VH

特点 Features

保证105℃ 2000小时：Endurance 2000h at 105℃

额定电压范围：6.3~450V。Rated Voltage Range:6.3~450V

标准品：Standard Type

满足RoHS：RoHS Compliant

主要技术性能 Specifications

项目 Items	特性 Performance Characteristics	
类别温度范围 Category Temperature Range	-55℃ ~+105℃(6.3-100V),-40℃ ~+105℃(160-450V)	
额定电压范围 Rated Voltage(U_R)	6.3 ~ 450V	
标称电容量范围 Nominal Capacitance Range(C_R)	1 ~ 8200μF	120Hz，+20℃
标称电容量允许偏差 Allowed Capacitance Tolerance(C_T)	±20%(M)	120Hz，+20℃
漏电流 Leakage Current(I_L)	6.3-100V: ≤0.01C_RU_R 或者 3μA 取较大值（Whichever is greater） 160-450V: ≤0.04 C_RV_R +100μA	+20℃ after 2 minutes

损耗角正切值 Tangent of loss angle(Tanδ) — Max. 120Hz,+20℃

U_R	6.3	10	16	25	35	50	63	80	100	160-250	350-450
Tanδ	0.32	0.24	0.20	0.16	0.14	0.12	0.12	0.11	0.10	0.15	0.20

低温特性 Characteristics at Low Temperature — Max. 120Hz

U_R (V)	6.3	10	16	25	35	50	63	80	100	160-250	350-450
$Z_{(-25℃)}$ / $Z_{(+20℃)}$	4	4	3	2	2	2	2	3	3	3	6
$Z_{(-40℃)}$ / $Z_{(+20℃)}$	-	-	-	-	-	-	-	-	-	6	10
$Z_{(-55℃)}$ / $Z_{(+20℃)}$	12	8	6	4	3	3	3	3	3	-	-

耐久性 Load life	+105℃，连续施加额定电压 2000 小时，恢复 16 小时后： After applying rated voltage for 2000 hours at 105℃ and then recovery 16 hours:	
	电容量变化率 Capacitance change	±30%初始值以内(160-450V 为±20%) Within ±30% of initial value（±20% of 160-450V）
	损耗角正切值 Tanδ	≤ 300%初始规定值(160-450V 为≤200%) Not more than 300% of specified value (≤200% of 160-450V)
	漏电流 Leakage current	≤ 初始规定值 Not more than specified value
高温贮存 Shelf Life	+105℃,1000 小时贮存后,恢复 16 小时后： After storage for 1000 hours at +105℃ and then recovery 16 hours:	
	电容量变化率 Capacitance change	±30%初始值以内(160-450V 为±20%) Within ±30% of initial value（±20% of 160-450V）
	损耗角正切值 Tanδ	≤ 300%初始规定值(160-450V 为≤200%) Not more than 300% of specified value (≤200% of 160-450V)
	漏电流 Leakage current	≤ 初始规定值 Not more than specified value
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 initial value
	损耗角正切值 Tanδ	≤初始规定值 Not more than specified value
	漏电流 Leakage current	≤ 初始规定值 Not more than specified value

