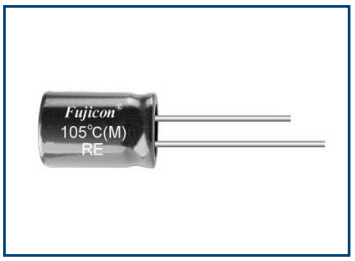
RE Series

WIDE TEMPERATURE

寬溫品



- Wide temperature range of –40(-25)~+105°C
  適用於-40(-25)~+105°C 的寬溫範圍
- Standard series for general purposes
  標準品通用型
- Endurance 3000 hours
  耐久性 3000 小時
- Comply with the RoHS & REACH
  符合 RoHS 與 REACH

RK → Longer life 長壽命化 → RE

☐ SPECIFICATIONS 特性表

Items 項目	Characteristics 主要特性	
Category Temperature Range 工作溫度範圍	-40 ~ +105°C	-25 ~ +105°C
Voltage Range 額定工作電壓範圍	6.3 ~ 100V	160 ~ 450V
Capacitance Range 靜電容量範圍	0.47 ~ 15000μF	1 ~ 470μF
Capacitance Tolerance 靜電容量允許偏差	±20% at 120Hz, 20°C	
Leakage Current 漏電流	Leakage current ≤0.01CV or 3μA, whichever is greater (after 2 minutes application of rated voltage at 20°C) 漏電流 ≤0.01CV 或 3μA 取較大值(在 20°C 環境中施加額定工作電壓 2 分鐘後)	Leakage current ≤0.02CV + 15μA (after 5 minutes application of rated voltage at 20°C) 漏電流 ≤0.02CV + 15μA(在 20°C 環境中施加額定工作電壓 5 分鐘後)
	C: Nominal capacitance (μF) 標稱靜電容量, V: Rated voltage (V) 額定電壓	
Dissipation Factor (tan δ) 損耗角正切	When nominal capacitance is over 1000μF, tan δ shall be added 0.02 to the listed value with increase of every 1000μF. 當標稱靜電容量大於 1000μF，其標稱靜電容量每增加 1000μF，損耗角正切增加 0.02。 Measurement frequency 測試頻率: 120Hz, Temperature 溫度: 20°C	

Rated Voltage (V) 額定工作電壓	6.3	10	16	25	35	50	63	100	160~250	350~450
tan δ (max.) 最大損耗角正切	0.24	0.20	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.20

Stability at Low Temperature 低溫特性 — Measurement frequency 測試頻率: 120Hz

Rated Voltage (V) 額定工作電壓		6.3	10	16	25~100	160~350	400, 450
Impedance Ratio 阻抗比	Z(-25°C) / Z(+20°C)	4	3	2	2	3	8
	Z(-40°C) / Z(+20°C)	8	6	4	3	4	—

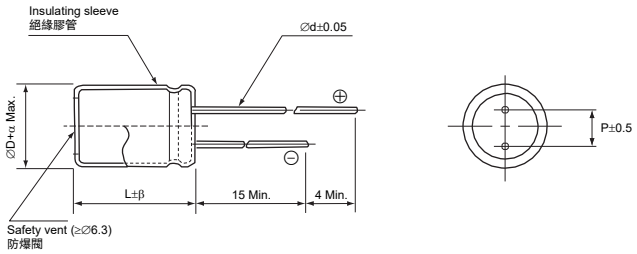
Endurance 耐久性 — When the capacitors are restored to 20°C after 3000 hours application of the rated voltage at 105°C, they meet the characteristics listed below.
在 105°C 環境中施加額定工作電壓 3000 小時後，待電容器恢復至 20°C 時進行測量，電容器的特性符合下表要求。

Capacitance Change 靜電容量變化率	Within ±20% of initial measured value 初始值的±20%以內
Dissipation Factor 損耗角正切	≤200% of initial specified value 不大於規範值的 200%
Leakage Current 漏電流	≤initial specified value 不大於規範值

Shelf Life 高溫貯存特性 — When the capacitors are restored to 20°C after leaving under no load at 105°C for 1000 hours, they meet the specified value for endurance characteristics listed above.
在 105°C 環境中無負荷放置 1000 小時後，待電容器恢復至 20°C 時進行測量，電容器的特性符合耐久性特性中所列的規定值。

Marking 標識 — Printed with white colour on black sleeve (PVC) or printed with white colour on green sleeve (PET).
黑色膠管白字印刷（PVC）或綠色膠管白字印刷（PET）。

☐ DRAWING & DIMENSIONS 外形圖及尺寸 (Unit: mm)



