

PC 高分子导电型(低阻抗品)——插件型

PC Conductive polymer type(Low ESR type)-----Radial type

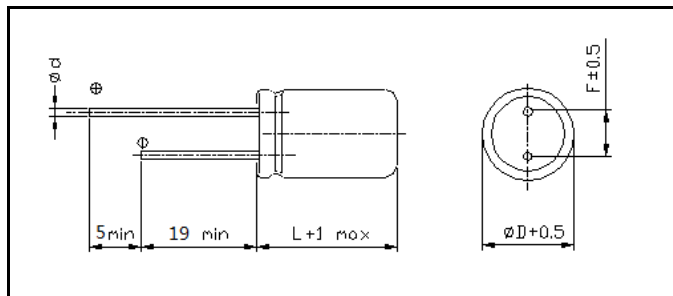
特点 Features

- 径向引线型，以 PE 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-flow 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 ~2 5V		
标称容量范围 Nominal Capacitance Range	3.3 ~ 2200μF		
标称容量允许偏差 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	Φ4~Φ5 0.10
			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(Φ4&Φ5 或制品高度在 6mm 以下的产品寿命：2000 小时)： After 5000 hours' application of rated voltage at 105℃, the capacitor shall meet the following requirement: (Load life time of Φ4 & Φ5 or the height not more than 6mm: 2000 hours)		
	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



单位 Unit:mm

D	4	5	6	8	10
F	1.5	2.0	2.5	3.5	5
d	0.45	0.5	0.6	0.6	0.6

尺寸表 Size list

■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 (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	
4×5.4	16	3.3	75	1020	100	6.3×5.4	4	330	15	3300	264	
	10	4.7	75	1020	100		2.5	220	15	3300	110	
	10	6.8	75	1020	100		2.5	330	15	3300	165	
	10	10	75	1020	100		2.5	390	15	3300	195	
	10	15	75	1020	100	6.3×9	16	220	10	4700	704	
	6.3	22	75	1020	100		16	270	10	4700	864	
	4	33	75	1020	100		6.3	470	7	4700	592	
5×5.4	20	10	75	1440	100		6.3	560	7	4700	706	
	16	15	75	1440	100		4	470	7	5400	376	
	16	22	75	1440	100		4	560	7	5400	448	
	10	33	75	1500	100		2.5	470	7	5400	235	
	6.3	47	75	1500	100	2.5	560	7	5400	280		
	4	39	75	1500	100	2.5	820	7	5400	410		
	4	68	75	1800	100	2.5	1000	7	5400	500		
5×8	6.3	270	15	2500	340	8×7	25	10	24	3100	100	
5×11	16	100	24	2500	320		20	33	24	3100	132	
6.3×5.4	25	6.8	24	1800	100		20	47	24	3100	188	
	25	27	24	2400	135		16	56	12	4700	179	
	25	33	24	2400	165		16	82	12	4700	262	
	20	22	24	2500	100		16	270	12	4700	864	
	20	27	24	2500	108		10	120	12	4700	240	
	16	39	24	1820	125		10	150	12	4700	300	
	16	47	24	2400	150		6.3	220	7	4700	277	
	16	68	24	2400	218		4	150	7	4700	120	
	16	82	24	2400	262		4	330	7	5400	264	
	16	100	24	2400	320		4	470	7	5400	376	
	10	47	15	1800	100		4	560	7	5400	448	
	10	56	15	1800	112		2.5	470	7	5400	235	
	10	120	15	2400	240		2.5	560	7	5400	280	
	6.3	82	15	1800	103		2.5	820	7	5400	410	
	6.3	100	15	1950	126		2.5	1000	7	5400	500	
	6.3	120	15	2780	151		8×9	16	270	10	5100	864
	6.3	220	15	3100	277			16	330	10	5100	1056
	4	150	15	1950	120			6.3	470	7	5400	592
	4	220	15	2390	176	6.3		560	7	5700	706	

Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)
8×9	6.3	820	7	5700	1033	10×10	25	56	24	3800	280
	4	470	7	5900	376		25	100	24	3900	500
	4	560	7	6100	448		25	150	24	4320	750
	4	820	7	6100	656		20	150	24	4700	600
	4	1000	7	6100	800		20	220	24	4700	880
	2.5	470	7	6100	235		20	270	24	4700	1080
	2.5	560	7	6100	280		20	330	24	4700	1320
	2.5	820	7	6100	410		20	390	24	4700	1560
	2.5	1000	7	6100	500		16	330	10	4720	1056
	2.5	1200	7	6100	600		16	390	10	5400	1248
8×10	25	33	24	2980	165	16	470	10	5400	1504	
	20	100	24	3320	400	10	470	10	5400	940	
	16	180	10	5140	576	10	560	10	5400	1120	
	16	220	10	5100	704	6.3	820	7	6100	1033	
	16	270	10	5100	864	4	1000	7	6100	800	
	16	330	10	5100	1056	4	1200	7	6100	960	
	10	330	10	5100	660	2.5	1000	7	6100	500	
	6.3	470	7	5700	592	2.5	1200	7	6100	600	
	6.3	560	7	6100	706	2.5	1500	7	6100	750	
	6.3	820	7	6100	1033	25	150	24	3900	750	
	4	560	7	6100	448	25	220	24	3900	1100	
	4	680	7	6100	544	20	150	24	3900	600	
	4	820	7	6100	656	20	220	24	3900	880	
	4	1000	7	6100	800	20	270	24	3900	1080	
	2.5	680	7	6100	340	20	330	24	3900	1320	
	2.5	820	7	6100	410	20	390	24	3900	1560	
2.5	1000	7	6100	500	20	470	24	3900	1880		
2.5	1200	7	6100	600	16	330	10	5400	1056		
8×12	25	100	24	3900	500	10×12	16	390	10	5400	1248
	20	100	24	3900	400	16	470	10	5400	1504	
	20	150	24	3900	600	16	560	10	5400	1792	
	16	220	10	5100	704	10	560	10	5400	1120	
	16	270	10	5100	864	10	680	10	5400	1360	
	16	330	10	5100	1056	6.3	820	7	6100	1033	
	16	390	10	5100	1248	6.3	1000	7	6100	1260	
	10	0	10	5400	660	4	1000	7	6100	800	
	10	390	10	5400	780	4	1200	7	6100	960	
	10	470	10	5400	940	4	1500	7	6100	1200	
	6.3	820	7	6100	1033	2.5	1000	7	6100	500	
	6.3	1000	7	6100	1260	2.5	1200	7	6100	600	
	2.5	820	7	6100	410	2.5	1500	7	6100	750	
	2.5	1000	7	6100	500	2.5	2200	7	6100	1100	
	2.5	1200	7	6100	600						
	2.5	1500	7	6100	750						

ESR(100KHZ to 300KHZ)

PD 高分子导电型(低阻抗品)——贴片型

PD Series Conductive polymer type(Low ESR type)-----SMD type

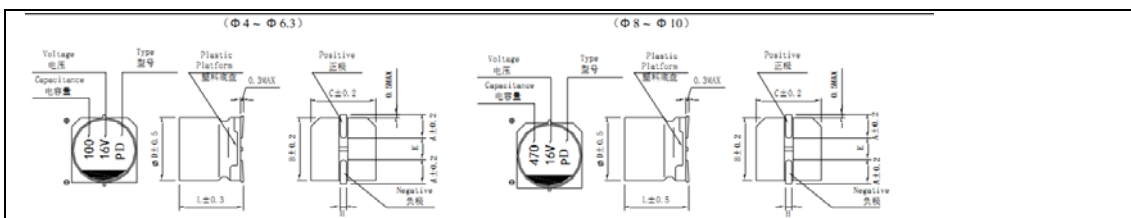
特点 Features

- 适用于表面贴装。Use for surface mounted type.
- 适用于无铅回流焊。The product can support lead free -reflow .
- 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 ~2 5V		
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	Φ4~Φ5 Φ6.3~Φ10 0.10 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℃	Z/Z20℃ 0.75 to 1.25 +105℃ Z/Z20℃ 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)	
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	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