HKWDZ

尺寸图 Dimensional drawings

Fig.1

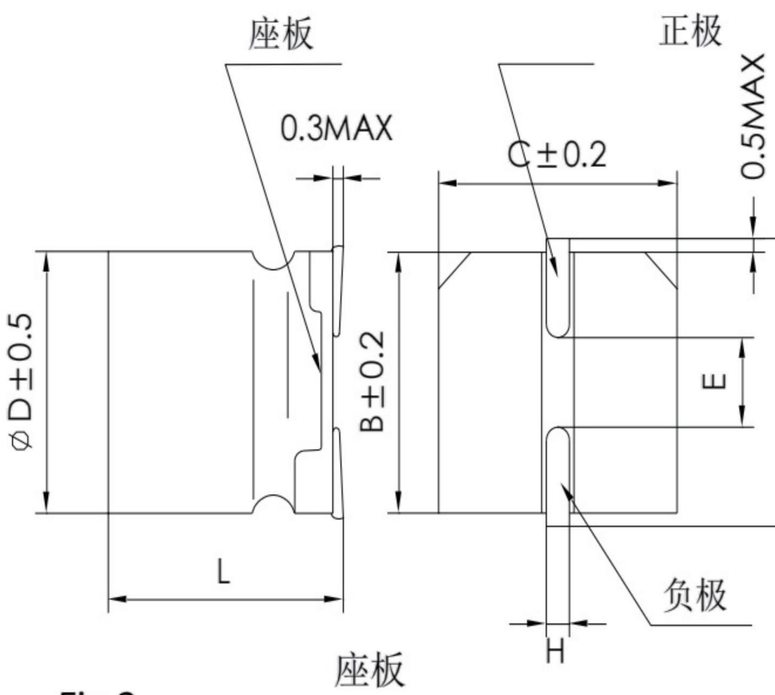
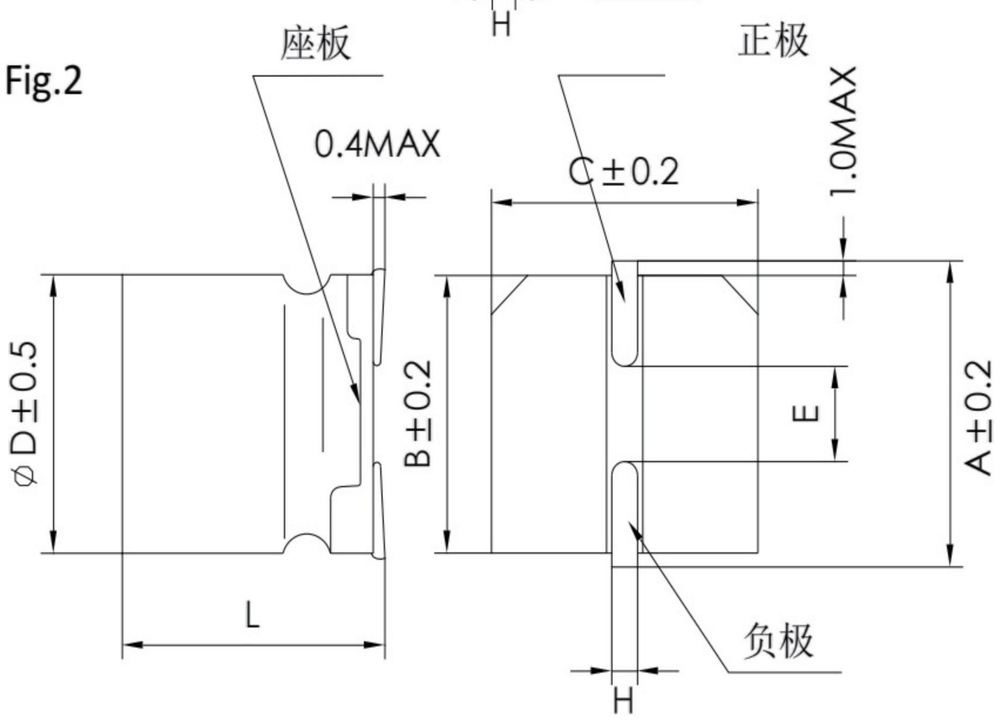
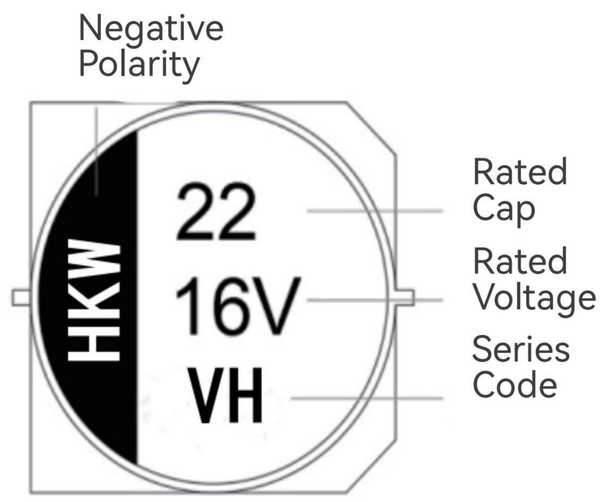


