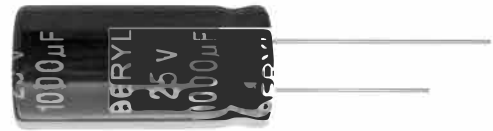


RF Series

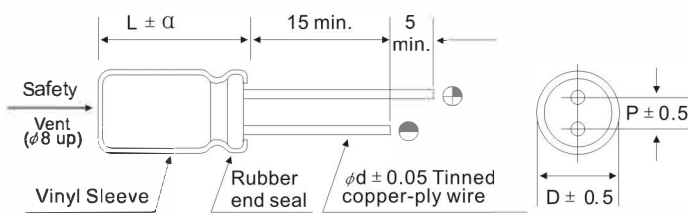
- Lower impedance at high frequency range
- Endurance with ripple current: 105°C 4,000 to 8,000hours
- RoHS Compliant



规格表 SPECIFICATIONS

项目 Items	特性参数 Characteristics		
使用温度范围 Category Temperature Range	-55~+105°C		
额定工作电压范围 Rated Voltage Range	6.3 ~ 100 V		
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, which is greater after application of rated Voltage for 2 minutes. 施加额定工作电压2分钟后读数,二者取大值 Note: I=Max. leakage current (µA), C=Nominal capacitance(µF), V=Rated voltage(V) (at 20°C)		
损耗角正切值tan δ Dissipation Factor	Rated voltage(V)	6.3 10 16 25 35 50 63 80 100	
	tan δ (Max.)	0.22 0.19 0.16 0.14 0.12 0.10 0.09 0.08 0.08 (at 20°C, 120Hz)	
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 1000 µF, add 0.02 to the value above for each 1000 µF increase. (at 20°C, 120Hz)			
低温特性 Low temperature Characteristics (Max. Impedance Ratio)	电容器低温的阻抗比值, 不应超过下表所列出的值 Impedance ratio values must not exceed values listed in below table.		
	Rated voltage(V)	6.3 10 16 25 35 50 63 80 100	
	Z(-25°C)/Z(+20°C)	4 3 2 2 2 2 2 2 2	(at 120Hz)
Z(-55°C)/Z(+20°C)	8 6 4 3 3 3 3 3 3		
耐久性 Endurance	施加额定工作电压和额定纹波电流经下表规定时间, 恢复到20°C后, 产品性能应满足以下要求 The following specifications shall be satisfied when the capacitors are restored to 20°C after application of rated voltage with rated ripple current for the specified period of time.		
	Time	Φ5 & Φ6.3:4000hrs; Φ8~Φ10:5000 hrs; Φ13:7000 hrs; Φ16 & 18:8000 hrs	
	Capacitance change	≤±20% of the initial value	
	D.F. (tan δ)	≤200% of the specified value	
	Leakage current	≤ The specified value	
高温储存特性 Shelf Life	105°C放置1000小时, 恢复到20°C后, 产品性能应满足以下要求 The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours at 105°C without voltage applied.		
	Capacitance change	≤ ±20% of the initial value	
	D.F.(tan δ)	≤ 200% of the specified value	
	Leakage current	≤ The specified value	

外形图 DIMENSIONS (mm)



ΦD	5	6.3	8	10	13	16	18
P	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	0.8	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
0.47 ~ 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

