

PF

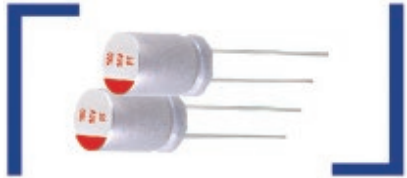
高分子导电型(长寿命产品)—插件型

PF

Series Conductive polymer type(Long life type)lead type

特点 Features

- 径向引线型，以PC为基础的高分子导电型。
This is a lead type using conductive polymer based on PE
- 可适于无铅焊
Lead free-fiow is supported
- ROHS指令已对应完毕。Adapted to the ROHS directive.

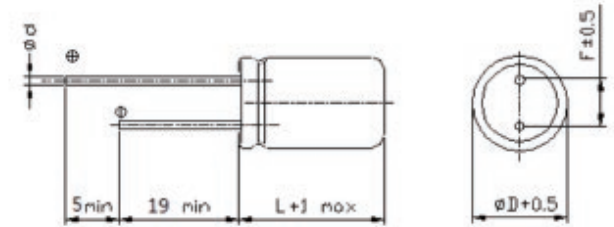


主要技术性能 Specifications

项目 Items	特性 Characteristics			
工作温度范围 Operating Temperature Range	-55℃ ~ +105℃			
额定电压范围 Rated Voltage Range	2.5V ~25V			
标称电容量范围 Nominal Capacitance Range	3.3 ~ 2200μF			
标称电容量允许偏差 Nominal Capacitance Tolerance	±20% (20℃ , 120Hz)			
漏电流 Leakage Current	≤表1规定值 Less than or equal to the value of table1 2分钟 at 20℃, after 2 minutes			
损耗角正切 (tgδ) Dissipation Factor (Max)	20℃, 120Hz	直径 tgδ	Φ6.3~Φ10 0.08	
ESR	≤表1规定值 Less than or equal to the value of table1			
高低温特性比 Characteristics of impedance ratio at high temp. and low temp	要求在100KHZ 20℃ Based the value at 100KHZ. +20℃	-55℃ +105℃	Z/Z20℃ Z/Z20℃	0.75 to 1.25 0.75 to 1.25
耐久性 Load Life	+105℃施加额定电压5000小时后，电容器应满足以下要求 After 5000 hours' application of rated voltage at 105℃, the capacitor shall meet the following requirement:			
	电容量变化率 Capacitance Change	±20%初始值以内 Within ±20% of the initial value (16V: within ±25% of the initial value)		
	损耗角正切 Dissipation Factor	≤ 150%初始规定值 Not more than 150% of the initial specified value		
	阻抗 Equivalent Series Resistance	≤ 150%初始规定值 Not more than 150% of the initial specified value		
	漏电流 Leakage Current	≤ 初始规定值 Not more than the initial specified value		
稳态湿热 Damp heat(Steady state)	60℃, 90~95% RH, 不加电压1000小时 60℃ , 90~95% RH, 1000 hours, No-applied voltage.			
	电容量变化率 Capacitance Change	±20%初始值以内 Within ±20% of the initial value (16V: within ±25% of the initial value)		
	损耗角正切 Dissipation Factor	≤ 150%初始规定值 Not more than 150% of the initial specified value		
	阻抗 Equivalent Series Resistance	≤ 150%初始规定值 Not more than 150% of the initial specified value		
	漏电流 Leakage Current	≤ 初始规定值 Not more than the initial specified value		
耐焊接热 Resistance to Soldering Heat	(VPS) (260℃ X 10s)			
	电容量变化率 Capacitance Change	±10%初始值以内 Within ±10% of the initial value (16V以上: within ±15% of the initial value)		
	损耗角正切 Dissipation Factor	≤ 初始规定值 Not more than the initial specified value		
	阻抗 Equivalent Series Resistance	≤ 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		



