation Factor	$\leq$ 200%初始规定值 Not more than 200% of the initial specified value								
	漏电流 Leakage Current	$\leq$ 初始规定值 Not more than 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									
低温特性 Low Temperature Stability 阻抗比 Impedance Ratio (120Hz)	$U_r$ (V)	6.3	10	16	25	35	50	63	80	100
	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	2	2	2
	Z(-40°C)/Z(+20°C)	8	6	4	4	3	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	$\pm$ 10%初始值以内 Within $\pm$ 10% of the initial value								
	损耗角正切 Dissipation Factor	$\leq$ 初始规定值 Not more than the initial specified value								
	漏电流 Leakage Current	$\leq$ 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~Φ13



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	10×13	13×13.5	
A	1.8	2.1	2.4	2.4	2.9	2.9	3.2	3.2	4.7	
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13	
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13	
E	1.0	1.3	2.2	2.2	2.3	3.1	4.5	4.5	4.5	
L	5.4	5.4	5.4	7.7	6.5	10.5	10.5	13	13.5	
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

电压WV (Vdc)	容量Cap (μF)	产品尺寸	纹波电流	电压WV (Vdc)	容量Cap (μF)	产品尺寸	纹波电流	电压WV (Vdc)	容量Cap (μF)	产品尺寸	纹波电流	电压WV (Vdc)	容量Cap (μF)	产品尺寸	纹波电流
6.3	22	4×5.4	29	16	10	4×5.4	28	35	4.7	4×5.4	22	50	0.1	4×5.4	2.3
	33	4×5.4	26		22	5×5.4	39		10	5×5.4	30		0.22	4×5.4	3.4
	47	5×5.4	46		33	5×5.4	35		22	6.3×5.4	60		0.33	4×5.4	4.1
	100	5×5.4	50		47	6.3×5.4	65		33	6.3×5.4	62		0.47	5×5.4	5
	220	6.3×5.4	76		100	6.3×5.4	70		47	6.3×7.7	80		1	4×5.4	10
	330	6.3×7.7	123		220	6.3×7.7	120		68	6.3×7.7	82		2.2	4×5.4	16
	470	8×10.5	330		330	8×10.5	325		100	8×10.5	296		3.3	4×5.4	16
	1000	10×10.5	470		470	8×10.5	340		220	10×10.5	435		4.7	5×5.4	23
	1500	10×10.5	490		680	10×10.5	410		330	10×10.5	450		10	6.3×5.4	32
	2200	10×13	520		1000	10×10.5	450		470	13×13.5	550		22	6.3×5.4	36
10	3300	13×13.5	650	1200	10×13	460	63	4.7	5×5.4	17	100	33	6.3×7.7	70	
	22	4×5.4	21	10	4×5.4	27		10	6.3×5.4	22		47	8×10.5	210	
	33	5×5.4	34	22	5×5.4	44		22	6.3×7.7	58		100	8×10.5	230	
	47	5×5.4	36	47	6.3×5.4	70		47	8×10.5	170		220	10×10.5	375	
	100	6.3×5.4	69	68	6.3×5.4	75		100	10×10.5	310		470	13×13.5	570	
	220	6.3×7.7	120	100	6.3×7.7	100		220	13×13.5	440		10	6.3×7.7	32	
	330	8×10.5	305	220	8×10.5	320		10	6.3×7.7	38		22	8×10.5	100	
	470	8×10.5	380	330	10×10.5	450		22	8×10.5	60		33	10×10.5	150	
	680	10×10.5	390	470	10×10.5	490		33	8×10.5	70		47	10×10.5	155	
	1000	10×10.5	450	560	10×13	510		47	10×10.5	120		100	13×13.5	230	
1500	10×13	480	680	10×13	520	100	13×13.5	230							
2200	13×13.5	820	1000	13×13.5	650										

I~=Rated ripple current (mA) (105°C, 120Hz) I~=额定纹波电流(mA)(105°C, 120Hz)

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	10K~100Hz
Coefficient 系数	0.70	1.00	1.17	1.36	1.50