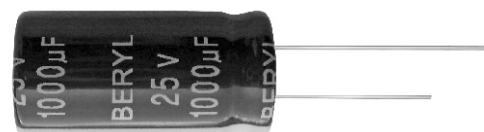


RF Series

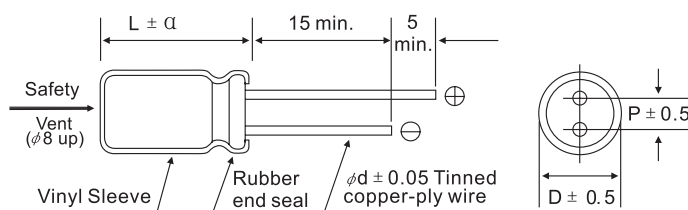
- Lower impedance at high frequency range
- Endurance with ripple current: 105°C 4,000 to 8,000hours
- RoHS Compliant



■ 規格表 SPECIFICATIONS

項目 Items	特性參數 Characteristics										
使用溫度範圍 Category Temperature Range	-55~+105°C										
額定工作電壓範圍 Rated Voltage Range	6.3 ~ 100 V										
靜電容量允許偏差 Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)										
漏電流 Leakage Current	I ≤ 0.01CV or 3 μA, which is greater after application of rated Voltage for 2 minutes. 施加額定工作電壓2分鐘後讀數, 二者取大值 Note: I=Max.leakage current (uA), C=Nominal capacitance(uF), V=Rated voltage(V) (at 20°C)										
損耗角正切值 tan δ Dissipation Factor	Rated voltage(V)	6.3	10	16	25	35	50	63	80	100	(at 20°C, 120Hz)
	tan δ (Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08	
	標稱容量超過1000 μF, 則每增加1000 μF, 損耗角正切值增加0.02 When nominal capacitance exceeds 1000 μF, add 0.02 to the value above for each 1000 μF increase. (at 20°C, 120Hz)										
低溫特性 Low temperature Characteristics (Max. Impedance Ratio)	電容器低溫的阻抗比值, 不應超過下表所列出的值 Impedance ratio values must not exceed values listed in below table.										
	Rated voltage(V)	6.3	10	16	25	35	50	63	80	100	(at 20°C, 120Hz)
	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	2	2	2	
	Z(-55°C)/Z(+20°C)	8	6	4	3	3	3	3	3	3	
耐久性 Endurance	施加額定工作電壓和額定紋波電流經下表規定時間, 恢復到20°C後, 產品性能應滿足以下要求 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									
高溫儲存特性 Shelf Life	105°C 放置1000小時, 恢復到20°C後, 產品性能應滿足以下要求 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									