尺寸图 Dimensions



尺寸表 Size List

单位Unit:mm			
D	6	8	10
F	2.5	3.5	5
d	0.6	0.6	0.6

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

Size Code	UR (V)	CR (μF)	ESR (mΩmax.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩmax.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)
6.3×9	2.5	470	7	5400	235	8×12	16	330	10	5100	1056
	2.5	560	7	5400	280		16	390	10	5100	1248
	2.5	820	7	5400	410		25	100	24	3900	500
	2.5	1000	7	5400	500		25	220	25	4100	1100
	4	470	7	5400	376	10×12	2.5	1000	7	6100	500
	4	560	7	5400	448		2.5	1200	7	6100	600
	6.3	470	7	4700	592		2.5	1500	7	6100	750
	6.3	560	7	4700	706		2.5	2200	7	6100	1100
	16	220	10	4700	704		4	1000	7	6100	800
	25	47	25	2100	235		4	1200	7	6100	960
8×9	2.5	560	7	6100	280		4	1500	7	6100	1200
	2.5	820	7	6100	410		6.3	820	7	6100	1033
	2.5	1000	7	6100	500		6.3	1000	7	6100	1260
	2.5	1200	7	6100	600		10	560	10	5400	1120
	4	470	7	5900	376		10	680	10	5400	1360
	4	560	7	6100	448		16	330	10	5400	1056
	4	820	7	6100	656		16	390	10	5400	1248
	4	1000	7	6100	800		16	470	10	5400	1504
	6.3	560	7	5700	706		16	560	10	5400	1792
	6.3	820	7	5700	1033		20	150	25	3900	600
8×12	16	270	10	5100	864		20	220	25	3900	880
	16	330	10	5100	1056		20	270	25	3900	1080
	2.5	1000	7	6100	500		20	330	25	3900	1320
	2.5	1200	7	6100	600		20	390	25	3900	1560
	6.3	820	7	6100	1033		20	470	25	3900	1880
	6.3	1000	7	6100	1260		25	150	25	3900	750
	10	390	10	5400	780		25	220	25	3900	1100
	16	270	10	5100	864						

ESR(100KHZ to 300KHZ)

如客户需要的规格尺寸可协调设计定制

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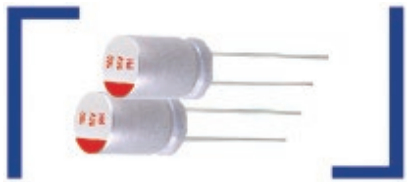
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高分子导电型(高电压品)——插件型

Series Conductive polymer type(Higt working voltage type)-----Radial lead type

特点 Features

- 径向引线型。
This is a lead type
- 可适于无铅焊
Lead free-fiow is supported
- ROHS指令已对应完毕。Adapted to the ROHS directive

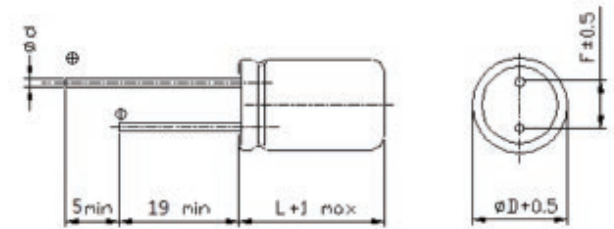


主要技术性能 Specifications

项目 Items	特性 Characteristics			
工作温度范围 Operating Temperature Range	-55℃ ~ +105℃			
额定电压范围 Rated Voltage Range	35V ~100V			
标称电容量范围 Nominal Capacitance Range	10~330μF			
标称电容量允许偏差 Nominal Capacitance Tolerance	±20% (20℃ , 120Hz)			
漏电流 Leakage Current	≤表1规定值 Less than or equal to the value of table1 2分钟 at 20℃, after 2 minutes			
损耗角正切 (tgδ) Dissipation Factor (Max)	20℃, 120Hz	直径 tgδ	Φ5 0.12	Φ6.3~Φ10 0.10
ESR	≤表1规定值 Less than or equal to the value of table1			
高低温特性比 Characteristics of impedance ratio at high temp. and low temp	要求在100KHZ 20℃ Based the value at 100KHZ. +20℃	-55℃ +105℃	Z/Z20℃ Z/Z20℃	0.75 to 1.25 0.75 to 1.25
耐久性 Load Life	+105℃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℃, the capacitor shall meet the following requirement			
	电容量变化率 Capacitance Change	±20%初始值以内 Within ±20% of the initial value (16V: within ±25% of the initial value)		
	损耗角正切 Dissipation Factor	≤ 150%初始规定值 Not more than 150% of the initial specified value		
	阻抗 Equivalent Series Resistance	≤ 150%初始规定值 Not more than 150% of the initial specified value		
	漏电流 Leakage Current	≤ 初始规定值 Not more than the initial specified value		
稳态湿热 Damp heat(Steady state)	60℃, 90~95% RH, 不加电压1000小时 60℃ , 90~95% RH, 1000 hours, No-applied voltage.			
	电容量变化率 Capacitance Change	±20%初始值以内 Within ±20% of the initial value (16V: within ±25% of the initial value)		
	损耗角正切 Dissipation Factor	≤ 150%初始规定值 Not more than 150% of the initial specified value		
	阻抗 Equivalent Series Resistance	≤ 150%初始规定值 Not more than 150% of the initial specified value		
	漏电流 Leakage Current	≤ 初始规定值 Not more than the initial specified value		
耐焊接热 Resistance to Soldering Heat	(VPS) (260℃ X 10s)			
	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 Dissipation Factor	≤ 初始规定值 Not more than the initial specified value		
	阻抗 Equivalent Series Resistance	≤ 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		



