

VL

特点 Features

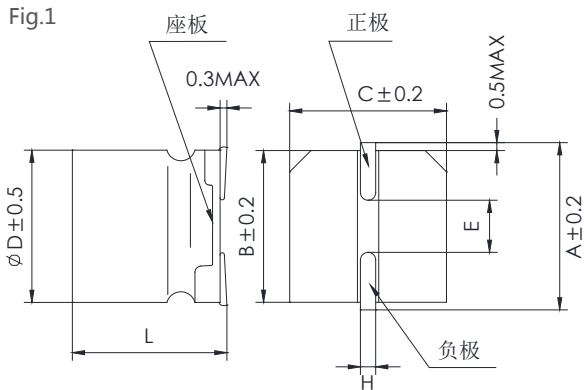
- 保证105°C 3000~5000小时。Endurance 3000~5000h at 105°C.
- 额定电压范围：6.3~50V。Rated Voltage Range:6.3~50V.
- 宽温度、长寿命品。Wide temperature ,Long life Type.
- 满足RoHS。RoHS Compliant.



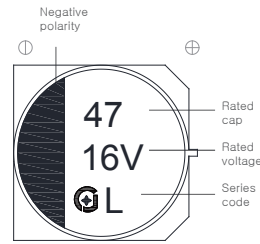
主要技术性能 Specifications

项目 Items	特性 Performance Characteristics																						
类别温度范围 Category Temperature Range	-55°C ~ +105°C																						
额定电压范围 Rated Voltage(U _R)	6.3 ~ 50V																						
标称容量范围 Nominal Capacitance Range(C _R)	4.7~ 3300µF	120Hz, +20°C																					
标称容量允许偏差 Allowed Capacitance Tolerance(C _r)	±20%(M)	120Hz, +20°C																					
漏电流 Leakage Current(I _L)	≤0.01C _R U _R 或者3µA 取较大值 (Whichever is greater)																						
损耗角正切值 Tangent of loss angle(Tanδ)	<table border="1"> <tr> <td>U_R(V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Tanδ</td> <td>0.32</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> </tr> </table>	U _R (V)	6.3	10	16	25	35	50	Tanδ	0.32	0.24	0.20	0.16	0.14	0.12	Max. 120Hz, +20°C							
U _R (V)	6.3	10	16	25	35	50																	
Tanδ	0.32	0.24	0.20	0.16	0.14	0.12																	
低温特性 Characteristics at Low Temperature	<table border="1"> <tr> <td>U_R (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Z_{25°C} / Z_{+20°C}</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z_{-55°C} / Z_{+20°C}</td> <td>10</td> <td>7</td> <td>5</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	U _R (V)	6.3	10	16	25	35	50	Z _{25°C} / Z _{+20°C}	4	3	2	2	2	2	Z _{-55°C} / Z _{+20°C}	10	7	5	3	3	3	Max. 120Hz
U _R (V)	6.3	10	16	25	35	50																	
Z _{25°C} / Z _{+20°C}	4	3	2	2	2	2																	
Z _{-55°C} / Z _{+20°C}	10	7	5	3	3	3																	
耐久性 Load Life	+105°C连续施加额定电压5000小时 (ΦD=4, 5和6.3为3000小时), 恢复16小时后: After applying rated voltage for 5000 hours(3000 hours for ΦD = 4, 5 and 6.3) at 105°C and then recovery 16 hours:																						
	电容量变化率 Capacitance change	±30%初始值以内 Within ±30% of initial value																					
	损耗角正切值 Tanδ	≤ 300%初始规定值 Not more than 300% of specified value																					
	漏电流 Leakage current	≤ 初始规定值 Not more than specified value																					
高温贮存 Shelf Life	+105°C,1000小时贮存后,恢复16小时后: After storage for 1000 hours at +105°C and then recovery 16 hours:																						
	电容量变化率 Capacitance change	±30%初始值以内 Within ±30% of initial value																					
	损耗角正切值 Tanδ	≤ 300%初始规定值 Not more than 300% of specified value																					
	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°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.																						
	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																					