	4 × 5.4	5 × 5.4	6.3 × 5.4	6.3 × 9.5	8 × 7.7	8 × 9.5	8 × 10.5	8 × 12.5	10 × 10.5	10 × 12.5
A	1.8	2.1	2.4	2.4	2.9	2.9	2.9	2.9	3.2	3.2
B	4.3	5.3	6.6	6.6	8.3	8.3	8.3	8.3	10.3	10.3
C	4.3	5.3	6.6	6.6	8.3	8.3	8.3	8.3	10.3	10.3
E	1.0	1.3	2.2	2.2	3.1	3.1	3.1	3.1	4.5	4.5
L	6	6	6	9.5	7.7	9.5	10.5	12.5	10.5	12.5
H	0.5 ~ 0.8				0.8~1.1					

■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 (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)
4 × 5.4	16	3.3	85	1020	300	6.3 × 5.4	2.5	330	18	3300	300
	10	4.7	85	1020	300		2.5	390	18	3300	300
	10	6.8	85	1020	300	6.3 × 9.5	16	220	13	4700	704
	10	10	85	1020	300		16	270	13	4700	864
	10	15	85	1020	300		6.3	470	10	4700	592
	6.3	22	85	1020	300		6.3	560	10	4700	706
	4	33	85	1020	300		4	470	10	5400	376
5 × 5.4	20	10	85	1440	300	4	560	10	5400	448	
	16	15	85	1440	300	2.5	470	10	5400	300	
	16	22	85	1440	300	2.5	560	10	5400	300	
	10	33	85	1500	300	2.5	820	10	5400	410	
	6.3	47	85	1500	300	2.5	1000	10	5400	500	
	4	39	85	1500	300	8 × 7.7	25	10	28	3100	300
	4	68	85	1800	300		20	33	28	3100	300
6.3 × 5.4	25	6.8	28	1800	300	8 × 9.5	20	47	28	3100	300
	25	27	28	2400	300		16	56	15	4700	300
	25	33	28	2400	300		16	82	15	4700	300
	20	22	28	2500	300		16	270	15	4700	864
	20	27	28	2500	300		10	120	15	4700	300
	16	39	28	1820	300		10	150	15	4700	300
	16	47	28	2400	300		6.3	220	10	4700	300
	16	68	28	2400	300		4	150	10	4700	300
	16	82	28	2400	300		4	330	10	5400	300
	16	100	28	2400	320		4	470	10	5400	376
	10	47	18	1800	300		4	560	10	5400	448
	10	56	18	1800	300		2.5	470	10	5400	300
	10	120	18	2400	300		2.5	560	10	5400	300
	6.3	82	18	1800	300		2.5	820	10	5400	410
	6.3	100	18	1950	300		2.5	1000	10	5400	500
	6.3	120	18	2780	300		16	270	13	5100	864
	6.3	220	18	3100	300		16	330	13	5100	1056
4	150	18	1950	300	6.3	470	10	5400	592		
4	220	18	2390	300	6.3	560	10	5700	706		
4	330	18	3300	300	6.3	820	10	5700	1033		
2.5	220	18	3300	300	4	470	10	5900	376		

Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)
8×9.5	4	560	10	6100	448	10×10.5	25	56	28	3800	300
	4	820	10	6100	656		25	100	28	3900	500
	4	1000	10	6100	800		25	150	28	4320	750
	2.5	470	10	6100	300		20	150	28	4700	600
	2.5	560	10	6100	300		20	220	28	4700	880
	2.5	820	10	6100	410		20	270	28	4700	1080
	2.5	1000		6100	500		20	330	28	4700	1320
	2.5	1200	10	6100	600		20	390	28	4700	1560
8×10.5	25	33	28	2980	300	16	330	13	4720	1056	
	20	100	28	3320	400	16	390	13	5400	1248	
	16	180	13	5100	576	16	470	13	5400	1504	
	16	220	13	5100	704	10	470	13	5400	940	
	16	270	13	5100	864	10	560	13	5400	1120	
	16	330	13	5100	1056	6.3	820	10	6100	1033	
	10	330	13	5100	660	4	1000	10	6100	800	
	6.3	470	10	5700	592	4	1200	10	6100	960	
	6.3	560	10	6100	706	2.5	1000	10	6100	500	
	6.3	820	10	6100	1033	2.5	1200	10	6100	600	
	4	560	10	6100	448	2.5	1500	10	6100	750	
	4	680	10	6100	544	25	150	28	3900	750	
	4	820	10	6100	656	25	220	28	3900	1100	
	4	1000	10	6100	800	20	150	28	3900	600	
	2.5	680	10	6100	340	20	220	28	3900	880	
	2.5	820	10	6100	410	20	270	28	3900	1080	
2.5	1000	10	6100	500	20	330	28	3900	1320		
2.5	1200	10	6100	600	20	390	28	3900	1560		
8×12.5	25	100	28	3900	500	20	470	2	3900	1880	
	20	100	28	3900	400	16	330	13	5400	1056	
	20	150	28	3900	600	16	390	13	5400	1248	
	16	220	13	5100	704	16	470	13	5400	1504	
	16	270	13	5100	864	16	560	13	5400	1792	
	16	330	13	5100	1056	10	560	13	5400	1120	
	16	390	13	5100	1248	10	680	13	5400	1360	
	10	330	13	5400	660	6.3	820	10	6100	1033	
	10	390	13	5400	780	6.3	1000	10	6100	1260	
	10	470	13	5400	940	4	1000	10	6100	800	
	6.3	820	10	6100	1033	4	1200	10	6100	960	
	6.3	1000	10	6100	1260	4	1500	10	6100	1200	
	2.5	820	10	6100	410	2.5	1000	10	6100	500	
	2.5	1000	10	6100	500	2.5	1200	10	6100	600	
	2.5	1200	10	6100	600	2.5	1500	10	6100	750	
	2.5	1500	10	6100	750	2.5	2200	10	6100	1100	

ESR(100KHZ to 300KHZ)

PE 高分子导电型(标准品)——插件型

PE Series Conductive polymer type(Standard type)-----Radial lead type

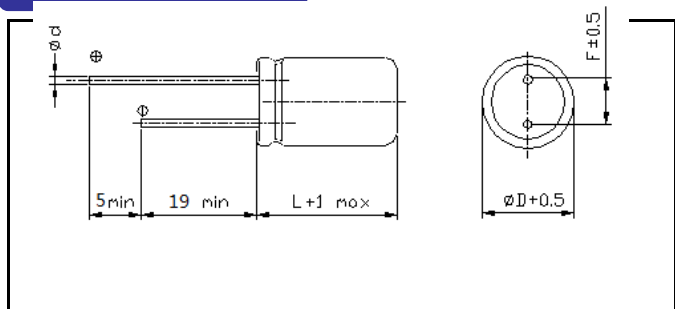
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Lead free-flow is supported
- ROHS 指令已对应完毕。Adapted to the ROHS directive。

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额定电压范围 Rated Voltage Range	2.5V ~2 5V		
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	Φ4~Φ5 Φ6.3~Φ10
		tgδ	0.10 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℃	Z/Z20℃ 0.75 to 1.25
		+105℃	Z/Z20℃ 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 (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



