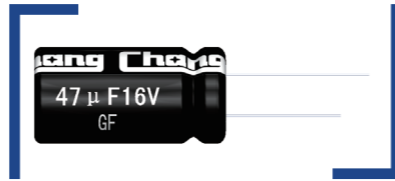




GF 系列 Series

特点 Features

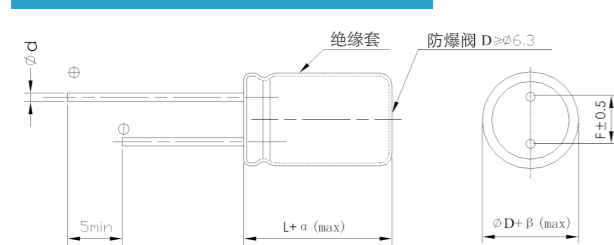
- 高频率, 低阻抗, 寿命2000~4000小时, 105°C.
Low ESR at high frequency, Life time:2000~4000 hours at 105°C.
- 适用于LED照明驱动电源, 电脑主机板、开关电源、高保真音响, 高分辨数码彩电等电子线路中。
Used in LED Lighting, main board, switching power supply, hi-fi acoustics, numeral color-TV circuits etc.
- RoHS指令已对应完毕。Adapted to the RoHS directive.



主要技术性能 Specifications

项目 Items	特性 Performance Characteristics																																					
使用温度范围 Operating Temperature Range	-40~+105°C	-25~+105°C																																				
额定电压范围 Rated Voltage Range	6.3~100V	160~450V																																				
标称容量范围 Nominal Capacitance Range	1~18000μF																																					
标称容量允许偏差 Capacitance Tolerance	±20% (120Hz, +20°C)																																					
漏电流 Leakage Current	I≤0.01CV (μA)或3μA 2分钟 取较大者 (at 20°C, after 2 minutes) (Whichever is greater)	CV≤1000: I=0.01CV+40(μA) max CV>1000: I=0.04CV+100(μA) max 20°C 1分钟额定电压下的漏电流 After 1 minute application of rated voltage at 20°C																																				
损耗角正切值 (tgδ) Dissipation Factor (+20°C, 120Hz)	<table border="1"> <thead> <tr> <th>U_r (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160~250</th> <th>400~450</th> </tr> </thead> <tbody> <tr> <td>tgδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.20</td> <td>0.24</td> </tr> </tbody> </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)	6.3	10	16	25	35	50	63	100	160~250	400~450	tgδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.20	0.24														
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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 ≤2times of the initial specified value 损耗角正切值 Dissipation factor: ≤2倍初始规定值 ≤2times of the initial specified value</p>																																					

外形图及尺寸表 Case Size Table



单位 Unit: mm

	5	6.3	8	10	12.5	16~18
D	5	6.3	8	10	12.5	16~18
F	2.0	2.5	3.5	5.0	5.0	7.5
d	0.5	0.5	0.5, 0.6	0.6	0.6	0.8

αMAX	βMAX
αMAX	βMAX
αMAX	βMAX

频率修正系数 Frequency Coefficient

Freq.(Hz)	120	1K	10K	100K
~180	0.40	0.75	0.90	1.00
220~560	0.50	0.85	0.94	1.00
680~1800	0.60	0.87	0.95	1.00
2200~3900	0.75	0.90	0.95	1.00
4700~18000	0.85	0.95	0.98	1.00