尺寸图 Dimensions



尺寸表 Size List

单位Unit:mm

D	5	6	8	10
F	2.0	2.5	3.5	5
d	0.5	0.6	0.6	0.6

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

Size Code	UR (V)	CR (μF)	ESR (mΩmax.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩmax.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)
5×9	35	27	35	1900	189	8×8	63	39	35	2000	491.4
		33	35	1900	231			47	35	2000	592.2
		39	35	1900	273			56	35	2000	705.6
	50	47	35	1900	329		100	15	35	1700	300
		15	35	1700	150			22	35	1700	440
		22	35	1700	220			27	35	1700	570
6.3×8	35	27	35	1700	270	8×12	35	100	30	2900	700
		56	30	1900	392			220	30	2900	1540
	50	68	30	1900	476		50	68	30	2700	680
		33	30	1700	330			100	30	2700	1000
		39	30	1700	390		63	56	30	2700	705.6
		47	30	1700	470			68	30	2700	856.8
	63	22	35	1700	277.2		100	27	30	2100	540
		27	35	1700	340.2			33	30	2100	660
		33	35	1700	415.8		35	150	30	3800	1050
	35	82	30	1900	576			220	30	3800	1540
		100	30	1900	700			270	30	3800	1890
		58	30	1700	580			330	30	3800	2310
6.3×9	63	33	35	1700	415.8	10×12	50	100	30	3100	1000
		39	35	1700	491.4			220	30	3100	2200
	35	82	30	2600	574		63	68	30	2900	856.8
		100	30	2600	700			100	30	2900	1260
8×8	50	47	30	2600	470		100	39	30	2100	780
		68	30	2600	680			47	30	2100	940
	63	33	35	2000	415.8			56	30	2100	1120

ESR(100KHZ to 300KHZ)

PH

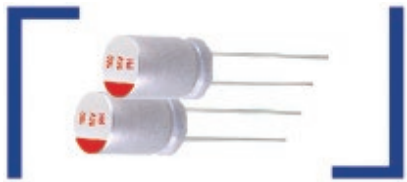
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高分子导电型(高电压品)——插件型

Series Conductive polymer type(Higt working voltage type)-----Radial lead type

特点 Features

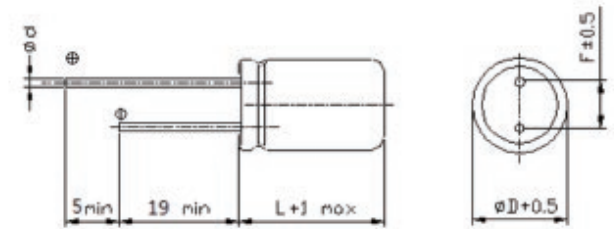
- 径向引线型。
This is a lead type
- 可适于无铅焊
Lead free-fiow is supported
- ROHS指令已对应完毕。Adapted to the ROHS directive



主要技术性能 Specifications

项目 Items	特性 Characteristics			
工作温度范围 Operating Temperature Range	-55℃ ~ +105℃			
额定电压范围 Rated Voltage Range	35V ~100V			
标称电容量范围 Nominal Capacitance Range	10~330μF			
标称电容量允许偏差 Nominal Capacitance Tolerance	±20% (20℃ , 120Hz)			
漏电流 Leakage Current	≤表1规定值 Less than or equal to the value of table1 2分钟 at 20℃, after 2 minutes			
损耗角正切 (tgδ) Dissipation Factor (Max)	20℃, 120Hz	直径 tgδ	Φ5 0.12	Φ6.3~Φ10 0.10
ESR	≤表1规定值 Less than or equal to the value of table1			
高低温特性比 Characteristics of impedance ratio at high temp. and low temp	要求在100KHZ 20℃ Based the value at 100KHZ. +20℃	-55℃ +105℃	Z/Z20℃ Z/Z20℃	0.75 to 1.25 0.75 to 1.25
耐久性 Load Life	+105℃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℃, the capacitor shall meet the following requirement			
	电容量变化率 Capacitance Change	±20%初始值以内 Within ±20% of the initial value (16V: within ±25% of the initial value)		
	损耗角正切 Dissipation Factor	≤ 150%初始规定值 Not more than 150% of the initial specified value		
	阻抗 Equivalent Series Resistance	≤ 150%初始规定值 Not more than 150% of the initial specified value		
	漏电流 Leakage Current	≤ 初始规定值 Not more than the initial specified value		
稳态湿热 Damp heat(Steady state)	60℃, 90~95% RH, 不加电压1000小时 60℃ , 90~95% RH, 1000 hours, No-applied voltage.			
	电容量变化率 Capacitance Change	±20%初始值以内 Within ±20% of the initial value (16V: within ±25% of the initial value)		
	损耗角正切 Dissipation Factor	≤ 150%初始规定值 Not more than 150% of the initial specified value		
	阻抗 Equivalent Series Resistance	≤ 150%初始规定值 Not more than 150% of the initial specified value		
	漏电流 Leakage Current	≤ 初始规定值 Not more than the initial specified value		
耐焊接热 Resistance to Soldering Heat	(VPS) (260℃ X 10s)			
	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 Dissipation Factor	≤ 初始规定值 Not more than the initial specified value		
	阻抗 Equivalent Series Resistance	≤ 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		