RF Series

■ 尺寸与最大纹波电流一览表 STANDARD RATINGS

Case size ΦD×L (mm)	6.3(0J)				10(1A)				16(1C)				25(1E)			
	Capacitance (μF)	Impedance (Ω max)100kHz		Rated ripple current (mA _{rms}) at 105°C 100kHz	Capacitance (μF)	Impedance (Ω max)100kHz		Rated ripple current (mA _{rms}) at 105°C 100kHz	Capacitance (μF)	Impedance (Ω max)100kHz		Rated ripple current (mA _{rms}) at 105°C 100kHz	Capacitance (μF)	Impedance (Ω max)100kHz		Rated ripple current (mA _{rms}) at 105°C 100kHz
		20°C	-10°C			20°C	-10°C			20°C	-10°C			20°C	-10°C	
5×11	150	0.50	1.0	179	100	0.50	1.0	150	47	0.50	1.0	142	47	0.50	1.0	142
6.3×11	330	0.25	0.5	294	220	0.25	0.5	279	100	0.25	0.5	265	100	0.25	0.5	265
6.3×15	470	0.18	0.36	405	330	0.18	0.36	388	220	0.18	0.36	369	150	0.18	0.36	354
8×12	680	0.12	0.24	558	470	0.12	0.24	535	330	0.12	0.24	508	220	0.12	0.24	487
8×16	1,000	0.09	0.18	732	680	0.09	0.18	695	470	0.09	0.18	667	330	0.09	0.18	640
8×20	1,200	0.08	0.16	814	1,000	0.08	0.16	773	560	0.08	0.16	726	390	0.08	0.16	697
10×13	820	0.09	0.18	964	680	0.09	0.18	915	470	0.09	0.18	878	330	0.09	0.18	843
10×16	1,200	0.068	0.106	1,054	1,000	0.068	0.136	1,011	680	0.068	0.136	951	470	0.068	0.136	913
10×20	1,500	0.052	0.104	1,224	1,200	0.052	0.104	1,162	1,000	0.052	0.104	1116	680	0.052	0.104	1038
10×25	2,200	0.045	0.09	1,446	1,500	0.045	0.09	1,344	1,200	0.045	0.09	1277	820	0.045	0.09	1200
10×30	2,700	0.037	0.074	1,698	1,800	0.037	0.074	1,579	1,500	0.037	0.074	1500	1,000	0.037	0.074	1395
13×20	3,300	0.038	0.076	1,668	2,200	0.038	0.076	1,551	1,500	0.038	0.076	1489	1,000	0.038	0.076	1414
13×25	3,900	0.03	0.06	1,954	3,300	0.03	0.06	1,875	2,200	0.03	0.06	1744	1,500	0.03	0.06	1657
13×30	4,700	0.025	0.05	2,314	3,900	0.025	0.05	2,152	2,700	0.025	0.05	2001	1,800	0.025	0.05	1901
13×35	5,600	0.022	0.044	2,516	4,700	0.022	0.044	2,390	3,300	0.022	0.044	2270	2,200	0.022	0.044	2157
13×40	6,800	0.017	0.034	2,874	5,600	0.017	0.034	2,701	3,900	0.017	0.034	2539	2,700	0.017	0.034	2412
16×21	5,600	0.029	0.058	2,906	3,900	0.029	0.058	2,702	2,700	0.029	0.058	2594	1,800	0.029	0.058	2490
16×26	6,800	0.022	0.044	2,930	5,600	0.022	0.044	2,783	3,900	0.022	0.044	2644	2,700	0.022	0.044	2512
16×30	8,200	0.019	0.038	3,270	6,800	0.019	0.038	3,041	4,700	0.019	0.038	2889	3,300	0.019	0.038	2715
16×35	10,000	0.017	0.034	3,610	8,200	0.017	0.034	3,357	5,600	0.017	0.034	3122	3,900	0.017	0.034	2934
16×40	12,000	0.015	0.03	3,716	10,000	0.015	0.03	3,455	6,800	0.015	0.03	3178	4,700	0.015	0.03	2987
18×21	6,800	0.028	0.056	3,892	5,600	0.028	0.056	3,736	3,900	0.028	0.056	3512	2,200	0.028	0.056	3266
18×26	10,000	0.02	0.04	3,945	6,800	0.02	0.04	3,747	4,700	0.02	0.04	3560	3,300	0.02	0.04	3417
18×30	12,000	0.018	0.036	4,036	8,200	0.018	0.036	3,834	5,600	0.018	0.036	3604	3,900	0.018	0.036	3423
18×35	15,000	0.016	0.032	4,184	10,000	0.016	0.032	3,891	8,200	0.016	0.032	3696	4,700	0.016	0.032	3437
18×40	18,000	0.015	0.03	4,209	1,200	0.015	0.03	3,914	10,000	0.015	0.03	3718	5,600	0.015	0.03	3495