尺寸 Dimensions

CAP(μF)	WV	6.3V(0J)			10V(1A)			16V(1C)			25V(1E)		
		Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple
2.2	2R2												
4.7	4R7												
10	100							5×11	1.300	90	5×11	1.200	95
22	220							5×11	0.650	120	5×11	1.100	125
47	470							5×11	0.450	130			
82	820										6.3×11	0.200	345
100	101	5×11	0.300	220	5×11	0.280	280	5×11	0.260	200	6.3×11	0.190	350
120	121				6.3×11	0.250	340	6.3×11	0.230	345	6.3×11	0.225	350
150	151				6.3×11	0.198	345	6.3×11	0.220	355	8×11.5	0.117	645
180	181				6.3×11	0.198	350	6.3×11	0.220	365	8×11.5	0.117	665
220	221				6.3×11	0.190	350	6.3×11	0.198	355	6.3×11	0.198	420
270	271				6.3×11	0.180	355	6.3×11	0.220	365	8×11.5	0.117	675
330	331				6.3×11	0.180	365	6.3×11	0.198	375	8×11.5	0.117	685
390	391				8×11.5	0.117	645	8×11.5	0.117	645	10×12.5	0.072	885
470	471				8×11.5	0.110	655	8×11.5	0.117	655	8×11.5	0.117	695
560	561				6.3×11	0.170	380	6.3×11	0.105	385	8×11.5	0.093	720
680	681				8×11.5	0.110	675	8×11.5	0.090	665	10×12.5	0.072	895
820	821				8×11.5	0.100	685	8×11.5	0.090	685	8×14	0.080	800
1000	102				10×12.5	0.072	870	10×12.5	0.072	870	10×12.5	0.072	915
1200	122				8×11.5	0.100	695	8×11.5	0.085	695	8×16	0.078	845
1500	152				10×12.5	0.072	885	10×12.5	0.078	845	10×16	0.060	880
1800	182				8×14	0.078	845	8×16	0.075	865	8×16	0.065	955
2200	222				10×16	0.054	1215	10×16	0.054	1215	10×20	0.062	1155
2700	272				10×20	0.046	1450	10×20	0.046	1450	10×20	0.046	1400
3300	332				10×25	0.042	1650	10×25	0.041	1405	10×25	0.038	1820
3900	392				10×25	0.042	1650	10×25	0.041	1405	10×25	0.042	1905
4700	472				12.5×20	0.032	1906	12.5×20	0.041	1450	12.5×20	0.032	1905
5600	562				10×20	0.046	1450	10×20	0.041	1500	10×25	0.038	1655
6800	682				12.5×20	0.032	1905	12.5×20	0.041	1500	10×25	0.038	1655
8200	822				12.5×20	0.032	1905	12.5×20	0.041	1500	10×25	0.038	1655
10000	103				12.5×20	0.032	1905	12.5×20	0.041	1500	10×25	0.038	1655
12000	123				12.5×20	0.032	1905	12.5×20	0.041	1500	10×25	0.038	1655
15000	153				12.5×20	0.032	1905	12.5×20	0.041	1500	10×25	0.038	1655
18000	183				12.5×20	0.032	1905	12.5×20	0.041	1500	10×25	0.038	1655

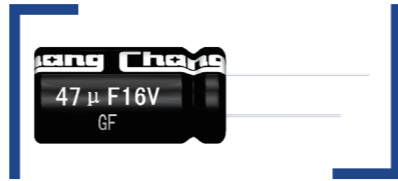
Size φD×L(mm)
Maximum Allowable Ripple Current (mA rms) at 105°C 100KHz
Maximum ESR (Ω) at 20°C 100KHz



GF 系列 Series

特点 Features

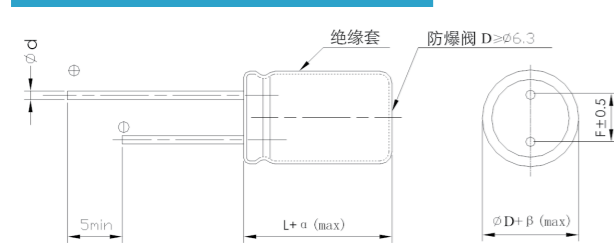
- 高频率, 低阻抗, 寿命2000~4000小时, 105°C.
Low ESR at high frequency, Life time:2000~4000 hours at 105°C.
- 适用于LED照明驱动电源, 电脑主机板、开关电源、高保真音响, 高分辨数码彩电等电子线路中。
Used in LED Lighting, main board, switching power supply, hi-fi acoustics, numeral color-TV circuits etc.
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项目 Items	特性 Performance Characteristics																																					
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漏电流 Leakage Current	I ≤ 0.01CV (μA) 或 3μA 2分钟 取较大者 (at 20°C, after 2 minutes) (Whichever is greater)	CV ≤ 1000: I = 0.01CV + 40(μA) max CV > 1000: I = 0.04CV + 100(μA) max 20°C 1分钟额定电压下的漏电流 After 1 minute application of rated voltage at 20°C																																				
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单位 Unit: mm

	D	5	6.3	8	10	12.5	16~18
D	5	6.3	8	10	12.5	16~18	
F	2.0	2.5	3.5	5.0	5.0	7.5	
d	0.5	0.5	0.5, 0.6	0.6	0.6	0.8	

αMAX	α < L < 20 > 1.5	βMAX	β < D < 20 > 0.5
	α > L > 20 > 2.0		β > D > 20 > 1.0

频率修正系数 Frequency Coefficient

Freq.(Hz)	120	1K	10K	100K
~180	0.40	0.75	0.90	1.00
220~560	0.50	0.85	0.94	1.00
680~1800	0.60	0.87	0.95	1.00
2200~3900	0.75	0.90	0.95	1.00
4700~18000	0.85	0.95	0.98	1.00