尺寸图 Dimensions



尺寸表 Size List

单位Unit:mm

D	5	6	8	10
F	2.0	2.5	3.5	5
d	0.5	0.6	0.6	0.6

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

Size Code	UR (V)	CR (μF)	ESR (mΩmax.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩmax.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)
5×9	35	27	35	1900	189	8×8	63	39	35	2000	491.4
		33	35	1900	231			47	35	2000	592.2
		39	35	1900	273			56	35	2000	705.6
	50	47	35	1900	329		100	15	35	1700	300
		15	35	1700	150			22	35	1700	440
		22	35	1700	220			27	35	1700	570
6.3×8	35	27	35	1700	270	8×12	35	100	30	2900	700
		56	30	1900	392			220	30	2900	1540
	50	68	30	1900	476		50	68	30	2700	680
		33	30	1700	330			100	30	2700	1000
		39	30	1700	390		63	56	30	2700	705.6
		47	30	1700	470			68	30	2700	856.8
	63	22	35	1700	277.2		100	27	30	2100	540
		27	35	1700	340.2			33	30	2100	660
		33	35	1700	415.8		35	150	30	3800	1050
	35	82	30	1900	576			220	30	3800	1540
		100	30	1900	700			270	30	3800	1890
		58	30	1700	580			330	30	3800	2310
6.3×9	63	33	35	1700	415.8	10×12	50	100	30	3100	1000
		39	35	1700	491.4			220	30	3100	2200
	35	82	30	2600	574		63	68	30	2900	856.8
		100	30	2600	700			100	30	2900	1260
8×8	50	47	30	2600	470		100	39	30	2100	780
		68	30	2600	680			47	30	2100	940
	63	33	35	2000	415.8			56	30	2100	1120

ESR(100KHZ to 300KHZ)

VS

型片式铝电解电容

VS

Series Chip Type Aluminum Electrolytic Capacitors

特点 Features

- 产品直径 Case diameter: Φ 4mm – Φ 10mm.
- 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.
- ROHS指令已对应完毕。 Adapted to the ROHS directive.

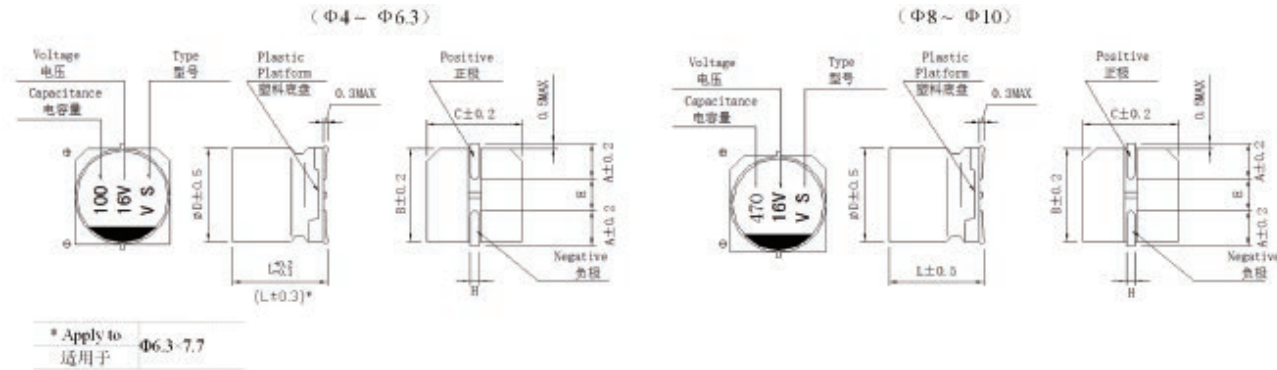


主要技术性能 Specifications

项目 Items	特性 Performance Characteristics									
工作温度范围 Operating Temperature Range	-40℃ ~ 85℃									
额定电压范围 Rated Voltage Range	6.3V ~ 100V									
标称容量范围 Nominal Capacitance Range	0.1 ~ 1500μF									
标称容量允许偏差 Nominal Capacitance Tolerance	±20% (20℃ , 120Hz)									
漏电流 Leakage Current	I≤0.01CRVR or 3(μA), 取较大者 (2分钟) CR : 标称容量 (μF) UR : 额定电压 (V) I≤0.01CRVR or 3(μA) Whichever is greater(at 20℃, After 2 minutes) CR: Nominal Capacitance (μF) UR: Rated voltages (V)									
损耗角正切 (tgδ) Dissipation Factor (Max) 20℃, 120Hz	U _R (V)	6.3	10	16	25	35	50	63	100	
	tgδ	0.28	0.24	0.20	0.16	0.14	0.12	0.12	0.10	
耐久性 Load Life	+85℃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 85℃, the capacitor shall meet the following requirement:									
	电容量变化率 Capacitance Change			±20%初始值以内 Within ±20% of the initial value						
	损耗角正切 Dissipation Factor			≤ 200%初始规定值 Not more than 200% 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	+85℃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 +85℃, 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	100
	Z(-25℃)/Z(+20℃)	< Φ8	4	3	2	2	2	2	2	2
		≥ Φ8	5	4	3	2	2	2	2	2
	Z(-40℃)/Z(+20℃)	< Φ8	8	8	4	4	3	3	3	3
		≥ Φ8	10	8	6	4	3	3	3	3
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 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



