



# FC 系列 Series

## 特点 Features

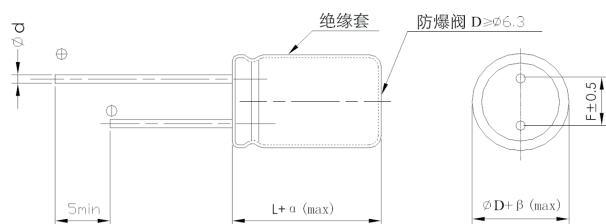
- 高频高可靠品, 105°C, 3000-5000小时。  
High frequency High reliability , 105°C , 3000-5000hours.
- 适应于无刷电机驱动及耐大电流冲击。  
Used Suitable for brushless motor drive and large current impact resistance .
- 符合RoHS标准。RoHS compliant.



## 主要技术性能 Specifications

项目 Items	特性 Characteristics								
使用温度范围 Operating Temperature Range	-40~+105°C								
额定电压范围 Rated Voltage Range	50~120 V								
标称电容量范围 Nominal Capacitance Range	220~1000μF								
标称电容量允许偏差 Nominal Capacitance Tolerance	± 20% (120Hz, +20°C)								
漏电流 Leakage Current	$I \leq 0.01CV$ or $3(\mu A)$ 2分钟(at 20°C, after 2 minutes) 取较大者 (whichever is greater)								
损耗角正切值(tgδ) Dissipation Factor (+20°C, 120Hz)	<table border="1"> <tr> <td><math>U_R</math> (V)</td> <td>50</td> <td>63-120</td> </tr> <tr> <td>tgδ</td> <td>0.10</td> <td>0.08</td> </tr> </table> <p>容量大于1000μF者, 每增加1000μF, 其损耗角正切值增加0.02。 When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase.</p>	$U_R$ (V)	50	63-120	tgδ	0.10	0.08		
$U_R$ (V)	50	63-120							
tgδ	0.10	0.08							
温度特性 Temperature Characteristics (Impedance ratio at 120Hz)	<table border="1"> <tr> <td><math>U_R</math> (V)</td> <td>50-120</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>4</td> </tr> </table>	$U_R$ (V)	50-120	Z-40°C / Z+20°C	4				
$U_R$ (V)	50-120								
Z-40°C / Z+20°C	4								
耐久性 Load Life	<p>在+105°C条件下, 施加含额定纹波电流的额定电压, 持续规定时间, 并在+20°C下恢复16小时后, 电容器应符合下列要求: The following specifications shall be met when the capacitors are restored to +20°C for 16 hours after D.C. bias rated ripple current is applied at +105°C, the peak voltage shall not exceed the voltage.</p> <table border="1"> <tr> <td>∅D</td> <td>10</td> <td>12.5</td> <td>&gt; 12.5</td> </tr> <tr> <td>Load life</td> <td>3000h</td> <td>4000h</td> <td>5000h</td> </tr> </table> <p>电容量变化率 Capacitance change : ≤±20%初始测量值以内 ±20% of the initial measured value 漏电流 Leakage current : ≤初始规定值 ≤Initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2 times of the initial specified value</p>	∅D	10	12.5	> 12.5	Load life	3000h	4000h	5000h
∅D	10	12.5	> 12.5						
Load life	3000h	4000h	5000h						
高温贮存 Shelf Life	<p>+105°C, 1000小时贮存后, 恢复16小时后: After storage for 1000 hours at +105°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ±20%初始测量值以内 ±20% of the initial measured value 漏电流 Leakage current : ≤2倍初始规定值 ≤2 times of the initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2 times of the initial specified value</p>								

## 外形图及尺寸表 Case Size Table



单位 Unit: mm

∅D	10	12.5	16	18
L	/	20,25	30,35	30,35,40
F	5.0	5.0	7.5	
d	0.6	0.6	0.8	
α(max)	(L<20) 1.5		(L≥20) 2.0	
β(max)	0.5			

## 频率修正系数 Frequency Coefficient

频率 Frequency(Hz)	120	1K	10K	100K
修正系数 Coefficient	0.5	0.8	1	1

## 尺寸 Dimensions

容量 $C_R$ (UF)	代码 Code	电压 $U_R$	50V(1H)			63V(1J)			80V(1K)		
			Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple
			$\phi D \times L$ (mm)	( $\Omega$ MAX)	(mA)	$\phi D \times L$ (mm)	( $\Omega$ MAX)	(mA)	$\phi D \times L$ (mm)	( $\Omega$ MAX)	(mA)
220	221		10×20	0.098	466	10×20	0.096	765	12.5×20	0.096	985
330	331		10×20	0.075	998	12.5×20	0.096	1092	12.5×25	0.096	1208
470	471		12.5×20	0.048	1192	12.5×20	0.068	1426	16×25	0.048	1579
680	681		12.5×20	0.042	1535	12.5×25	0.048	1705			
1000	102		16×30	0.038	1833	16×25	0.042	1832	16×30	0.035	2106

容量 $C_R$ (UF)	代码 Code	电压 $U_R$	100V(2A)			120V(2N)		
			Size	ESR	Ripple	Size	ESR	Ripple
			$\phi D \times L$ (mm)	( $\Omega$ MAX)	(mA)	$\phi D \times L$ (mm)	( $\Omega$ MAX)	(mA)
220	221		12.5×25	0.096	989	16×25	0.42	1105
330	331		16×25	0.066	1385	18×25	0.38	1515
470	471		16×25	0.058	1733			
680	681							
1000	102		18×40	0.038	2317			

 Size  $\phi D \times L$ (mm)

Maximum Allowable Ripple Current (mA rms) at 105°C 100kHz

 Maximum ESR ( $\Omega$ ) at 20°C 100kHz