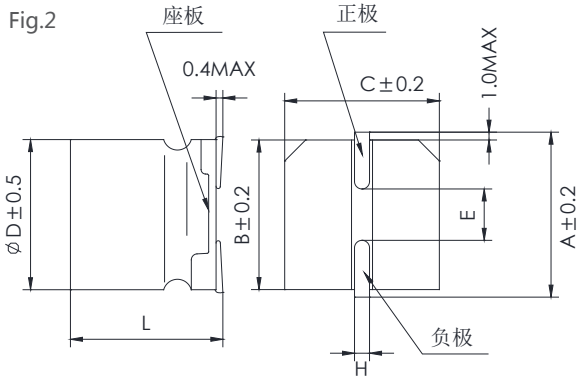
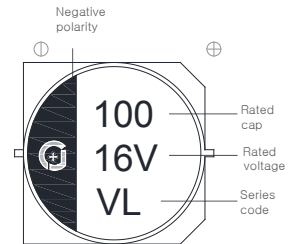
尺寸图 Dimensional drawings



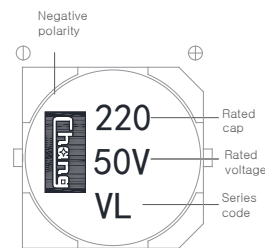
Marking
 $\varnothing D=4 \sim 5\text{mm}$



$\varnothing D=6.3 \sim 10.2\text{mm}$



$\varnothing D=12.5 \sim 18\text{mm}$



尺寸表 Size table

单位 Unit: mm

$\varnothing D$	L	A	B	C	$E \pm 0.2$	H	Fig.No.
4	5.8 ± 0.3	5.0	4.3	4.3	1.0	0.5 ~ 0.8	1
5	5.8 ± 0.3	6.0	5.3	5.3	1.3		
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	0.8 ~ 1.1	
8	10.5 ± 0.5	9.0	8.3	8.3	3.1		
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	1.1 ~ 1.4	2
12.5	13.5 ± 0.5	13.6	13	13	4.5		
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

C _r (μF)	6.3V		10V		16V		25V		35V		50V	
	ΦDxL mm*mm	I _{ACR} 120Hz 105°C mA	ΦDxL mm*mm	I _{ACR} 120Hz 105°C mA	ΦDxL mm*mm	I _{ACR} 120Hz 105°C mA	ΦDxL mm*mm	I _{ACR} 120Hz 105°C mA	ΦDxL mm*mm	I _{ACR} 120Hz 105°C mA	ΦDxL mm*mm	I _{ACR} 120Hz 105°C mA
4.7							4*5.8	16	4*5.8	14	5*5.8	21
10					4*5.8	20	5*5.8	30	5*5.8	30	6.3*5.8	35
22	4*5.8	23	4*5.8	30	5*5.8	35	6.3*5.8	45	6.3*5.8	50	6.3*7.7	52
33	5*5.8	40	5*5.8	40	6.3*5.8	50	6.3*5.8	50	6.3*5.8	45	6.3*7.7	55
47	5*5.8	45	6.3*5.8	55	6.3*5.8	60	6.3*7.7	65	6.3*7.7	65	8*10.5	95
100	6.3*5.8	70	6.3*5.8	58	6.3*7.7	90	6.3*7.7	100	8*10.5	100	10*10.5	99
220	6.3*7.7	105	6.3*7.7	89	8*10.5	250	8*10.5	145	10*10.5	230	12.5*13.5	280
330	8*10.5	245	8*10.5	170	8*10.5	260	10*10.5	250	10*10.5	250	12.5*16	360
470	10*10.5	350	8*10.5	160	10*10.5	310	10*10.5	300	12.5*13.5	330	16*16.5	510
1000	10*10.5	350	10*10.5	310	12.5*13.5	450	12.5*13.5	330	16*16.5	700	18*16.5	780
2200			12.5*13.5	410	12.5*16	550	16*16.5	680	18*21.5	1080		
3300					16*21.5	880	18*21.5	1090				

额定纹波电流频率修正系数
Frequency correction factor for ripple current

Frequency (Hz)	50	120	300	1K	≥10K
Coefficient (kf)	0.70	1.00	1.17	1.36	1.50