	(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	1.8	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		63		100	
	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA
0.1											4×5.4	3.2				
0.22											4×5.4	4.7				
0.33											4×5.4	5.7				
0.47											4×5.4	6.8				
1.0											4×5.4	10				
2.2											4×5.4	15				
3.3											4×5.4	18				
4.7							4×5.4	22	4×5.4	20	4×5.4	24			6.3×7.7	40
											5×5.4	25				
10					4×5.4	26	4×5.4	24	4×5.4	24	5×5.4	41	6.3×7.7	50	8×10.5	77
							5×5.4	32	5×5.4	34	6.3×5.4	43				
22	4×5.4	31	4×5.4	30	4×5.4	30	5×5.4	38	5×5.4	39	6.3×5.4	71	6.3×7.7	96	8×10.5	100
			5×5.4	39	5×5.4	44	6.3×5.4	55	6.3×5.4	59						
33	4×5.4	31	4×5.4	34	5×5.4	44	5×5.4	46	6.3×5.4	65	6.3×7.7	94	8×10.5	117	10×10.5	130
	5×5.4	44	5×5.4	48	6.3×5.4	63	6.3×5.4	67								
47	4×5.4	40	5×5.4	47	5×5.4	52	6.3×5.4	70	6.3×7.7	94	6.3×7.7	105	10×10.5	140		
	5×5.4	52	6.3×5.4	67	6.3×5.4	75					8×10.5	140				
100	5×5.4	47	5×5.4	54	6.3×5.4	103	6.3×7.7	143	6.3×7.7	132	8×10.5	200				
	6.3×5.4	89	6.3×5.4	98					8×10.5	175	10×10.5	250				
220	6.3×5.4	91	6.3×7.7	173	6.3×7.7	162	8×10.5	230	8×10.5	200	10×10.5	320				
			8×6.5	250	8×10.5	280	10×10.5	310	10×10.5	310						
330	6.3×7.7	188	8×10.5	390	8×10.5	320	8×10.5	270	10×10.5	360						
							10×10.5	340								
470	8×10.5	380	8×10.5	390	8×10.5	350	10×10.5	380								
					10×10.5	420										
1000	8×10.5	370	10×10.5	580												
	10×10.5	700														
1500	10×10.5	750														

I~ = Rated ripple current (mA) (85°C, 120Hz) I~ = 额定纹波电流 (mA) (85°C , 120Hz)

VS

型片式铝电解电容

VS

Series Chip Type Aluminum Electrolytic Capacitors

特点 Features

- 产品直径 Case diameter: Φ 4mm – Φ 10mm.
- 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.
- ROHS指令已对应完毕。Adapted to the ROHS directive.

