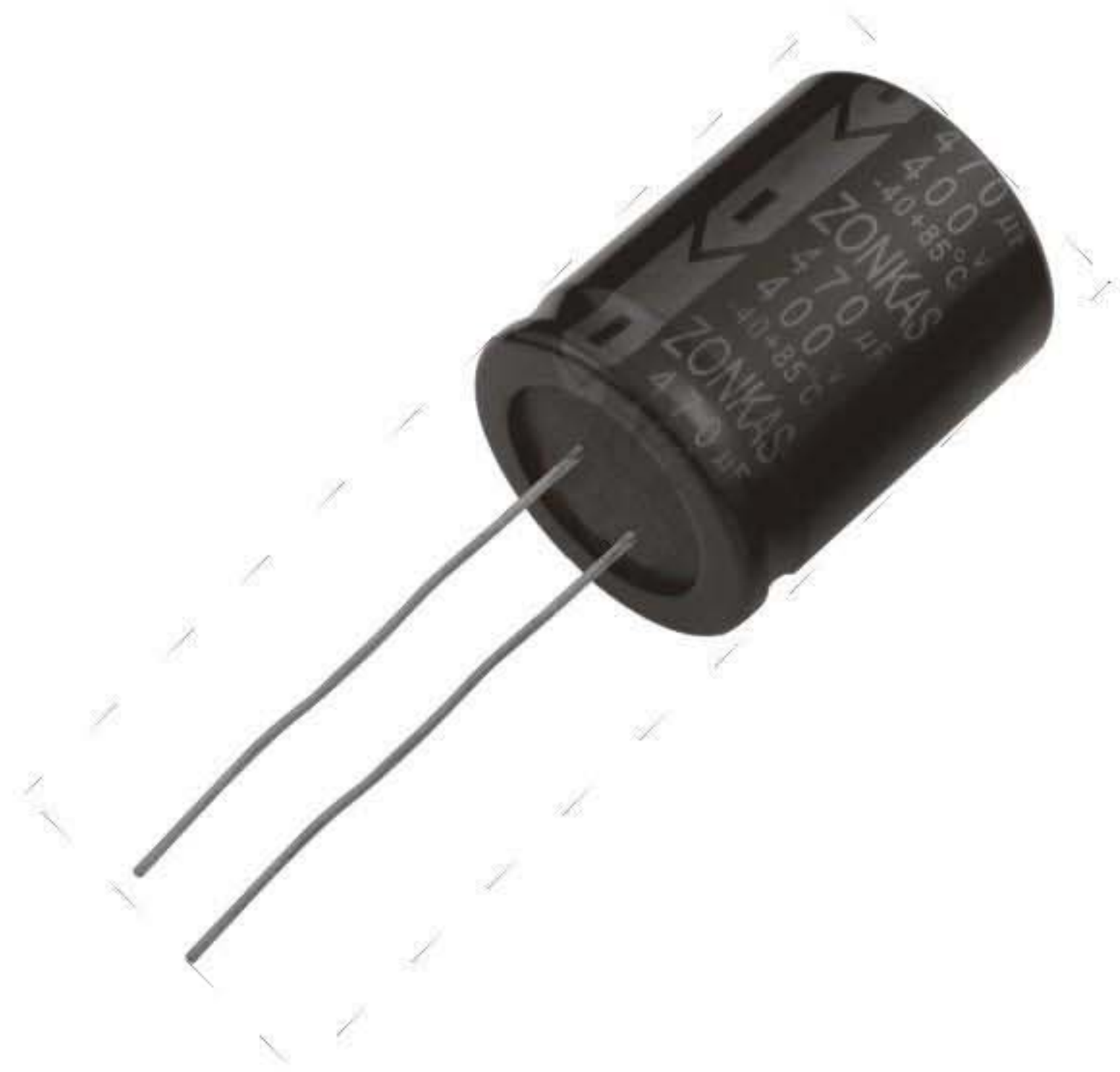




GIR Series Low Impedance 一般低阻抗標準品

Features

- Used in communication equipments, switching power supply, industrial measuring instruments, etc.
- Load life 2000 Hrs at 105℃.
- Safety vent construction design.



