

GF Series 系列

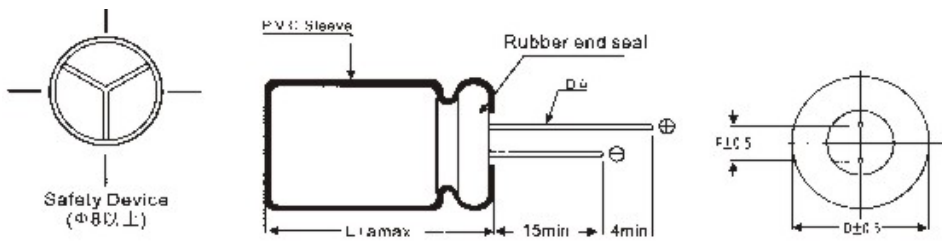
特点 Features

- 适用于各类电源、LED、主板等用**高频低阻抗产品** Used in communication equipments,switching power supply, industrial measuring instruments,etc
- 105℃下负荷寿命可达 2000 • 4000 小时 Load life 2000~4000 hrs at 105℃
- 符合环保要求 **RoHS Compliant**

特性表 Specifications

项 目 Item	特性参数 Performance Characteristics																											
使用温度范围 Operating Temp. Range	-40~+105℃																											
额定工作电压 Rated Voltage Range	6.3 to 100 VDC																											
静电容量范围 Capacitance Range	0.47 to 4700 μF																											
静电容量误差 Capacitance Tolerance	±20% (120Hz, 20℃)																											
漏电流 Leakage Current	<p>LC ≤ 0.005CV or 3.0 (μA) 施加额定电压 2 分钟后取最大值 After 2 minutes whichever is greater measured with rated working voltage applied</p>																											
损耗角正切值(Tanδ) Dissipation Factor(Tanδ) (max, 120Hz, 20℃)	<p>静电容量每大于 1000μF 时, 每增加 1000μF 损失角增加 2% For capacitance > 1000μF, add 2% per another 1000μF</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>W.V(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>D.F(%)</td> <td>0.18</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.08</td> <td>0.08</td> </tr> </table>	W.V(VDC)	6.3	10	16	25	35	50	63	100	D.F(%)	0.18	0.12	0.10	0.10	0.09	0.08	0.08	0.08									
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D.F(%)	0.18	0.12	0.10	0.10	0.09	0.08	0.08	0.08																				
低温特性 Low Temp. Characteristic (最大阻抗比 Max Impedance Ratio) (120Hz)	<p>静电容量大于 1000UF 时, 每增加 1000UF, 阻抗比在 Z(-20)/Z(+20℃)增加 0.5 Z(-40℃)/Z(+20℃)增加 1 For capacitance > 1000μF, add 0.5 per another 1000μF for Z(-20)/Z(+20℃)add 1 per another 1000μF for Z(-40℃)/Z(+20℃)</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>W.V(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>Z(-20)/Z(+20℃)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40℃)/Z(+20℃)</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	W.V(VDC)	6.3	10	16	25	35	50	63	100	Z(-20)/Z(+20℃)	4	3	2	2	2	2	2	2	Z(-40℃)/Z(+20℃)	8	6	4	3	3	3	3	3
W.V(VDC)	6.3	10	16	25	35	50	63	100																				
Z(-20)/Z(+20℃)	4	3	2	2	2	2	2	2																				
Z(-40℃)/Z(+20℃)	8	6	4	3	3	3	3	3																				
高温负荷 Load Life	<p>试验条件 Test conditions 试验时间 Duration time:</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Φ D</td> <td>D5~6.3</td> <td>D8~10</td> <td>D13~</td> </tr> <tr> <td>Load life</td> <td>2000h</td> <td>3000h</td> <td>4000h</td> </tr> </table> <p>工作温度 Ambient temperature: +105℃ 工作电压 Applied voltage: Rated DC working voltage 测试条件 After test requirements at +20℃ 静电容量变化率 Capacitance change: ≤ ±20% of the initial measured value 损耗角正切 Dissipation factor: ≤ 200% of the initial specified value 漏电流 Leakage current: ≤ the initial specified value</p>	Φ D	D5~6.3	D8~10	D13~	Load life	2000h	3000h	4000h																			
Φ D	D5~6.3	D8~10	D13~																									
Load life	2000h	3000h	4000h																									
高温储存 Shelf Life	<p>试验条件 Test conditions 放置时间 Duration time: 1000hrs 放置温度 Ambient temperature: +105℃ 工作电压 Applied voltage: None 放置完成后在+25℃条件下进行特性测试,并在测量前使用额定直流工作电压充电 30 分钟 After test requirements at +20℃ : Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30minutes</p>																											
其它 Others	JIS C-5141 and JIS C-5102																											

产品尺寸图 **Diagram of Dimensions (unit: mm)**



ΦD	5	6.3	8(L<20)	8(L≥20)	10	(12.5)13	16	18	22
Φd	0.50		0.6		0.60		0.80		
F	2.0	2.5	3.5		5.0		7.5	10.0	
L	L+1.5 max								

频率修正系数 Multiplier for ripple current vs frequency

Fre.(Hz)	120	1K	10K	100K
Cap(μF)				
Cap ≤ 10	0.59	0.85	0.97	1.00
10 < Cap ≤ 100	0.62	0.89	0.97	1.00
100 < Cap ≤ 1000	0.72	0.90	0.98	1.00
1000 < Cap	0.78	0.91	0.98	1.00