RF Series

■ 尺寸與最大紋波電流一覽表 STANDARD RATINGS

Case size ΦD×L (mm)	Capacitance (μF)	35(1V)			50(1H)			63(1J)			100(2A)					
		Impedance (Ω max)100kHz		Rated ripple current (mA _{RMS}) at 105°C 100kHz	Impedance (Ω max)100kHz		Rated ripple current (mA _{RMS}) at 105°C 100kHz	Impedance (Ω max)100kHz		Rated ripple current (mA _{RMS}) at 105°C 100kHz	Impedance (Ω max)100kHz		Rated ripple current (mA _{RMS}) at 105°C 100kHz			
		20°C	-10°C		20°C	-10°C		20°C	-10°C		20°C	-10°C				
5×11	33	0.50	1.0	179	22	0.90	1.8	156	12	1.90	4.0	149	6.8	2.16	8.63	81
6.3×11	56	0.25	0.5	295	47	0.45	0.9	268	22	1.00	2.0	245	10	1.70	6.81	182
6.3×15	100	0.18	0.36	408	68	0.31	0.62	364	39	0.61	1.400	334				
8×12	150	0.12	0.24	559	100	0.22	0.44	489	68	0.34	0.750	406	22	1.43	3.97	236
8×16	220	0.09	0.18	734	150	0.16	0.32	638	100	0.27	0.650	538	39	0.74	1.93	315
8×20	270	0.08	0.16	749	180	0.12	0.24	734	150	0.21	0.520	694	56	0.39	1.32	500
10×13	220	0.09	0.18	894	120	0.16	0.32	831	100	0.26	0.510	793	47	0.48	1.43	430
10×16	330	0.063	0.136	1,054	220	0.21	0.380	950	180	0.13	0.26	856	68	0.240	0.99	537
10×20	470	0.052	0.104	1,226	220	0.088	0.18	1,056	180	0.15	0.290	895	82	0.23	0.56	580
	680	0.055	0.1	1,360	470	0.065	0.11	1,062					100	0.25	0.62	690
10×25	560	0.045	0.09	1,445	330	0.073	0.15	1,254	220	0.13	0.260	1,056				
					470	0.078	0.14	1,256								
10×30	680	0.037	0.074	1,694	390	0.054	0.11	1,504	330	0.09	0.180	1,304				
10×40					1,000	0.064	0.13	1,668	560	0.10	0.200	1,551	220	0.79	1.48	920
13×16													100	0.15	0.62	859
13×20	680	0.038	0.076	1,764	390	0.059	0.12	1,693	330	0.09	0.170	1,625	150	0.11	0.48	972
					680	0.067	0.13	1,721	470	0.13	0.210	1,650	220	0.08	0.15	1,290
13×25	1,000	0.03	0.06	1,956	560	0.044	0.088	1,842	390	0.07	0.140	1,725	220	0.09	0.38	1,003
					1,000	0.05	0.100	2,080	560	0.052	0.110	1,823				
13×30	1,200	0.025	0.05	2,314	680	0.039	0.078	2,222	470	0.055	0.110	2,094	270	0.081	0.38	1,205
13×35	1,500	0.022	0.044	2,514	820	0.033	0.066	2,295	680	0.047	0.094	2,278	330	0.054	0.21	1,484
					1,500	0.032	0.066	2,372								
13×40	1,800	0.017	0.034	2,875	1000	0.029	0.058	2,504	820	0.042	0.084	2,378	390	0.055	0.20	1,526
16×21	1200	0.029	0.058	2914	680	0.048	0.096	2545	470	0.059	0.120	2475	220	0.100	0.44	763
					1000	0.051	0.103	2623								
16×25					1500	0.032	0.066	2720					330	0.073	0.28	1282
16×26	1,800	0.022	0.044	3064	1000	0.034	0.068	2849	680	0.050	0.100	2650				
16×30	2,200	0.019	0.038	3095	1200	0.028	0.056	2904	820	0.043	0.086	2,675				
16×32													470	0.041	0.15	1,724
16×35	2,700	0.017	0.034	3,156	1,500	0.025	0.05	2,935	1,000	0.036	0.072	2,778	560	0.036	0.13	1,763
					2,200	0.023	0.052	3,050								
16×40	3,300	0.015	0.03	3,212	1,800	0.021	0.042	3,206	1,200	0.030	0.060	2,854	680	0.034	0.10	1,845
18×21	1,800	0.028	0.056	3,495	820	0.042	0.084	3,286	680	0.055	0.110	2,995	330	0.056	0.18	1,207
					1,500	0.025	0.057	3,341								
18×25	2,200	0.02	0.04	3,545	1,200	0.029	0.058	3,416	820	0.043	0.086	3,176				
18×26													470	0.048	0.16	1,763
18×30	2,700	0.018	0.036	3,634	1,800	0.025	0.05	3,501	1,200	0.032	0.064	3,290				
18×32													560	0.039	0.14	1,846
18×35	3,300	0.016	0.032	3,784	2,700	0.023	0.046	3,594	1,500	0.030	0.060	3,343				
18×36													680	0.04	0.11	2,082
18×40	3,900	0.015	0.03	3,804	2,700	0.02	0.04	3,651	1,800	0.025	0.050	3,468	820	0.033	0.10	2,327