尺寸 Dimensions

CAP(μF)	WV	6.3V(0J)			10V(1A)			16V(1C)			25V(1E)		
		Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple
2.2	2R2										5×11	1.500	80
4.7	4R7										5×11	1.200	90
10	100							5×11	1.300	90	5×11	1.200	95
22	220							5×11	0.650	120	5×11	1.100	125
47	470							5×11	0.450	130			
82	820										6.3×11	0.200	345
100	101	5×11	0.300	220	5×11	0.280	280	5×11	0.260	200	6.3×11	0.190	350
120	121				6.3×11	0.250	340	6.3×11	0.230	345	6.3×11	0.225	350
150	151				6.3×11	0.198	345	6.3×11	0.220	355	8×11.5	0.117	645
180	181				6.3×11	0.198	350	6.3×11	0.220	365	8×11.5	0.117	665
220	221				6.3×11	0.190	350	6.3×11	0.198	355	6.3×11	0.198	420
270	271				6.3×11	0.180	355	6.3×11	0.220	365	8×11.5	0.117	675
330	331				6.3×11	0.180	365	6.3×11	0.198	375	8×11.5	0.117	685
390	391				8×11.5	0.117	645	8×11.5	0.117	645	10×12.5	0.072	885
470	471				8×11.5	0.110	655	8×11.5	0.117	655	8×11.5	0.117	695
560	561				6.3×11	0.170	380	6.3×11	0.105	385	8×11.5	0.093	720
680	681				8×11.5	0.110	675	8×11.5	0.090	665	10×12.5	0.072	895
820	821				8×11.5	0.100	685	8×11.5	0.090	685	8×14	0.080	800
1000	102				10×12.5	0.072	870	10×12.5	0.072	870	10×12.5	0.072	915
1200	122				8×11.5	0.100	695	8×11.5	0.085	695	8×16	0.078	845
1500	152				10×12.5	0.072	885	10×12.5	0.078	845	8×16	0.060	880
1800	182				8×11.5	0.072	780	8×16	0.075	865	8×16	0.065	955
2200	222				10×12.5	0.072	885	10×12.5	0.070	895	10×12.5	0.065	1100
2700	272				10×16	0.054	1215	10×16	0.054	1215	12.5×12.5	0.045	1450
3300	332				8×14	0.078	845	10×16	0.030	1300	10×20	0.046	1400
3900	392				10×12.5	0.072	895	10×20	0.041	1405	10×25	0.038	1820
4700	472				8×16	0.069	865	10×16	0.054	1350	10×20	0.046	1450
5600	562				10×16	0.054	1225	10×20	0.041	1450	12.5×20	0.032	1905
6800	682				10×20	0.046	1400	10×20	0.041	1500	10×25	0.038	1655
8200	822				12.5×20	0.032	1905	12.5×20	0.032	1905	12.5×20	0.035	1980
10000	103				10×20	0.046	1450	10×20	0.046	1650	10×25	0.034	1850
12000	123				10×25	0.043	1600	12.5×20	0.032	1905	12.5×25	0.027	2130
15000	153				10×25	0.042	1650	10×25	0.042	1750	12.5×25	0.030	2190
18000	183				12.5×20	0.032	1906	12.5×20	0.035	1955	16×20	0.027	2480
					10×20	0.048	1650	10×25	0.035	2125	12.5×30	0.023	2430
					12.5×20	0.032	1905	16×20	0.032	2320	18×20	0.024	2505
					12.5×25	0.027	2130	12.5×25	0.027	2175	16×30	0.020	3035
					16×20	0.032	2215				18×25	0.022	2780
					12.5×30	0.023	2530	16×25	0.025	2560	16×35	0.018	3230
					16×20	0.032	2260	18×20	0.031	2505	18×30	0.018	3610
					12.5×40	0.017	2650	16×30	0.020	3035	16×40	0.018	3620
					16×25	0.025	2560	18×25	0.022	2780			
					18×20	0.031	2505						
					16×30	0.020	3035	16×35	0.018	3130	18×35	0.017	3645
								18×30	0.018	3610			
					16×35	0.018	3130	18×35	0.017	3685	18×40	0.014	3790
					18×25	0.022	2780						
					16×40	0.015	3895	18×40	0.014	3790			
					18×30	0.018	3610						
					18×35	0.017	3710						
					18×40	0.014	3790						

Size φD×L(mm)
Maximum Allowable Ripple Current (mA rms) at 105°C 100KHz
Maximum ESR (Ω) at 20°C 100KHz



尺寸 Dimensions

Table with columns for WV, CAP(μF), and voltage ratings (35V(1V), 50V(1H), 63V(1J), 100V(2A)). Includes dimensions (Size, ESR, Ripple) for various capacitor models.

Size φD×L(mm)
Maximum Allowable Ripple Current (mA rms) at 105°C 100KHz
Maximum ESR (Ω) at 20°C 100KHz

尺寸 Dimensions

Table with columns for WV, CAP(μF), and voltage ratings (160V(2C), 200V(2D), 250V(2E), 400(2G)). Includes dimensions (Size, ESR, Ripple) for various capacitor models.

Table with columns for WV, CAP(μF), and voltage ratings (420V(2M), 450V(2W)). Includes dimensions (Size, ESR, Ripple) for various capacitor models.

Size φD×L(mm)
Maximum Allowable Ripple Current (mA rms) at 105°C 100KHz
Maximum ESR (Ω) at 20°C 100KHz

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