

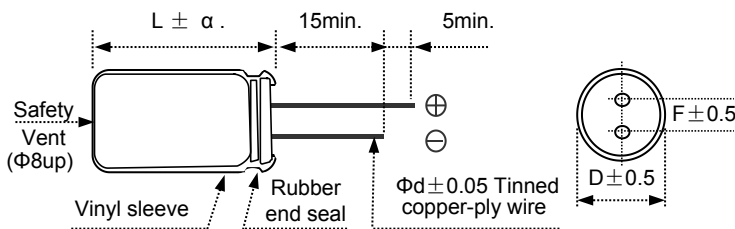
RF Series

- Low impedance, downsized
- Power supply output, 105°C 4000~8000hours
- RoHS2.0 Compliant

◆ 规格表 Specifications

项目 Items	特性参数 Characteristics										
使用温度范围 Category Temperature Range	-40 ~ +105°C										
额定工作电压范围 Rated Voltage	6.3 ~ 100V.DC										
静电容量允许偏差 Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)										
漏电流 Leakage Current	I ≤ 0.01CV or 3μA, 二者取大值 (施加额定工作电压2分钟后) Whichever is greater (After 2 minutes application of rated voltage) Note: I=Max.leakage current (μA), C=Nominal capacitance(μF), V=Rated voltage(V) (at 20°C)										
损耗角正切值 tanδ Dissipation Factor	Rated voltage(Vdc)	6.3	10	16	25	35	50	63	80	100	
	tanδ (Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08	
标称容量超过1000 μF, 则每增加1000 μF, 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. (at 20°C, 120Hz)											
低温特性 Low Temperature Characteristics (Max. Impedance Ratio)	阻抗比值不得超过下表中列出的值 The impedance ratio shall not exceed the values listed in the below table. (at 120Hz)										
	Rated voltage(V)	6.3	10	16	25	35	50	63	80	100	
	Z(-25°C)/Z(+20°C)	2	2	2	2	2	2	2	2	2	
Z(-40°C)/Z(+20°C)											
耐久性 Endurance	在105°C环境中, 不超过额定电压的范围内叠加最大允许纹波电流, 连续加载右表时间, 经恢复到20°C后, 电容器满足以下各项要求。 The following specifications shall be satisfied when the capacitors are restored to 20°C after applied within maximum allowable ripple current and not over rated voltage range for the time in the table at 105°C.										
	Capacitance change	≤ ±25% of the initial value					时间 (hrs)				
	D.F.(tanδ)	≤ 200% of the initial specified value					Φ5~Φ6.3 : 4000、Φ8~Φ10 : 5000				
	Leakage current	≤ The initial specified value					Φ13 : 7000、≥Φ16:8000				
高温储存特性 Shelf Life	在105°C环境中, 不施加电压条件下储存1000小时, 经恢复到20°C后, 电容器满足以下各项要求。 The following specifications shall be satisfied when the capacitors are restored at 20°C after exposing them for 500 hours at 105°C without voltage applied.										
	Capacitance change	≤ ±25% of the initial value									
	D.F.(tanδ)	≤ 200% of the initial specified value									
	Leakage current	≤ 200% of the initial specified value									

◆ 尺寸图 (单位: mm) DIMENSIONS (Unit:mm)



ΦD	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.5/0.6	0.6	0.6	0.8	0.8

α	(L < 20) 1.5
	(L ≥ 20) 2.0

◆ 纹波电流修正系数 Rated Ripple Current Coefficient

● 频率系数 Frequency Coefficient

Capacitance(μF)	Frequency(Hz)			
	120	1k	10k	100k
6.8~180	0.40	0.75	0.90	1.00
220~560	0.50	0.85	0.94	1.00
680~1,800	0.60	0.87	0.95	1.00
2,200~3,900	0.75	0.90	0.95	1.00
4,700 ~	0.85	0.95	0.98	1.00