■ 外形圖 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

■ 紋波電流補正係數 RATED RIPPLE CURRENT COEFFICIENT

- 頻率係數 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

■ 尺寸與最大紋波電流一覽表 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 (mArms) at 105°C 100kHz	Capacitance (μF)	Impedance (Ω max)100kHz		Rated ripple current (mArms) at 105°C 100kHz	Capacitance (μF)	Impedance (Ω max)100kHz		Rated ripple current (mArms) at 105°C 100kHz	Capacitance (μF)	Impedance (Ω max)100kHz		Rated ripple current (mArms) 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	178	47	0.50	1.0	179	47	0.50	1.0	179
6.3×11	330	0.25	0.5	294	220	0.25	0.5	294	100	0.25	0.5	294	100	0.25	0.5	294
6.3×15	470	0.18	0.36	405	330	0.18	0.36	405	220	0.18	0.36	405	150	0.18	0.36	405
8×12	680	0.12	0.24	558	470	0.12	0.24	558	330	0.12	0.24	558	220	0.12	0.24	558
8×16	1,000	0.09	0.18	732	680	0.09	0.18	734	470	0.09	0.18	735	330	0.09	0.18	735
8×20	1,200	0.08	0.16	814	1,000	0.08	0.16	814	560	0.08	0.16	819	390	0.08	0.16	819
10×13	820	0.09	0.18	764	680	0.09	0.18	768	470	0.09	0.18	768	330	0.09	0.18	764
10×16	1,200	0.068	0.106	1,054	1,000	0.068	0.136	1,056	680	0.068	0.136	1,054	470	0.068	0.136	1,054
10×20	1,500	0.052	0.104	1,224	1,200	0.052	0.104	1,224	1,000	0.052	0.104	1,224	680	0.052	0.104	1,224
10×25	2,200	0.045	0.09	1,446	1,500	0.045	0.09	1,445	1,200	0.045	0.09	1,446	820	0.045	0.09	1,445
10×30	2,700	0.037	0.074	1,698	1,800	0.037	0.074	1,697	1,500	0.037	0.074	1,694	1,000	0.037	0.074	1,698
13×20	3,300	0.038	0.076	1,668	2,200	0.038	0.076	1,668	1,500	0.038	0.076	1,666	1,000	0.038	0.076	1,664
13×25	3,900	0.03	0.06	1,954	3,300	0.03	0.06	1,958	2,200	0.03	0.06	1,954	1,500	0.03	0.06	1,954
13×30	4,700	0.025	0.05	2,314	3,900	0.025	0.05	2,314	2,700	0.025	0.05	2,316	1,800	0.025	0.05	2,315
13×35	5,600	0.022	0.044	2,516	4,700	0.022	0.044	2,516	3,300	0.022	0.044	2,514	2,200	0.022	0.044	2,516
13×40	6,800	0.017	0.034	2,874	5,600	0.017	0.034	2,875	3,900	0.017	0.034	2,879	2,700	0.017	0.034	2,878
16×21	5,600	0.029	0.058	2,216	3,900	0.029	0.058	2,215	2,700	0.029	0.058	2,214	1,800	0.029	0.058	2,219
16×26	6,800	0.022	0.044	2,564	5,600	0.022	0.044	2,564	3,900	0.022	0.044	2,568	2,700	0.022	0.044	2,364
16×30	8,200	0.019	0.038	3,014	6,800	0.019	0.038	3,015	4,700	0.019	0.038	3,014	3,300	0.019	0.038	3,014
16×35	10,000	0.017	0.034	3,156	8,200	0.017	0.034	3,156	5,600	0.017	0.034	3,156	3,900	0.017	0.034	3,156
16×40	12,000	0.015	0.03	3,716	10,000	0.015	0.03	3,715	6,800	0.015	0.03	3,715	4,700	0.015	0.03	3,715
18×21	6,800	0.028	0.056	2,492	5,600	0.028	0.056	2,495	3,900	0.028	0.056	2,495	2,200	0.028	0.056	2,495
18×26	10,000	0.02	0.04	2,745	6,800	0.02	0.04	2,745	4,700	0.02	0.04	2,746	3,300	0.02	0.04	2,742
18×30	12,000	0.018	0.036	3,336	8,200	0.018	0.036	3,334	5,600	0.018	0.036	3,334	3,900	0.018	0.036	3,334
18×35	15,000	0.016	0.032	3,684	10,000	0.016	0.032	3,689	8,200	0.016	0.032	3,684	4,700	0.016	0.032	3,685
18×40	18,000	0.015	0.03	3,809	1,200	0.015	0.03	3,808	10,000	0.015	0.03	3,805	5,600	0.015	0.03	3,804