Fig.2

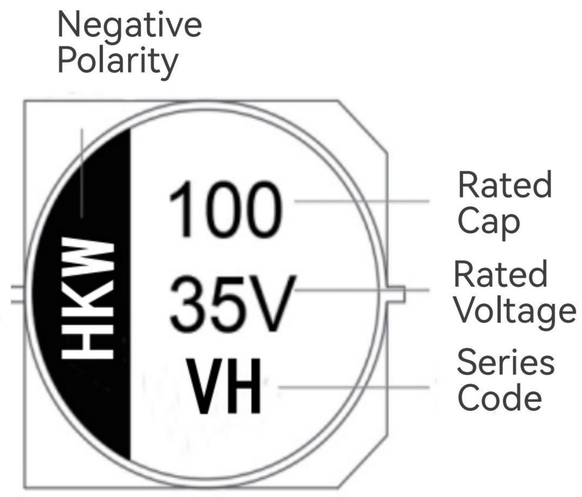


Marking

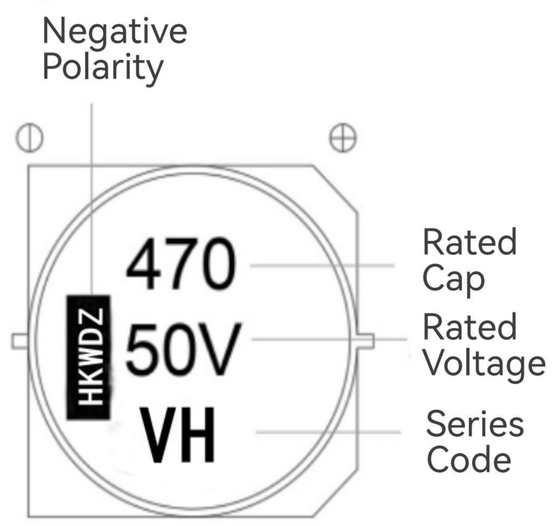
ΦD=4～5mm



ΦD=6.3~10.2mm



ΦD=12.5mm



尺寸表 size table

单位 Unit: mm

ΦD	L	A	B	C	E±0.2	H	Fig.No.
4	5.4±0.2	5.0	4.3	4.3	1.0	0.5 ~ 0.8	1
4	5.8±0.3	5.0	4.3	4.3	1.0		
5	5.4±0.2	6.0	5.3	5.3	1.3		
5	5.8±0.3	6.0	5.3	5.3	1.3		
6.3	5.4±0.2	7.3	6.6	6.6	2.2		
6.3	5.8±0.3	7.3	6.6	6.6	2.2		
6.3	7.7±0.3	7.3	6.6	6.6	2.2		
8	6.5±0.5	8.9	8.3	8.3	2.3		
8	10.5±0.5	9.0	8.3	8.3	3.1	0.8 ~ 1.1	
10	10.5±0.5	11.0	10.3	10.3	4.5		
10	12.5±0.5	11.0	10.3	10.3	4.5		
12.5	13.5±0.5	13.6	13	13	4.5	1.1 ~ 1.4	2
12.5	16±0.5	13.6	13	13	4.5		
16	16.5±0.5	18.0	17	17	6.4		
16	21.5±0.5	18.0	17	17	6.4		
18	16.5±0.5	20.0	19	19	6.4		
18	21.5±0.5	20.0	19	19	6.4		

规格特性表 Table of specifications and characteristics

U_R(V) / CAP(μF)	6.3V		10V		16V		25V		35V	
	ΦDxL mm*mm	$I_{AC,R}$ 120Hz 105℃ mA	ΦDxL mm*mm	$I_{AC,R}$ 120Hz 105℃ mA	ΦDxL mm*mm	$I_{AC,R}$ 120Hz 105℃ mA	ΦDxL mm*mm	$I_{AC,R}$ 120Hz 105℃ mA	ΦDxL mm*mm	$I_{AC,R}$ 120Hz 105℃ mA
4.7									4*5.4	16
10			4*5.4	20	4*5.4	18	4*5.4	13	5*5.4	27
22	4*5.4	22	5*5.4	27	5*5.4	30	5*5.4	23	6.3*5.4	44
33	4*5.4	26	5*5.4	35	5*5.4	32			6.3*5.4	48
47	5*5.4	36	5*5.4	34	6.3*5.4	50	6.3*5.4	48	6.3*7.7	80
100	6.3*5.4	60	6.3*5.4	60	6.3*5.4	60	6.3*7.7	86	8*10.5	240
220	6.3*5.8	90	6.3*5.8	75	6.3*7.7	100	8*10.5	240	10*10.5	430
330	6.3*7.7	105	6.3*7.7	100	8*10.5	290	10*10.5	410	10*10.5	450
470	8*10.5	340	8*10.5	320	8*10.5	320	10*10.5	450	10*12.5	510
680			10*10.5	395	10*10.5	470	10*12.5	550	12.5*13.5	530
1000	10*10.5	495	10*10.5	450	12.5*13.5	560	12.5*13.5	560	12.5*16	820
2200	12.5*13.5	690	12.5*13.5	690	16*16.5	910	16*16.5	910	18*21.5	1080
3300	12.5*16	860	16*16.5	960	16*16.5	960	18*16.5	1200		
4700	16*16.5	1050	16*16.5	1030	18*16.5	1250	18*21.5	1340		
6800	18*16.5	1300	18*16.5	1290						
8200	18*21.5	1500	18*21.5	1480						

U_R(V) / CAP(μF)	50V		63V		80V		100V	
	ΦDxL mm*mm	$I_{AC,R}$ 120Hz 105℃ mA	ΦDxL mm*mm	$I_{AC,R}$ 120Hz 105℃ mA	ΦDxL mm*mm	$I_{AC,R}$ 120Hz 105℃ mA	ΦDxL mm*mm	$I_{AC,R}$ 120Hz 105℃ mA
1	4*5.4	6.3						
2.2	4*5.4	11						
3.3	4*5.4	14						
4.7	5*5.4	19						
10	6.3*5.4	36	6.3*5.4	26	6.3*7.7	35	6.3*7.7	24
22	6.3*5.4	32	6.3*7.7	48	8*10.5	90	8*10.5	100
33	6.3*7.7	60			10*10.5	100	10*10.5	150
47	8*10.5	230	8*10.5	150	10*10.5	150	10*12.5	180
100	8*10.5	230	10*10.5	310	10*12.5	180	12.5*13.5	390
220	10*10.5	375	12.5*13.5	480	16*16.5	470	16*16.5	450
330	12.5*13.5	500	16*16.5	660	18*16.5	600	18*16.5	590
470	12.5*16	580	16*16.5	700	18*21.5	1000	18*21.5	980
1000	18*16.5	1000						