Specifications

No	Item	Performance Characteristics																																				
1	使用温度範圍 Operating Temperature Range	-40 to + 105℃					-25 to + 105℃																															
2	定格電壓範圍 Rated Voltage Range	6.3 to 100 VDC					160 to 450 VDC																															
3	靜電容量範圍 Capacitance Range	0.47 to 22000uF					0.47 to 1000uF																															
4	靜電容量容許差 Capacitance Tolerance	±20%(120Hz, +20℃)																																				
5	漏電電流 Leakage Current(+20℃,max)	I ≤0.01CV or 2(μA) After 2 minutes whichever is greater measured with rated working voltage applied.					I ≤0.03CV (μA) After 1 minute with rate working voltage applied.																															
6	損失角 Dissipation Factor(tanδ)	<table><tr><td>Working Voltage (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. (%)Max</td><td>22</td><td>19</td><td>16</td><td>14</td><td>12</td><td>10</td><td>9</td><td>8</td></tr></table>										Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	D.F. (%)Max	22	19	16	14	12	10	9	8									
		Working Voltage (VDC)	6.3	10	16	25	35	50	63	100																												
		D.F. (%)Max	22	19	16	14	12	10	9	8																												
		<table><tr><td>Working Voltage (VDC)</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr><tr><td>D.F. (%)Max</td><td>12</td><td>12</td><td>12</td><td>15</td><td>15</td><td>17</td></tr></table>										Working Voltage (VDC)	160	200	250	350	400	450	D.F. (%)Max	12	12	12	15	15	17													
		Working Voltage (VDC)	160	200	250	350	400	450																														
D.F. (%)Max	12	12	12	15	15	17																																
For capacitance >1000 μ F, add 2% per another 1000 μ F. (+20℃,at 120Hz)																																						
7	温度特性 Low Temperature Characteristics (120Hz)	Impedance ratio max. (at:120Hz)																																				
		<table><tr><td>Working Voltage (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-25℃/Z+20℃</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</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>										Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	Z-25℃/Z+20℃	4	3	3	3	3	3	2	2	Z-40℃/Z+20℃	8	6	4	3	3	3	3	3
		Working Voltage (VDC)	6.3	10	16	25	35	50	63	100																												
		Z-25℃/Z+20℃	4	3	3	3	3	3	2	2																												
		Z-40℃/Z+20℃	8	6	4	3	3	3	3	3																												
		<table><tr><td>Working Voltage (VDC)</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr><tr><td>Z-25℃/Z+20℃</td><td>2</td><td>2</td><td>3</td><td>5</td><td>5</td><td>6</td></tr><tr><td>Z-40℃/Z+20℃</td><td>3</td><td>6</td><td>6</td><td>6</td><td>6</td><td>-</td></tr></table>										Working Voltage (VDC)	160	200	250	350	400	450	Z-25℃/Z+20℃	2	2	3	5	5	6	Z-40℃/Z+20℃	3	6	6	6	6	-						
Working Voltage (VDC)	160	200	250	350	400	450																																
Z-25℃/Z+20℃	2	2	3	5	5	6																																
Z-40℃/Z+20℃	3	6	6	6	6	-																																
8	高温負荷特性 Load Life	Test conditions																																				
		Duration time :2000Hrs Ambient temperature :+105℃ Applied voltage :Rated DC working voltage After test requirements at +20℃ Capacitance change :≤ ± 20% of the initial measured value Dissipation factor :≤ 200% of the initial specified value Leakage current :≤ The initial specified value																																				
9	高温無負荷特性 Shelf Life	Test conditions																																				
		Duration time :1000Hrs Ambient temperature :+105℃ Applied voltage :None After test requirements at +20℃ : Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.																																				