Case size ΦD×L (mm)	35(1V)				50(1H)				63(1J)			
	Capacitance (μF)	Impedance (Ω max)100kHz		Rated ripple current (mArms) at 105°C 100kHz	Capacitance (μF)	Impedance (Ω max)100kHz		Rated ripple current (mArms) at 105°C 100kHz	Capacitance (μF)	Impedance (Ω max)100kHz		Rated ripple current (mArms) at 105°C 100kHz
		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
6.3×11	56	0.25	0.5	295	47	0.45	0.9	268	22	1.00	2.0	245
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
8×16	220	0.09	0.18	734	120	0.16	0.32	638	100	0.27	0.650	538
8×20	270	0.08	0.16	315	180	0.12	0.24	734	150	0.21	0.520	694
10×13	220	0.09	0.18	765	120	0.16	0.32	625	100	0.26	0.510	548
10×16	330	0.063	0.136	1,054	180	0.13	0.26	856	120	0.19	0.380	604
10×20	470	0.052	0.104	1,226	220	0.088	0.18	1,056	180	0.15	0.290	895
10×25	560	0.045	0.09	1,445	330	0.073	0.15	1,254	220	0.13	0.260	1,056
10×30	680	0.037	0.074	1,694	390	0.054	0.11	1,504	330	0.09	0.180	1,304
13×20	680	0.038	0.076	1,664	390	0.059	0.12	1,486	330	0.09	0.170	1,294
13×25	1,000	0.03	0.06	1,956	560	0.044	0.088	1,842	390	0.07	0.140	1,725
13×30	1,200	0.025	0.05	2,314	680	0.039	0.078	2,222	470	0.055	0.110	2,094
13×35	1,500	0.022	0.044	2,514	820	0.033	0.066	2,295	680	0.047	0.094	2,278
13×40	1,800	0.017	0.034	2,875	1000	0.03	0.058	2,504	820	0.042	0.084	2,568
16×21	1200	0.029	0.058	2,214	680	0.048	0.096	1,845	470	0.059	0.120	1,775
16×26	1,800	0.022	0.044	2,564	1000	0.034	0.068	2,243	680	0.050	0.100	2,165
16×30	2,200	0.019	0.038	3,015	1200	0.028	0.056	2,704	820	0.043	0.086	2,675
16×35	2,700	0.017	0.034	3,156	1,500	0.025	0.05	2,804	1,000	0.036	0.072	2,778
16×40	3,300	0.015	0.03	3,712	1,800	0.021	0.042	3,206	1,200	0.030	0.060	2,854
18×21	1,800	0.028	0.056	2,495	820	0.042	0.084	1,986	680	0.055	0.110	2,295
18×26	2,200	0.02	0.04	3,745	1,200	0.029	0.058	2,616	820	0.043	0.086	2,594
18×30	2,700	0.018	0.036	3,334	1,800	0.025	0.05	3,001	1,200	0.032	0.064	2,954
18×35	3,300	0.016	0.032	3,684	2,200	0.023	0.046	3,105	1,500	0.030	0.060	3,104
18×40	3,900	0.015	0.03	3,804	2,700	0.02	0.04	3,406	1,800	0.025	0.050	3,216

RF Series

RF Series

■ 尺寸與最大紋波電流一覽表 STANDARD RATINGS

Case size ΦD×L (mm)	WV(V)	80(1K)			100(2A)				
		Capacitance (μF)	Impedance (Ω max.)100kHz		Rated ripple current (mArms) (at 105°C 100kHz)	Capacitance (μF)	Impedance (Ω max.)100kHz		Rated ripple current (mArms) (at 105°C 100kHz)
			20°C	-10°C			20°C	-10°C	
5×11		10	2.04	7.49	128	6.8	2.16	8.63	81
6×11		33	0.65	2.61	214	10	1.70	6.81	182
8×12		56	0.41	1.59	376	22	1.43	3.97	236
8×16		68	0.28	1.14	463	39	0.74	1.93	315
8×20		100	0.24	0.96	599	56	0.39	1.32	500
10×13		82	0.28	1.09	550	47	0.48	1.43	430
10×16		100	0.24	0.99	604	68	0.24	0.99	537
10×20		120	0.22	0.83	687	82	0.23	0.56	580
10×20		150	0.14	0.59	797	100	0.25	0.62	690
13×16		180	0.15	0.49	859	100	0.15	0.62	859
13×20		220	0.12	0.53	971	150	0.11	0.48	972
13×20						220	0.079	0.148	1290
13×25		330	0.075	0.29	1216	220	0.088	0.38	1003
13×30		390	0.064	0.26	1560	270	0.081	0.38	1205
13×35		470	0.054	0.21	1712	330	0.054	0.21	1484
13×40		560	0.045	0.19	1872	390	0.055	0.20	1526
16×21		330	0.073	0.26	1320	220	0.100	0.44	763
16×25		470	0.069	0.24	1367	330	0.073	0.28	1282
16×32		680	0.041	0.15	1920	470	0.041	0.15	1724
16×35		820	0.036	0.13	2080	560	0.036	0.13	1763
16×40		1,000	0.034	0.11	2288	680	0.034	0.10	1845
18×21		470	0.085	0.33	1446	330	0.056	0.18	1207
18×26		680	0.068	0.26	1560	470	0.048	0.16	1763
18×32		820	0.053	0.18	1680	560	0.039	0.14	1846
18×36		1,000	0.034	0.11	1764	680	0.034	0.11	2082
18×40		1,200	0.033	0.10	2166	820	0.033	0.10	2327