温度修正系数 Multiplier for ripple current vs temperature

Temperature (°C)	45	60	70	85	105
Multiplier	2.10	1.90	1.65	1.40	1.00

尺寸表 Case Size

WV(V) Cap(μF)	6.3 (8.0)			10(13)			16(20)		
	Size	Ripple	Imped.	Size	Ripple	Imped.	Size	Ripple	Imped.
10							5x11	85	2.560
22							5x11	115	1.950
33				5x11	110	1.700	5x11	155	1.420
47				5x11	150	1.340	5x11	185	1.100
100	5x11	170	0.550	5x11	200	0.500	5x11	210	0.500
							6.3x11	300	0.250
220	6.3x11	300	0.260	6.3x11	300	0.220	6.3x12	340	0.220
330	6.3x12	350	0.220	6.3x11	400	0.220	8x12	650	0.125
470	6.3x10	400	0.210	6.3x11	450	0.130	8x12	730	0.100
	8x12	540	0.130	8x12	550	0.110	10x12	865	0.080
680	8x12	560	0.120	6.3x15	620	0.110	8x12	780	0.080
				8x12	650	0.110	8x16	850	0.080
820	8x12	640	0.110	8x12	850	0.080	8x16	960	0.075
1000	8x9	770	0.080	8x12	860	0.080	8x16	1050	0.065
	8x12	850	0.080	8x16	900	0.076	10x16	1210	0.050
1200	10x13	865	0.080	10x16	1210	0.060	10x16	1310	0.046
1500	8x20	1050	0.069	10x16	1350	0.046	10x16	1400	0.042
2200	10x16	1350	0.046	10x20	1400	0.046	10x25	1650	0.042
							13x20	1900	0.035
3300	10x25	1650	0.042	13x20	1900	0.035	13x25	2100	0.030
4700	13x20	2000	0.030	13x20	2100	0.030	16x25	2410	0.025

Maximum Allowable Ripple current(mArms,at 105°C 100KHz

Case Size Φ DXL (mm)

Maximum Impedance(Ω) at 20°C 100KHz

ALUMINUM ELECTROLYTIC CAPACITORS

WV(V) Cap(μF)	25(32)			35(44)			50(63)		
	Size	Ripple	Imped.	Size	Ripple	Imped.	Size	Ripple	Imped.
1							5X11	25	3.950
2.2							5X11	35	2.800
3.3							5X11	45	2.000
4.7							5X11	58	1.800
10	5X11	56	2.100	5X11	110	1.700	5X11	120	1.600
22	5X11	120	1.800	5X11	130	1.360	5X11	180	1.000
33	5X11	150	1.200	5X11	180	0.950	6.3X12	250	0.450
47	5X11	220	1.100	5X11	300	0.450	6.3X12	290	0.350
56	5x11	245	0.45	6.3x11	340	0.300	8x12	490	0.280
68	6.3x11	255	0.26	6.3x11	340	0.230	8x12	540	0.220
100	6.3X12	350	0.220	6.3X12	450	0.200	8X12	550	0.170
				8x12	640	0.170			
150	8x12	640	0.19	8x12	645	0.165	8x16	730	0.085
220	6.3X12	550	0.150	8X12	650	0.100	8X16	850	0.065
	8X12	650	0.130	8X16	840	0.085	10X16	1050	0.060
330	8X12	800	0.110	8X14	840	0.080	10X20	1150	0.055
	8X16	865	0.085	8X16	860	0.065	13X20	1650	0.050
470	8X12	840	0.080	8X20	1100	0.060	10X20	1250	0.050
	8X14	840	0.076	10X16	1210	0.056	13X20	1650	0.045
	10x12	865	0.076	10x20	1300	0.046	13x25	1950	0.034
560	10x16	1210	0.060	10x16	1300	0.046	13x20	1950	0.034
680	8X16	1220	0.068	10X16	1300	0.050	13X20	1750	0.040
	10X16	1300	0.060	10X20	1400	0.045	13X25	1850	0.035
1000	10X16	1400	0.045	10X20	1650	0.045	13X25	1880	0.030
	10X20	1650	0.040	13X20	1850	0.035	16X25	2000	0.025
				13x25	2124	0.030			
1500	10X20	1800	0.038	13X25	2000	0.030			
	13X20	1900	0.035	16X25	2450	0.025			
1800	13x25	2124	0.030	16x25	2550	0.022			
2200	13X25	2150	0.030	16X25	2650	0.020			

Maximum Allowable Ripple current(mArms,at 105℃ 100KHz

Case Size Φ DXL (mm)

Maximum Impedance(Ω) at 20℃ 100KHz

WV(V) Cap(μ F)	63(79)			100(125)		
	Size	Ripple	Imped.	Size	Ripple	Imped.
10				5X11	80	2.500
22	6.3X12	110	0.960	6.3X12	180	0.900
33	6.3X12	135	0.600	8X12	280	0.490
47	8X12	210	0.500	10X13	350	0.420
56	8X12	232	0.500	8X20	362	0.260
68	8X12	260	0.400	10X16	460	0.300
100	8X16	300	0.360	10X16	540	0.200
	10X13	314	0.344	10X20	550	0.170
150	8X20	360	0.260	10X20	580	0.170
220	10X16	380	0.240	13X20	860	0.110
	10X20	460	0.160	13X25	920	0.096
330	13X20	980	0.080	16X25	1400	0.090
470	13X20	1500	0.070	16X25	1520	0.080
680	13X25	1600	0.060	18X30	1750	0.050
1000	13X25	1800	0.050	18X36	2400	0.038
	16X25	2000	0.048	18X40	2540	0.030