单位 Unit:mm

D	4	5	6	8	10
F	1.5	2.0	2.5	3.5	5
d	0.45	0.5	0.6	0.6	0.6

尺寸表 Size list

■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 (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	
4×5.4	16	3.3	100	660	200	6.3×5.4	4	330	24	2800	264	
	10	4.7	100	670	200		2.5	220	24	2800	200	
	10	6.8	100	670	200		2.5	330	24	2800	200	
	10	10	100	700	200		2.5	390	24	2800	200	
	10	15	100	740	200	6.3×9	16	220	14	3100	704	
	6.3	22	100	740	200		16	270	14	3100	864	
	4	33	100	740	200		6.3	470	12	3100	592	
5×5.4	20	10	100	1100	200		6.3	560	12	3100	706	
	16	15	100	1100	200		4	470	12	3900	376	
	16	22	100	1100	200		4	560	12	3900	448	
	10	33	100	1200	200		2.5	470	12	3900	235	
	6.3	47	100	1200	200	2.5	560	12	3900	280		
	4	39	100	1100	200	2.5	820	12	3900	410		
	4	68	100	1400	200	2.5	1000	12	3900	500		
5×8	6.3	270	24	2200	340	8×7	25	10	30	2700	200	
5×11	16	100	35	2200	320		20	33	30	2700	200	
6.3×5.4	25	6.8	30	1400	200		20	47	30	2700	200	
	25	27	30	2100	200		16	56	18	3100	200	
	25	33	30	2100	200		16	82	18	3100	262	
	20	22	30	2200	200		16	270	18	3100	864	
	20	27	30	2200	200		10	120	18	3100	240	
	16	39	30	1400	200		10	150	18	3100	300	
	16	47	30	2100	200		6.3	220	12	3100	277	
	16	68	30	2100	200		4	150	12	3100	200	
	16	82	30	2100	262		4	330	12	3900	264	
	16	100	30	2100	320		4	470	12	3900	376	
	10	47	24	1400	200		4	560	12	3900	448	
	10	56	24	1400	200		2.5	470	12	3900	235	
	10	120	24	2100	240		2.5	560	12	3900	280	
	6.3	82	24	1400	200		2.5	820	12	3900	410	
	6.3	100	24	1500	200		2.5	1000	12	3900	500	
	6.3	120	24	2500	200		8×9	16	270	12	4700	864
	6.3	220	24	2700	277			16	330	12	4700	1056
	4	150	24	1700	200			6.3	470	12	4700	592
4	220	24	2100	200	6.3	560		12	5100	706		

Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)
8×9	6.3	820	12	5100	1033	10×10	25	56	30	3100	280
	4	470	12	5300	376		25	100	30	3100	500
	4	560	12	5400	448		25	150	30	3900	750
	4	820	12	5400	656		20	150	30	3900	600
	4	1000	12	5400	800		20	220	30	3900	880
	2.5	470	12	5400	235		20	270	30	3900	1080
	2.5	560	12	5400	280		20	330	30	3900	1320
	2.5	820	12	5400	410		20	390	30	3900	1560
	2.5	1000	12	5400	500		16	330	14	4700	1056
	2.5	1200	12	5400	600		16	390	14	4700	1248
8×10	25	33	30	2700	200	16	470	14	4700	1504	
	20	100	30	3100	400	10	470	14	4700	940	
	16	180	14	4700	576	10	560	14	5400	1120	
	16	220	14	4700	704	6.3	820	12	5400	1033	
	16	270	14	4700	864	4	1000	12	5400	800	
	16	330	14	4700	1056	4	1200	12	5400	960	
	10	330	14	4700	660	2.5	1000	12	5400	500	
	6.3	470	12	5100	592	2.5	1200	12	5400	600	
	6.3	560	12	5400	706	2.5	1500	12	5400	750	
	6.3	820	12	5400	1033	25	150	30	3100	750	
	4	560	12	5400	448	25	220	30	3100	1100	
	4	680	12	5400	544	20	150	30	3100	600	
	4	820	12	5400	656	20	220	30	3100	880	
	4	1000	12	5400	800	20	270	30	3100	1080	
8×12	2.5	680	12	5400	340	20	330	30	3100	1320	
	2.5	820	12	5400	410	20	390	30	3100	1560	
	2.5	1000	12	5400	500	20	470	30	3100	1880	
	2.5	1200	12	5400	600	16	330	14	4700	1056	
	25	100	30	3100	500	16	390	14	4700	1248	
	20	100	30	3100	400	16	470	14	4700	1504	
	20	150	30	3100	600	16	560	14	4700	1792	
	16	220	14	4700	704	10	560	14	4700	1120	
	16	270	14	4700	864	10	680	14	4700	1360	
	16	330	14	4700	1056	6.3	820	12	5400	1033	
	16	390	14	4700	1248	6.3	1000	12	5400	1260	
	10	330	14	4700	660	4	1000	12	5400	800	
	10	390	14	4700	780	4	1200	12	5400	960	
	10	470	14	4700	940	4	1500	12	5400	1200	
6.3	820	12	5400	1033	2.5	1000	12	5400	500		
6.3	1000	12	5400	1260	2.5	1200	12	5400	600		
2.5	820	12	5400	410	2.5	1500	12	5400	750		
2.5	1000	12	5400	500	2.5	2200	12	5400	1100		
2.5	1200	12	5400	600							
2.5	1500	12	5400	750							