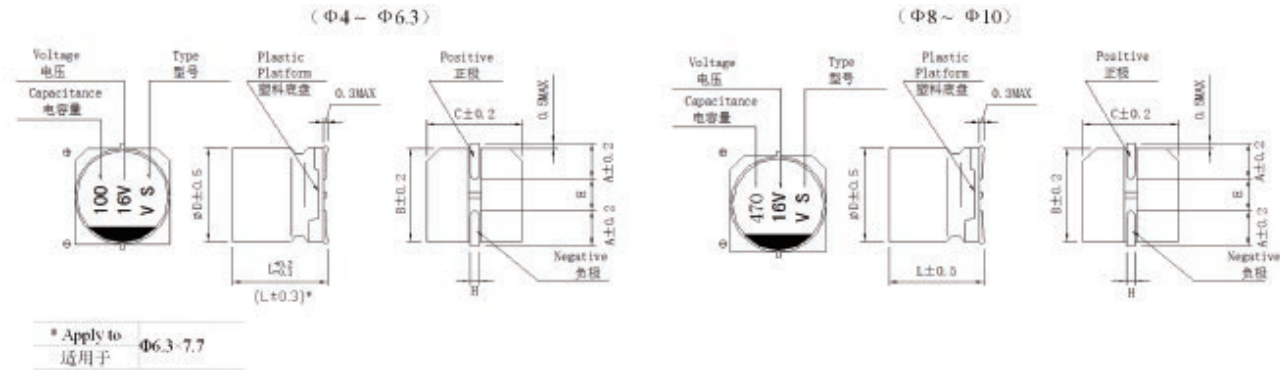


主要技术性能 Specifications

项目 Items	特性 Performance Characteristics									
工作温度范围 Operating Temperature Range	-40℃ ~ 85℃									
额定电压范围 Rated Voltage Range	6.3V ~ 100V									
标称电容量范围 Nominal Capacitance Range	0.1 ~ 1500μF									
标称电容量允许偏差 Nominal Capacitance Tolerance	±20% (20℃ , 120Hz)									
漏电流 Leakage Current	I≤0.01CRVR or 3(μA), 取较大者 (2分钟) CR : 标称电容量 (μF) UR : 额定电压 (V) I≤0.01CRVR or 3(μA) Whichever is greater(at 20℃, After 2 minutes) CR: Nominal Capacitance (μF) UR: Rated voltages (V)									
损耗角正切 (tgδ) Dissipation Factor (Max) 20℃, 120Hz	U _R (V)	6.3	10	16	25	35	50	63	100	
	tgδ	0.28	0.24	0.20	0.16	0.14	0.12	0.12	0.10	
耐久性 Load Life	+85℃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 85℃, the capacitor shall meet the following requirement:									
	电容量变化率 Capacitance Change			±20%初始值以内 Within ±20% of the initial value						
	损耗角正切 Dissipation Factor			≤ 200%初始规定值 Not more than 200% 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	+85℃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 +85℃, 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	100
	Z(-25℃)/Z(+20℃)	< Φ8	4	3	2	2	2	2	2	2
		≥ Φ8	5	4	3	2	2	2	2	2
	Z(-40℃)/Z(+20℃)	< Φ8	8	8	4	4	3	3	3	3
		≥ Φ8	10	8	6	4	3	3	3	3
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 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



	(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	1.8	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		63		100	
	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA
0.1											4×5.4	3.2				
0.22											4×5.4	4.7				
0.33											4×5.4	5.7				
0.47											4×5.4	6.8				
1.0											4×5.4	10				
2.2											4×5.4	15				
3.3											4×5.4	18				
4.7							4×5.4	22	4×5.4	20	4×5.4	24			6.3×7.7	40
10					4×5.4	26	4×5.4	24	4×5.4	24	5×5.4	41	6.3×7.7	50	8×10.5	77
22	4×5.4	31	4×5.4	30	4×5.4	30	5×5.4	38	5×5.4	39	6.3×5.4	71	6.3×7.7	96	8×10.5	100
33	4×5.4	31	4×5.4	34	5×5.4	44	5×5.4	46	6.3×5.4	65	6.3×7.7	94	8×10.5	117	10×10.5	130
47	4×5.4	40	5×5.4	48	6.3×5.4	63	6.3×5.4	67	6.3×7.7	94	6.3×7.7	105	10×10.5	140		
100	5×5.4	47	5×5.4	54	6.3×5.4	75	6.3×5.4	70	6.3×7.7	132	8×10.5	200				
220	6.3×5.4	91	6.3×5.4	98	6.3×5.4	103	6.3×7.7	143	8×10.5	175	10×10.5	250				
330	6.3×7.7	188	8×10.5	390	8×10.5	320	8×10.5	270	10×10.5	360						
470	8×10.5	380	8×10.5	390	8×10.5	350	10×10.5	380								
1000	8×10.5	370	10×10.5	580												
1500	10×10.5	750														

I~ = Rated ripple current (mA) (85°C, 120Hz) I~ = 额定纹波电流 (mA) (85°C , 120Hz)

VT

型片式铝电解电容

VT

Series Chip Type Aluminum Electrolytic Capacitors

特点 Features

- 产品直径 Case diameter: Φ 4mm – Φ 10mm.
- 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℃) Operating over wide temperature range.
- ROHS指令已对应完毕。Adapted to the ROHS directive.