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◆ 标准品一览表 Standard Ratings

WV(V)	Cap. (μF)	Case size ΦD×L (mm)	Impedance (Ω) Max. 20°C/100kHz	Rated ripple current (mA _{rms}) 105°C	WV(V)	Cap. (μF)	Case size ΦD×L (mm)	Impedance (Ω) Max. 20°C/100kHz	Rated ripple current (mA _{rms}) 105°C/100kHz
6.3	150	5x11	0.30	250	35	33	5×11	0.30	250
	330	6.3x11	0.13	405		56	6.3×11	0.13	405
	560	8x12	0.072	760		150	8×12	0.072	760
	820	8x16	0.056	995		220	8×16	0.056	995
	1,000	10x13	0.053	1,030		220	10×13	0.053	1,030
	1,200	8x20	0.041	1,250		270	8×20	0.041	1,250
	1,200	10x16	0.038	1,430		330	10×16	0.038	1,430
	1,500	10x20	0.023	1,820		470	10×20	0.023	1,820
	2,200	10x25	0.022	2,150		560	10×25	0.022	2,150
	3,300	13x20	0.021	2,360		680	13×20	0.021	2,360
	3,900	13x25	0.018	2,770		1,000	13×25	0.018	2,770
	4,700	13x30	0.16	3,290		1,200	13×30	0.16	3,290
	5,600	13x35	0.015	3,400		1,200	16×21	0.18	3,140
	5,600	16x21	0.018	3,140		1,500	13×35	0.015	3,400
6,800	16x26	0.016	3,460	1,800	16×26	0.016	3,460		
10	100	5x11	0.30	250	50	22	5×11	1.88	238
	220	6.3x11	0.13	405		56	6.3×11	1.65	385
	470	8x12	0.072	760		100	8×12	1.45	724
	680	8x16	0.056	995		120	8×16	1.22	950
	680	10x13	0.053	1,030		150	10×13	1.23	979
	1,000	8x20	0.041	1,250		180	8×20	1.16	1,190
	1,000	10x16	0.038	1,430		220	10×16	1.12	1,370
	1,200	10x20	0.023	1,820		270	10×20	0.98	1,580
	1,500	10x25	0.022	2,150		330	10×25	0.89	1,870
	2,200	13x20	0.021	2,360		470	13×20	0.078	2,050
	3,300	13x25	0.018	2,770		560	13×25	0.056	2,410
	3,900	13x30	0.16	3,290		680	13×30	0.053	2,860
	3,900	16x21	0.018	3,140		820	13×35	0.041	2,960
	4,700	13x35	0.015	3,400		820	16×21	0.039	2,730
5,600	16x26	0.016	3,460	1,000	16×26	0.036	3,010		
16	56	5x11	0.30	250	63	15	5×11	1.99	250
	120	6.3x11	0.13	405		33	6.3×11	1.88	405
	330	8x12	0.072	760		56	8×12	1.55	760
	470	8x16	0.056	995		82	8×12	1.32	995
	470	10x13	0.053	1,030		82	10×12	1.19	1,030
	680	8x20	0.041	1,250		120	8×16	0.099	1,250
	680	10x16	0.038	1,430		120	10×13	0.099	1,430
	820	10x20	0.035	1,550		180	10×14	0.096	1,820
	1,000	10x20	0.023	1,820		180	10×16	0.092	2,150
	1,200	10x25	0.022	2,150		220	10×16	0.089	2,360
	1,500	13x20	0.021	2,360		270	10×16	0.088	2,770
	2,200	13x25	0.018	2,770		330	10×16	0.089	2,770
	2,700	13x30	0.016	3,290		390	10×20	0.085	3,290
	2,700	16x21	0.018	3,140		470	13×20	0.085	3,140
3,300	13x35	0.015	3,400	470	13×25	0.081	3,400		
3,900	16x26	0.016	3,460	560	13×30	0.078	3,460		
25	47	5x11	0.30	250	80	680	13×30	0.078	2800
	100	6.3x11	0.13	405		680	16×26	0.086	2600
	220	8x12	0.072	760		680	18×20	0.099	2,500
	330	8x16	0.056	995		820	16×32	0.085	2,850
	330	10x13	0.053	1,030		820	18×26	0.092	2,800
	470	8x20	0.041	1,250		1,000	16×35	0.065	2,900
	470	10x16	0.038	1,430		1,200	16×40	0.061	3,400
	680	10x20	0.023	1,820		1,200	18×32	0.088	3,300
	820	10x25	0.022	2,150		1,500	18×35	0.058	3,400
	1,000	13x20	0.021	2,360		1,800	18×40	0.048	3,500
	1,500	13x25	0.018	2,770		68	10×13	1.55	480
	1,800	13x30	0.016	3,290		100	10×16	1.32	600
	1,800	16x21	0.018	3,140		120	10×20	1.21	800
	2,200	13x35	0.015	3,400		150	10×25	1.11	900
2,700	16x26	0.016	3,460	150	13×16	1.11	750		

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◆ 标准品一览表 Standard Ratings

WV(V)	Cap. (μF)	Case size ΦD×L (mm)	Impedance (Ω) Max. 20℃/100kHz	Rated ripple current (mA _{rms}) 105℃
80	220	13×20	0.062	1100
	330	13×25	0.047	1250
	330	16×20	0.048	1,350
	390	13×30	0.042	1,500
	470	13×35	0.036	1,650
	470	16×26	0.038	1,700
	470	18×20	0.045	1,500
	560	13×40	0.032	1,800
	680	16×32	0.032	1,850
	680	18×26	0.036	1,750
	820	16×35	0.029	2,000
	820	18×32	0.03	1,900
	1,000	16×40	0.027	2,200
	1,000	18×35	0.027	2,200
1,200	18×40	0.026	2,700	
100	6.8	5×11	1.4	125
	15	6.3×11	0.57	205
	27	8×12	0.36	355
	39	8×16	0.25	450
	47	10×13	0.17	480

WV(V)	Cap. (μF)	Case size ΦD×L (mm)	Impedance (Ω) Max. 20℃/100kHz	Rated ripple current (mA _{rms}) 105℃/100kHz
100	56	8×20	0.19	565
	68	10×16	0.11	600
	82	10×20	0.084	800
	100	13×16	0.11	750
	120	10×25	0.069	900
	150	13×20	0.062	1100
	220	13×25	0.047	1250
	220	16×20	0.048	1,350
	270	13×30	0.042	1,500
	330	13×35	0.036	1,650
	330	16×26	0.038	1,700
	330	18×20	0.045	1,500
	390	13×40	0.032	1,800
	470	16×32	0.032	1,850
	470	18×26	0.036	1,750
	560	16×35	0.029	2,000
	560	13×30	0.030	1,900
	680	16×40	0.027	2,200
	680	18×35	0.027	2,200
	820	18×40	0.026	2,700

※铝电解电容器由于在纹波电流叠加时自我发热、温度上升而老化，中心温度每升温5℃寿命减少一半。要想保持长寿命请在使用过程中降低纹波电流
 The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5℃ rise. When long life performance is required in actual use, the rms ripple current has to be reduced.