ESR(100KHZ to 300KHZ)

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

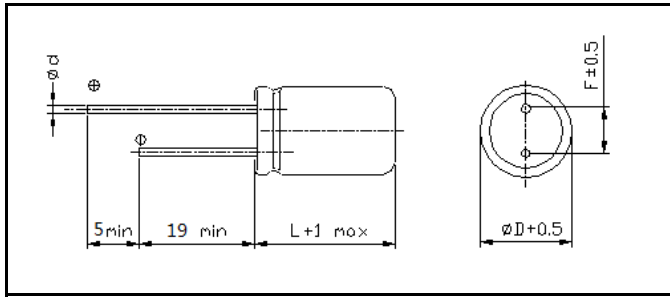
特点 Features

- 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-flow 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 ~35V		
标称容量范围 Nominal Capacitance Range	3.3 ~ 2200μF		
标称容量允许偏差 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 Φ6.3~Φ10	tgδ 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℃	Z/Z20℃ 0.75 to 1.25
		+105℃	Z/Z20℃ 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



单位 Unit:mm

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

尺寸表 Size list

■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 tabl

Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)
6.3×9	2.5	470	7	5400	235	8×12	25	100	24	3900	500
	2.5	560	7	5400	280		25	220	25	4100	1100
	2.5	820	7	5400	410		35	47	24	2600	329
	2.5	1000	7	5400	500		35	100	24	3300	700
	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
	16	270	10	5100	864	20	220	25	3900	880	
	16	330	10	5100	1056	20	270	25	3900	1080	
8×12	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	35	100	25	3400	700	
	16	330	10	5100	1056	35	220	25	3400	1540	
	16	390	10	5100	1248						

ESR(100KHZ to 300KHZ)

如客户需要的规格尺寸可协调设计定制

PH 高分子导电型(高电压品)——插件型

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

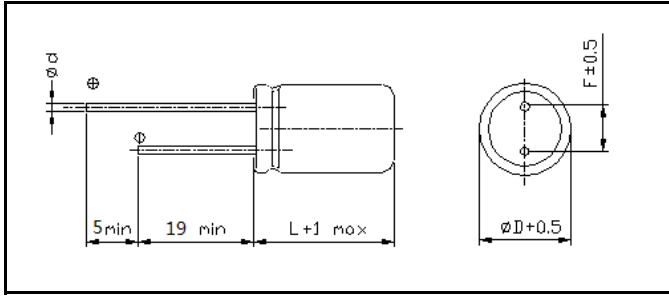
特点 Features

- 径向引线型。
This is a lead type
- 可适于无铅焊
Lead free-flow 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		
标称容量范围 Nominal Capacitance Range	10~330μF		
标称容量允许偏差 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
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		
	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.		
	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)		
	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