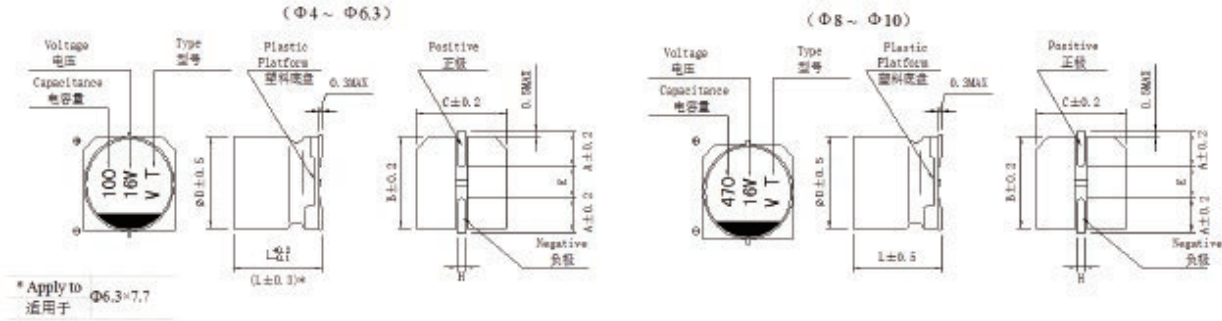


主要技术性能 Specifications

项目 Items	特性 Performance Characteristics							
工作温度范围 Operating Temperature Range	-40℃ ~ +105℃							
额定电压范围 Rated Voltage Range	6.3V ~ 50V							
标称电容量范围 Nominal Capacitance Range	0.1 ~ 1500μF							
标称电容量允许偏差 Capacitance Tolerance	±20% (20℃ , 120Hz)							
漏电流 Leakage Current	I≤0.01CRVR or 3(μA), 取较大者 (2分钟) CR : 标称电容量 (μF) UR : 额定电压 (V) I≤0.01CRVR or 3(μA) Whichever is greater(at 20℃,After 2 minutes) CR: Nominal Capacitance (μF) UR: Rated voltages (V)							
损耗角正切 (tgδ) Dissipation Factor (Max) 20℃, 120Hz	U _R (V)	4	6.3	10	16	25	35	50
	tgδ	0.35	0.28	0.24	0.20	0.16	0.14	0.12
耐久性 Load Life	+105℃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℃, the capacitor shall meet the following requirement:							
	电容量变化率 Capacitance Change		±20%初始值以内 Within ±20% of the initial value					
	损耗角正切 Dissipation Factor		≤ 200%初始规定值 Not more than 200% 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	+105℃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℃, 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)	4	6.3	10	16	25	35	50
	Z(-25℃)/Z(+20℃)	7	4	3	2	2	2	2
	Z(-40℃)/Z(+20℃)	15	8	6	4	4	3	3
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 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



	(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	1.8	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	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA	D×L mm	I~ mA
0.1											4×5.4	2.3
0.22											4×5.4	3.4
0.33											4×5.4	4.1
0.47											4×5.4	5
1.0											4×5.4	10
2.2											4×5.4	16
3.3									4×5.4	13	4×5.4	16
4.7							4×5.4	22	4×5.4	22	5×5.4	23
10					4×5.4	28	5×5.4	28	5×5.4	30	6.3×5.4	32
22	4×5.4	29	5×5.4	30	5×5.4	39	6.3×5.4	55	6.3×5.4	60	6.3×7.7	51
33	5×5.4	34	5×5.4	34	5×5.4	35	6.3×5.4	65	8×6.5	84	6.3×7.7	70
47	5×5.4	46	6.3×5.4	48	6.3×5.4	70	6.3×5.4	70	6.3×7.7	80	6.3×7.7	80
100	6.3×5.4	71	6.3×5.4	69	6.3×5.4	70	6.3×7.7	100	8×10.5	296	8×10.5	230
220	6.3×7.7	120	6.3×7.7	120	6.3×7.7	120	8×10.5	320	10×10.5	435	10×10.5	375
330	8×10.5	290	8×10.5	305	8×10.5	425	10×10.5	450	10×10.5	450		
470	8×10.5	330	8×10.5	340	8×10.5	340	10×10.5	490				
1000	8×10.5	340	10×10.5	410	10×10.5	450						
1500	10×10.5	475										

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

额定纹波电流的频率系数
Frequency Coefficient of Ripple Current

Frequency 频率	50Hz	120Hz	300Hz	1KHz	10K~100Hz
Coefficient 系数	0.70	1.00	1.17	1.36	1.50

项目 Items	特性 Performance Characteristics											
工作温度范围 Operating Temperature Range	-55℃ ~+105℃(6.3-100V),-40℃ ~+105℃(160-400V)											
额定电压范围 Rated Voltage Range	6.3V ~ 400V											
标称容量范围 Nominal Capacitance Range	1 ~ 1000μF											
标称容量允许偏差 Capacitance Tolerance	±20% (20℃ , 120Hz)											
漏电流 Leakage Current	6.3to100V						160-400V					
	I≤0.01CRVR or 3(μA) , 取较大者 (2分钟) CR : 标称容量 (μ F) UR额定电压 (V) I≤0.01CRVR or 3(μA) Whichever is greater(at 20℃, after 2 minutes)						I≤0.04 CRVR +100(μA) (20℃ , 1分钟) CR : 标称容量 (μ F) UR额定电压 (V) I≤0.04CRVR + 100(μA) Whichever is greater(at 20℃, after 1 minutes)					
损耗角正切 (tgδ) Dissipation Factor (Max) 20℃, 120Hz	UR (V)	6.3	10	16	25	35	50	63	80	100	120-250	350-400
	tgδ	0.32	0.24	0.20	0.16	0.14	0.12	0.12	0.11	0.10	0.15	0.20
耐久性 Load Life	+105℃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℃, the capacitor shall meet the following requirement:											
	电容量变化率 Capacitance Change			±30%初始值以内(160-400V为±20%) Within ±30% of the initial value (±20% of 160-400V)								
	损耗角正切 Dissipation Factor			≤ 300%初始规定值(160-400V为≤200%) Not more than 300% of the initial specified value(≤200% of 160-400V)								
	漏电流 Leakage Current			≤ 初始规定值 Not more than the initial specified value								
高温贮存 Shelf Life	+105℃贮存1000小时后, 加额定工作电压30分钟,电容器应满足以上耐久性要求 After storage for 1000 hours at +105℃, UR to be applied for 30 minutes ,the capacitors shall meet the requirement of load life above											
低温特性 Low Temperature Stability 阻抗比 Impedance Ratio (120Hz)	UR (V)	6.3	10	16	25	35	50	63	80	100	160-250	350-400
	Z(-25℃)/Z(+20℃)	4	4	3	3	3	2	3	4	4	-	-
	Z(-40℃)/Z(+20℃)	-	-	-	-	-	-	-	-	-	6	10
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 (tgδ) 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								