∅D	5	6.3	8 (L≤11.5)	8 (L>16)	10	13	16	18	22	25
P	2.0	2.5	3.5		5.0		7.5		10.0	12.5
∅d	0.5			0.6			0.8			
β	1.5				2.0					
α	0.5								1.0	

☐ FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT 紋波電流頻率補償系數

Frequency 頻率		50Hz	120Hz	300Hz	1KHz	10KHz~
Coefficient 系數	0.47 ~ 47μF	0.75	1.00	1.35	1.55	2.00
	68 ~ 680μF	0.80	1.00	1.25	1.34	1.50
	1000 ~ 15000μF	0.85	1.00	1.10	1.13	1.15

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5~10°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced. 鋁電解電容器在疊加紋波電流後會引起發熱，溫度每上升 5~10°C 壽命會減半。若要保持長壽命性能，請在使用過程中適當降低紋波電流。

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CAT.2026/V2.1

RE Series

☐ DIMENSIONS & STANDARD RATINGS 規格尺寸及標準參數

WV / Code 代碼 / μF		6.3		10		16		25		35		50		63	
		0J		1A		1C		1E		1V		1H		1J	
0.47	R47											5 x 11	8	5 x 11	8
0.68	R68											5 x 11	9	5 x 11	9
1	010											5 x 11	11	5 x 11	13
2.2	2R2											5 x 11	20	5 x 11	15
3.3	3R3											5 x 11	30	5 x 11	19
4.7	4R7											5 x 11	33	5 x 11	22
6.8	6R8											5 x 11	42	5 x 11	34
10	100					5 x 11	50	5 x 11	38	5 x 11	41	5 x 11	50	5 x 11	50
22	220			5 x 11	50	5 x 11	54	5 x 11	57	5 x 11	61	5 x 11 (6.3 x 11.5)	78 (85)	6.3 x 11.5	86
33	330			5 x 11	60	5 x 11	64	5 x 11	69	5 x 11	75	6.3 x 11.5	95	6.3 x 11.5	100
47	470	5 x 11	62	5 x 11	71	5 x 11	80	5 x 11	106	5 x 11 (6.3 x 11.5)	106 (110)	6.3 x 11.5	125	6.3 x 11.5	130
68	680	5 x 11	80	5 x 11	83	5 x 11	85	5 x 11	114	6.3 x 11.5	121	8 x 11.5	144	8 x 11.5 (8 x 16)	128 (135)
100	101	5 x 11	95	5 x 11	100	5 x 11 (6.3 x 11.5)	120 (135)	5 x 11 (6.3 x 11.5)	120 (145)	6.3 x 11.5 (8 x 11.5)	150 (180)	8 x 11.5 (10 x 12)	188 (200)	10 x 12	295
220	221	5 x 11	150	5 x 11 (6.3 x 11.5)	155 (175)	6.3 x 11.5	190	6.3 x 11.5 (8 x 11.5)	190 (236)	8 x 11.5	270	10 x 12 (10 x 16)	345 (370)	10 x 16	390
330	331	6.3 x 11.5	170	6.3 x 11.5	200	8 x 11.5	270	8 x 11.5 (10 x 12)	310 (335)	10 x 12 (8 x 16)	395 (455)	10 x 16 (10 x 20)	420 (460)	10 x 20 (13 x 21)	510 (560)
470	471	6.3 x 11.5	230	6.3 x 11.5 (8 x 11.5)	260 (290)	8 x 11.5	310	8 x 11.5 (8 x 16) (10 x 12)	325 (350) (380)	10 x 16 (10 x 20)	520 (550)	13 x 21	560	13 x 21 (13 x 25)	650 (700)
680	681	8 x 11.5	314	8 x 11.5 (8 x 16)	345 (390)	8 x 16 (10 x 16)	480 (520)	10 x 16	520	10 x 16 (10 x 20)	550 (590)	13 x 25	720	16 x 25	800
1000	102	8 x 11.5	380	8 x 11.5 (8 x 16) (10 x 12)	400 (425) (585)	8 x 20 (10 x 16) (10 x 20)	580 (645) (700)	10 x 20 (13 x 21)	775 (810)	13 x 21 (13 x 25)	845 (930)	16 x 25	930	16 x 25	1080
2200	222	10 x 12 (10 x 16)	630 (690)	10 x 20 (13 x 21)	760 (815)	13 x 21	760	13 x 21 (13 x 25)	890 (1110)	13 x 25 (16 x 25)	1080 (1260)	16 x 35 (18 x 35)	1470 (1530)	16 x 31 (18 x 35)	1565 (2180)
3300	332	10 x 20 (13 x 21)	845 (920)	13 x 25	1130	13 x 21 (13 x 25)	980 (1170)	16 x 25	1440	16 x 31 (16 x 35)	1420 (1480)	18 x 35	1770		
4700	472	13 x 25	1240	13 x 25	1280	16 x 25	1320	16 x 31	1650	18 x 35	1900	22 x 40	2340		
6800	682	16 x 25	1480	16 x 31	1510	16 x 31	1930	18 x 35	2160	22 x 40					
10000	103	16 x 31	1920	16 x 35	2220	18 x 35	2350								
15000	153	18 x 31	2390												