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

尺寸表 Size list

■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 (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	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
		27	35	1700	270			8*12	35	100	30
6.3*8	35	56	30	1900	392	220	30			2900	1540
		68	30	1900	476	50	68		30	2700	680
	50	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	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	10*12	35	150	30	3800	1050
6.3*9	35	82	30	1900	576			220	30	3800	1540
		100	30	1900	700			270	30	3800	1890
50	58	30	1700	580	50		330	30	3800	2310	
	33	35	1700	415.8			100	30	3100	1000	
39	35	1700	491.4	220	30		3100	2200			
8*8	35	82	30	2600	574		63	68	30	2900	856.8
		100	30	2600	700	100		30	2900	1260	
	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)

PV 高分子导电型(标准品)——贴片型

PV Series Conductive polymer type(Standard type)-----SMD type

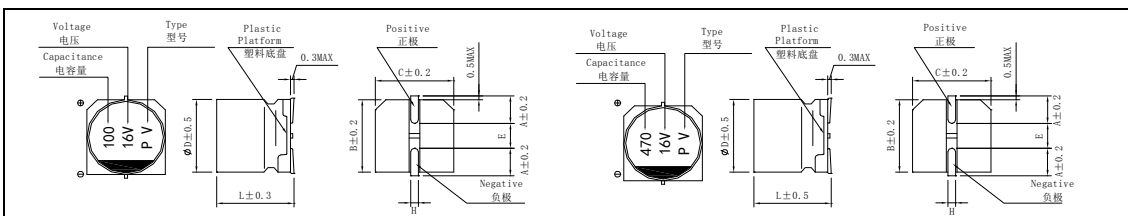
特点 Features

- 适用于表面贴装。Use for surface mounted type.
- 适用于无铅回流焊。The product can support lead free -reflow .
- 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 ~2 5V		
标称容量范围 Nominal Capacitance Range	3.3 ~ 2200μF		
标称容量允许偏差 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 Φ4~Φ5	Φ6.3~Φ10
		tgδ	0.10 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℃	Z/Z20℃ 0.75 to 1.25
		+105℃	Z/Z20℃ 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:		
	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.	
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)	
	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

	4 × 5.4	5 × 5.4	6.3 × 5.4	6.3 × 9.5	8 × 7.7	8 × 9.5	8 × 10.5	8 × 12.5	10 × 10.5	10 × 12.5
A	1.8	2.1	2.4	2.4	2.9	2.9	2.9	2.9	3.2	3.2
B	4.3	5.3	6.6	6.6	8.3	8.3	8.3	8.3	10.3	10.3
C	4.3	5.3	6.6	6.6	8.3	8.3	8.3	8.3	10.3	10.3
E	1.0	1.3	2.2	2.2	3.1	3.1	3.1	3.1	4.5	4.5
L	6	6	6	9.5	7.7	9.5	10.5	12.5	10.5	12.5
H	0.5 ~ 0.8				0.8 ~ 1.1					

■ 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 (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)
4 × 5.4	16	3.3	110	660	300	6.3 × 5.4	2.5	330	28	2800	300
	10	4.7	110	670	300		2.5	390	28	2800	300
	10	6.8	110	670	300	6.3 × 9.5	16	220	17	3100	704
	10	10	110	700	300		16	270	17	3100	864
	10	15	110	740	300		6.3	470	15	3100	592
	6.3	22	110	740	300		6.3	560	15	3100	706
	4	33	110	740	300		4	470	15	3900	376
20	10	110	1100	300	4	560	15	3900	448		
5 × 5.4	16	15	110	1100	300	2.5	470	15	3900	300	
	16	22	110	1100	300	2.5	560	15	3900	300	
	10	33	110	1200	300	2.5	820	15	3900	410	
	6.3	47	110	1200	300	2.5	1000	15	3900	500	
	4	39	110	1100	300	25	10	35	2700	300	
	4	68	110	1400	300	20	33	35	2700	300	
	6.3 × 5.4	25	6.8	35	1400	300	8 × 7.7	20	47	35	2700
25		27	35	2100	300	16		56	21	3100	300
25		33	35	2100	300	16		82	21	3100	300
20		22	35	2200	300	16		270	21	3100	864
20		27	35	2200	300	10		120	21	3100	300
16		39	35	1400	300	10		150	21	3100	300
16		47	35	2100	300	6.3		220	15	3100	300
16		68	35	2100	300	4		150	15	3100	300
16		82	35	2100	300	4		330	15	3900	300
16		100	35	2100	320	4		470	15	3900	376
10		47	28	1400	300	4	560	15	3900	448	
10		56	28	1400	300	2.5	470	15	3900	300	
10		120	28	2100	300	2.5	560	15	3900	300	
6.3		82	28	1400	300	2.5	820	15	3900	410	
6.3		100	28	1500	300	2.5	1000	15	3900	500	
6.3		120	28	2500	300	8 × 9.5	16	270	15	4700	864
6.3		220	28	2700	300		16	330	15	4700	1056
4		150	28	1700	300		6.3	470	15	4700	592
4		220	28	2100	300		6.3	560	15	5100	706
4		330	28	2800	300		6.3	820	15	5100	1033
2.5	220	28	2800	300	4		470	15	5300	376	

Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)	Size Code	UR (V)	CR (μF)	ESR (mΩ max.)	Ripple 100KHZ (mArms)	Leakage current(μA) (max.)
8×9.5	4	560	15	5400	448	10×10.5	25	56	35	3100	300
	4	820	15	5400	656		25	100	35	3100	500
	4	1000	15	5400	800		25	150	35	3900	750
	2.5	470	15	5400	300		20	150	35	3900	600
	2.5	560	15	5400	300		20	220	35	3900	880
	2.5	820	15	5400	410		20	270	35	3900	1080
	2.5	1000	15	5400	500		20	330	35	3900	1320
	2.5	1200	15	5400	600		20	390	35	3900	1560
8×10.5	25	33	35	2700	300		16	330	17	4700	1056
	20	100	35	3100	400		16	390	17	4700	1248
	16	180	17	4700	576		16	470	17	4700	1504
	16	220	17	4700	704		10	470	17	4700	940
	16	270	17	4700	864		10	560	17	5400	1120
	16	330	17	4700	1056		6.3	820	15	5400	1033
	10	330	17	4700	660		4	1000	15	5400	800
	6.3	470	15	5100	592		4	1200	15	5400	960
	6.3	560	15	5400	706	2.5	1000	15	5400	500	
	6.3	820	15	5400	1033	2.5	1200	15	5400	600	
	4	560	15	5400	448	2.5	1500	15	5400	750	
	4	680	15	5400	544	25	150	35	3100	750	
	4	820	15	5400	656	25	220	35	3100	1100	
	4	1000	15	5400	800	20	150	35	3100	600	
	2.5	680	15	5400	340	20	220	35	3100	880	
	2.5	820	15	5400	410	20	270	35	3100	1080	
2.5	1000	15	5400	500	20	330	35	3100	1320		
2.5	1200	15	5400	600	20	390	35	3100	1560		
8×12.5	25	100	35	3100	500	10×12.5	20	470	35	3100	1880
	20	100	35	3100	400		16	330	17	4700	1056
	20	150	35	3100	600		16	390	17	4700	1248
	16	220	17	4700	704		16	470	17	4700	1504
	16	270	17	4700	864		16	560	17	4700	1792
	16	330	17	4700	1056		10	560	17	4700	1120
	16	390	17	4700	1248		10	680	17	4700	1360
	10	330	17	4700	660		6.3	820	15	5400	1033
	10	390	14	4700	780		6.3	1000	15	5400	1260
	10	470	17	4700	940		4	1000	15	5400	800
	6.3	820	15	5400	1033		4	1200	15	5400	960
	6.3	1000	15	5400	1260		4	1500	15	5400	1200
	2.5	820	15	5400	410		2.5	1000	15	5400	500
	2.5	1000	15	5400	500		2.5	1200	15	5400	600
	2.5	1200	15	5400	600		2.5	1500	15	5400	750
	2.5	1500	15	5400	750		2.5	2200	15	5400	1100

ESR(100KHZ to 300KHZ)