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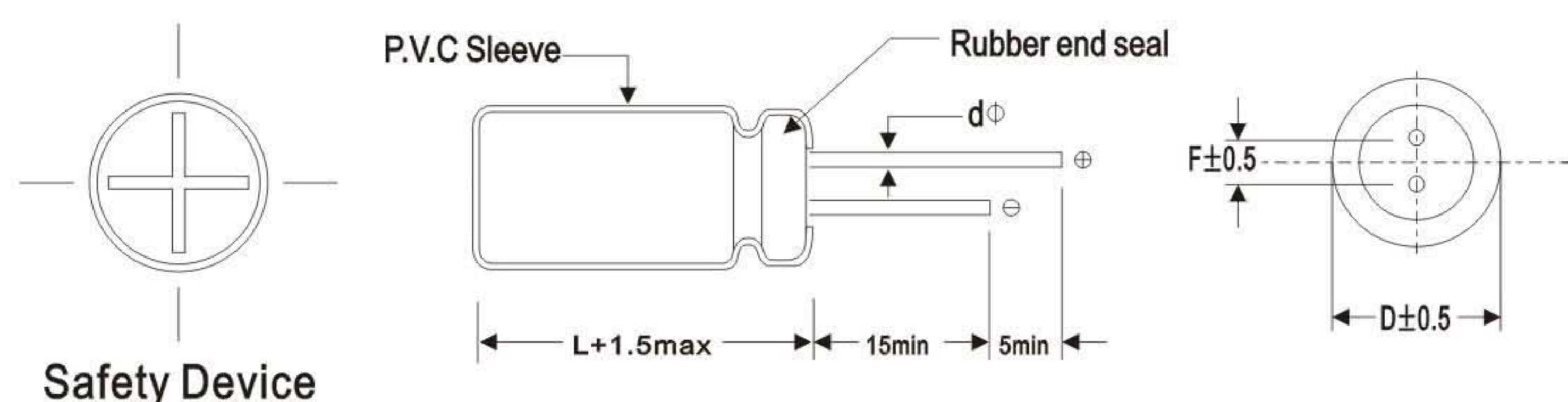
Multiplier for Ripple Current vs. Frequency

CAP(μ F)\Hz		50(60)	120	400	1K	10K	50K-100K
Multiplier	CAP≤10	0.47	0.59	0.76	0.85	0.97	1
	10<CAP≤100	0.52	0.62	0.80	0.89	0.97	1
	100<CAP≤1000	0.58	0.72	0.84	0.90	0.98	1
	1000<CAP	0.63	0.78	0.87	0.91	0.98	1

Multiplier for Ripple Current vs. Temperature

Temperature℃	45	60	70	85	105
Multiplier	2.10	1.90	1.65	1.25	1.00

Outline drawing:(Unit:mm)



DΦ	5	6.3	8	10	13	16	18	22	25
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	10
dΦ	0.5		0.6		0.8		0.8		0.8

Case Size

	φ DxL(mm)													
WV(SV) μF	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
0.47						5x11	5x11	5x11	5x11	5x11	5x11	6.3x11	6.3x11	8x12
1						5x11	5x11	5x11	6.3x11	6.3x11	6.3x11	8x12	8x12	8x12
2.2						5x11	5x11	5x11	6.3x11	6.3x11	8x12	8x12	8x12	8x14
3.3						5x11	5x11	5x11	8x12	8x12	8x12	8x12	8x14	10x15
4.7						5x11	5x11	6.3x11	8x12	8x12	8x12	10x13	10x17	10x21
10						5x11	5x11	6.3x11	8x12	10x13	10x13	10x21	10x21	13x21
22					5x11	5x11	6.3x11	8x12	10x13	10x17	10x21	13x21	13x26	16x26
33				5x11	5x11	6.3x11	6.3x11	8x14	10x17	10x21	13x21	13x26	16x26	16x32
47		5x11	5x11	6.3x11	6.3x11	6.3x11	8x12	10x13	10x21	13x21	13x26	16x26	16x32	16x36
100	5x11	5x11	5x11	8x12	8x12	8x14	10x13	10x21	16x26	16x32	16x36	18x42	22x42	22x46
220	5x11	6.3x11	6.3x11	8x12	8x14	10x13	10x21	16x26	18x32	18x36	18x42	22x46	22x50	25x50
330	6.3x11	6.3x11	8x12	8x14	10x15	10x21	13x21	16x32	18x36	22x36	22x46	25x46	-	-
470	6.3x11	8x12	8x12	10x15	10x21	13x21	13x26	16x36	22x36	22x46	-	-	-	-
1000	8x12	8x12	10x17	10x21	13x21	16x26	16x32	18x36	22x50	-	-	-	-	-
2200	10x17	10x21	13x21	13x21	16x26	16x36	18x36	25x42	-	-	-	-	-	-
3300	10x21	13x21	13x26	16x26	16x36	18x36	22x36	25x50	-	-	-	-	-	-
4700	13x21	13x26	16x26	16x36	18x36	22x36	22x46	-	-	-	-	-	-	-
6800	16x26	16x26	16x32	18x36	22x46	25x46	-	-	-	-	-	-	-	-
10000	16x32	16x36	18x36	22x36	25x46	-	-	-	-	-	-	-	-	-
15000	18x36	18x36	22x42	25x46	-	-	-	-	-	-	-	-	-	-
22000	22x42	22x46	25x46	-	-	-	-	-	-	-	-	-	-	-