WV / Code 代碼 / μF		100		160		200		250		350		400		450	
		2A		2C		2D		2E		2V		2G		2W	
1	010	5 x 11	19	5 x 11	16	5 x 11	16	6.3 x 11.5	16	6.3 x 11.5	16	6.3 x 11.5 (8 x 11.5)	16 (20)	8 x 11.5	17
2.2	2R2	5 x 11	30	6.3 x 11.5	23	6.3 x 11.5	30	6.3 x 11.5	35	8 x 11.5	38	6.3 x 11.5 (8 x 11.5)	32 (39)	8 x 11.5	39
3.3	3R3	5 x 11	32	6.3 x 11.5	34	6.3 x 11.5	39	8 x 11.5	42	8 x 11.5	43	6.3 x 11.5 (8 x 11.5)	40 (45)	8 x 11.5	45
4.7	4R7	5 x 11	38	6.3 x 11.5	40	8 x 11.5	46	8 x 11.5	45	10 x 12	55	8 x 11.5 (10 x 12)	50 (55)	10 x 12	55
6.8	6R8	5 x 11	52	8 x 11.5	48	8 x 11.5	52	8 x 11.5 (10 x 12)	52 (57)	10 x 16	62	8 x 16 (10 x 16)	65 (80)	10 x 16	90
10	100	6.3 x 11.5	73	8 x 11.5 (10 x 12)	65 (60)	8 x 11.5 (10 x 12)	65 (70)	10 x 12 (10 x 16)	92 (116)	10 x 16	95	10 x 16 (10 x 20)	95 (105)	10 x 20 (13 x 21)	120 (125)
22	220	6.3 x 11.5	104	10 x 12	96	8 x 16 (10x16)	115 (140)	10 x 16 (10 x 20)	140 (145)	13 x 21	220	13 x 21 (13 x 25) (16 x 20)	160 (170) (185)	13 x 25	185
33	330	8 x 11.5	150	10 x 20	155	10 x 20	170	13 x 21	190	13 x 25	215	13 x 25 (16 x 25)	185 (245)	16 x 20 (16 x 25)	207 (260)
47	470	10 x 12	190	13 x 21	220	13 x 21	220	13 x 25	250	16 x 25	285	16 x 25 (16 x 31)	295 (320)	16 x 25 (16 x 31)	305 (313)
68	680	10 x 16	239	13 x 21	275	13 x 25	270	16 x 25	365	16 x 31	370	16 x 31 (16 x 35)	350 (405)	16 x 31 (16 x 35) (18 x 31)	415 (435) (450)
100	101	10 x 20	320	13 x 25	355	16 x 25	385	16 x 31	485	18 x 35	485	18 x 31 (18 x 35)	420 (520)	18 x 35 (18 x 40)	540 (560)
220	221	13 x 25	450	16 x 31	660	16 x 35 (18 x 31)	695 (755)	18 x 35	760						
330	331	13 x 25	625	18 x 35	820	18 x 35 (18 x 40)	820 (965)								
470	471	16 x 25	780	18 x 40	975									Case size 尺寸	Ripple current 紋波電流
680	681	16 x 35	1021												

•Case size ∅D×L(mm), ripple current (mA rms) at 105°C, 120Hz •尺寸∅D×L(mm)，紋波電流(mA rms)於 105°C, 120Hz

- Please refer to page 21 “Taping Specifications” & page 23 “Lead Forming & Cutting” about the taped or formed product spec. 編帶與引線成型標準請查閱第 21 頁“編帶標準”及第 23 頁“引線成型與剪腳”。
- Please refer to page 22 “Packaging Specifications” for the minimum package quantity. 最小包裝數量請查閱第 22 頁“包裝標準”。
- Please refer to page 18 for the Part Number System. 產品編碼規則請查閱第 18 頁。

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