	4 × 5.4	5 × 5.4	6.3 × 5.4	6.3 × 7.7	8 × 6.5	8 × 10.5	10 × 10.5	8 × 12.5	10 × 12.5
A	1.8	2.1	2.4	2.4	2.9	2.9	3.2	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	8.3	10.3
E	1.0	1.3	2.2	2.2	2.3	3.1	4.5	3.1	4.5
L	5.4	5.4	5.4	7.7	6.5	10.5	10.5	12.5	12.5
H	0.5 ~ 0.8					0.8 ~ 1.1			

注：160-400产品L值公差为±1

电压WV (Vdc)	容量Ca (μA)	产品尺寸	纹波电流	电压WV (Vdc)	容量Ca (μA)	产品尺寸	纹波电流	电压WV (Vdc)	容量Ca (μA)	产品尺寸	纹波电流	电压WV (Vdc)	容量Ca (μA)	产品尺寸	纹波电流
6.3	22	4×5.4	22	16	10	4×5.4	18	35	47	6.3×7.7	80	50	10	6.3×5.4	36
	33	4×5.4	26		22	5×5.4	30		100	8×10.5	230		22	6.3×5.4	32
	47	5×5.4	36		33	5×5.4	32		220	10×10.5	260		33	6.3×7.7	60
	100	5×5.4	38		47	6.3×5.4	50		330	10×10.5	450		47	8×10.5	210
	220	6.3×5.4	86		100	6.3×5.4	60		470	10×12.5	500		100	8×10.5	230
	330	6.3×7.7	105		220	6.3×7.7	100		560	10×12.5	510		220	10×10.5	375
	470	8×10.5	340		330	8×10.5	290	63	10	6.3×5.4	26	80	22	8×10.5	100
	680	8×10.5	350		470	8×10.5	320		22	6.3×7.7	48		33	8×10.5	140
	1000	10×10.5	495		680	10×10.5	470		33	8×10.5	170		47	10×10.5	150
	1500	10×12.5	560		1000	10×12.5	510		47	8×10.5	170		100	10×12.5	180
	2200	10×12.5	580		1200	10×12.5	520		100	10×10.5	310				
	10	4×5.4	20		10	5×5.4	21		150	10×12.5	330				
10	22	5×5.4	27	25	22	5×5.4	23	100	10	6.3×7.7	24	160	10	8×10.5	57
	33	5×5.4	35		47	6.3×5.4	38		22	8×10.5	100		15	8×12.5	65
	47	5×5.4	34		100	6.3×7.7	66		33	10×10.5	150		22	10×12.5	80
	100	6.3×5.4	60		220	8×10.5	240		47	10×12.5	180		10	10×10.5	75
	220	6.3×7.7	105		330	10×10.5	410		56	10×12.5	180		15	10×12.5	81
	330	8×10.5	290		470	10×10.5	450						22	10×12.5	83
	470	8×10.5	320		560	10×12.5	500	250	3.3	8×10.5	36	400	2.2	8×10.5	29
	680	10×10.5	395		680	10×12.5	510		4.7	8×10.5	42		3.3	8×10.5	30
	1000	10×10.5	450						6.8	8×10.5	64		4.7	8×12.5	40
	1500	10×12.5	520						8.2	10×10.5	70		5.6	10×12.5	51
					10	10×10.5	72						6.8	10×12.5	52
													8.2	10×12.5	55
35	4.7	4×5.4	16	50	1	4×5.4	6.3					10	10×12.5	60	
	10	5×5.4	27		2.2	4×5.4	11								
	22	6.3×5.4	44		3.3	4×5.4	14								
	33	6.3×5.4	48		4.7	5×5.4	19								

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

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