Maximum Ripple Current

(mA,rms,100KHz at 105°C)

WV(SV) μF	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
0.47						25	25	20	22	22	22	24	26	29
1						40	33	30	37	37	47	47	56	67
2.2						55	45	42	55	65	80	90	97	108
3.3						60	58	55	75	85	100	138	165	185
4.7						90	65	72	92	98	120	148	182	208
10						120	110	130	170	180	185	280	290	320
22					150	150	240	220	325	335	350	430	510	575
33				155	180	250	270	320	475	485	490	560	740	745
47		150	155	180	280	290	300	420	610	615	630	700	770	840
100	170	180	265	370	450	480	530	560	730	830	940	1090	1200	1360
220	285	285	450	550	750	630	710	880	1000	1110	1380	1620	1760	-
330	390	460	590	730	1050	1150	1250	1440	1690	1800	1920	-	-	-
470	450	550	750	1010	1200	1400	1620	1790	1980	2300	-	-	-	-
1000	750	1040	1200	1650	1900	2100	2350	2600	2980	-	-	-	-	-
2200	1470	1650	1900	2100	2850	3040	3270	3430	-	-	-	-	-	-
3300	1650	1700	2410	2680	2900	3100	3410	3760	-	-	-	-	-	-
4700	2100	2100	2680	2960	3000	3350	3680	-	-	-	-	-	-	-
6800	2450	2650	2900	3550	3680	3800	-	-	-	-	-	-	-	-
10000	2700	2850	3550	3760	3900	-	-	-	-	-	-	-	-	-
15000	2950	3160	3690	3900	-	-	-	-	-	-	-	-	-	-
22000	3200	3490	3860	-	-	-	-	-	-	-	-	-	-	-

Impedance

(Ω 100KHz at ±20°C)

WV(SV) μF	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
0.47						6.30	6.30	10						
1						4.00	4.00	9.5						
2.2						2.80	2.80	6.5						
3.3						2.40	2.40	4.5						
4.7				4.0	4.0	2.40	2.40	2.40						
10			5.20	2.9	2.8	2.00	1.90	2.40						
22		2.90	2.80	2.0	1.50	1.30	0.80	1.30						
33		2.80	2.00	1.56	1.30	0.80	0.61	0.68						
47		1.44	1.36	1.30	0.80	0.70	0.56	0.46						
100	1.10	0.60	0.50	0.35	0.25	0.17	0.14	0.37						
220	0.70	0.35	0.25	0.156	0.114	0.076	0.070	0.18						
330	0.35	0.25	0.156	0.114	0.079	0.065	0.055	0.10						
470	0.25	0.150	0.114	0.076	0.065	0.055	0.050	0.09						
1000	0.20	0.076	0.065	0.049	0.040	0.036	0.034	0.076						
2200	0.13	0.049	0.040	0.036	0.034	0.032	0.028	0.068						
3300	0.06	0.039	0.035	0.030	0.026	0.026	0.026	0.062						
4700	0.036	0.034	0.026	0.024	0.024	0.024	0.024	-						
6800	0.026	0.026	0.024	0.024	0.023	0.023	-	-						
10000	0.024	0.024	0.024	0.023	0.022	-	-	-						
15000	0.024	0.024	0.023	0.022	-	-	-	-						
22000	0.023	0.023	0.022	-	-	-	-	-						