

ALUMINUM ELECTROLYTIC CAPACITORS

TY series

FEATURES 特性

- 105°C Miniaturized

105°C 小型化



SPECIFICATIONS

Item 項目	Performance Characteristics 特性						
Operating Temperature Range 工作溫度範圍	-40°C ~ +105°C						
Rated Voltage Range 額定電壓範圍	160V ~ 500 W.V.						
Capacitance Range 靜電容量範圍	0.22~680uF						
Capacitance Tolerance 靜電容量誤差	±20% (20°C, 120Hz)						
Leakage Current 洩漏電流	Nominal Capacitance ≤ 10 μF I=0.02CV +25uA(After 2 minutes) 額定容量 ≤ 10 μF I=0.02CV +25uA(2 分鐘後) Nominal Capacitance > 10 μF I=0.02CV(After 2 minutes) 額定容量 > 10 μF I=0.02CV(2 分鐘後)) I=Leakage Current(μA), C=Nominal Capacitance(μF), V=Rated Voltage(V) I=洩漏電流(μA), C=額定容量(μF), V=額定電壓(V)						
Dissipation Factor (tan δ) 散逸因素 (損失角正切值)	Rated voltage (V) 額定電壓(V)	160~200	250	400~420	450	500	MAX (20°C, 120Hz)
	Tan δ 損失角正切值	0.15	0.15	0.20	0.20	0.20	
Low Temperature Stability Impedance Ratio(MAX) 低溫特性阻抗比率	Rated voltage (V) 額定電壓(V)	160~200	250	400	450	500	MAX (120Hz)
	Z(-25°C)/Z(+20°C)	3	5	8	8	8	
	Z(-40°C)/Z(+20°C)	8	8	17	17	17	

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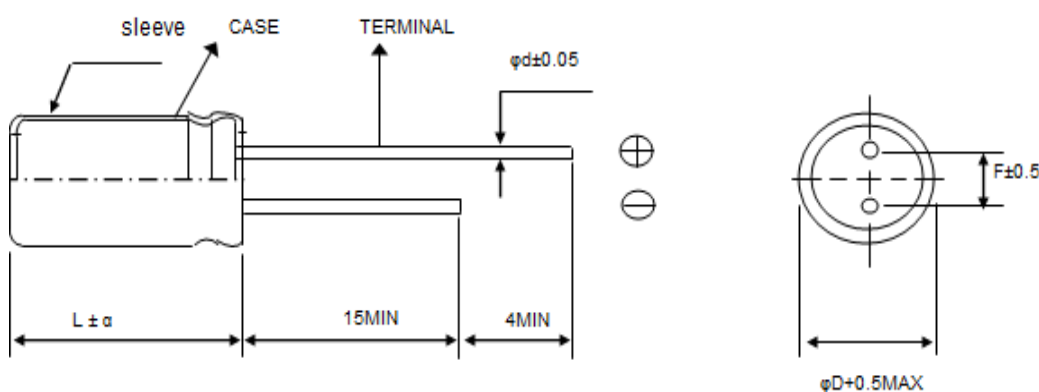
Load Life 負荷壽命	After 2000 hours' application of rated voltage at 105°C, capacitors meet the characteristics requirement listed as following. 在 105°C 下印加額定電壓 2000 小時後, 電容特性需滿足以下要求。	
	Leakage Current 洩漏電流	Not more than the specified value. 不超出規格值。
	Capacitance Change 容量變化率	Within ±20% of the initial value 初始值±20%以內
	Dissipation Factor 散逸因素	Not more than 200% of the specified value 不超出規格值的 2 倍
Shelf Life 放置壽命	After leaving capacitors under no load at 105°C for 1000 hours, the capacitors shall meet the following requirements 電容放置在 105°C 無印加電壓的情況下儲存 1000 小時後, 電容需符合以下要求。	
	Leakage Current 洩漏電流	Not more than the specified value. 不超出規格值。
	Capacitance Change 容量變化率	Within ±20% of the initial value 初始值±20%以內
	Dissipation Factor 散逸因素	Not more than 200% of the specified value 不超出規格值的 2 倍
Standard 參照標準	According to JIS C-5101 依據 JIS C-5101	

Frequency coefficient

頻率系數

Frequency(Hz)	60(50)	120	1k	10k	≥ 100k
Coefficient	0.8	1.0	1.45	1.65	1.75

DIMENSIONS 尺寸(mm)



ϕD	6.3	8	10	12/12.5/13	16	18	20	22
ϕd	0.5	0.6	0.6	0.6	0.8	0.8	0.8	1.0
F	2.5	3.5	5.0	5.0	7.5	7.5	10.0	10.0
α	$L \leq 19: \alpha = 1.5, \quad L \geq 20: \alpha = 2.0$							
$\phi D \geq 20 + 1.0 \text{ MAX}$								

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STANDARD SIZES AND RIPPLE CURRENT

尺寸及紋波標準

SIZE ϕ DxL(mm)Ripple Current(mA 105°C 120Hz) r.m.s

W.V		160(2C)		200(2D)		220(2B)		250(2E)		400(2G)		420(2H)		450(2W)		500(2Z)	
Cap(μ F)		Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current
0.22	R22									5x11	7						
1	010									6.3x9 6.3x11	17 19			6.3x11 8x11.5	19 27	6.3x11	19
2.2	2R2			8x11.5	17			6.3x11	20	6.3x11 8x8	22 20			8x11.5 10x12.5	37 43	10x16	70
3.3	3R3	5x11	15	6.3x11	22			6.3x11 8x11.5	25 29	6.3x11 8x11.5 10x12.5	25 35 45			8x11.5 10x12.5 12.5x20	42 60 75	10x16	75
4.7	4R7	5x11 6.3x11	20 22	6.3x11 8x11.5	30 50			8x9 8x11.5 6.3x11	45 53 30	6.3x16 8x9 10x11.5 10x16	47 50 62 70	8x11.5	60	6.3x18 8x11.5 10x10 10x16	50 50 63 70	10x12.5	67
5.6	5R6									8x11.5	70					8x11.5	100
6.8	6R8	6.3x11	45	6.3x11 8x11.5	45 60			8x11.5	65	8x11.5 10x11.5 10x16	65 70 75	8x12 10x12.5	70 75	8x12 10x12.5	72 72	8x16 10x20 10x23	100 120 130
8.2	8R2			6.3x11	58					8x11.5 10x11.5 10x16	75 78 80	8x11.5	80	8x15	80	8x16 10x12.5	100 100
10	100	8x11.5	60	8x11.5 10x12.5	70 57			8x16 10x12.5	75 60	8x11.5 8x20 10x11.5 10x20 12.5x12	72 78 80 90 90	8x16 10x12.5	90 90	8x15 10x12.5 12.5x15 12.5x20	100 100 120 145	8x20 10x16 12.5x16	100 120 145
12	120									8x11.5 8x15 10x12.5	78 80 100	10x12.5	110	8x25 10x15 12.5x16 16x16	130 100 130 150	8x22 10x16	120 125
15	150	8x16	80	10x12.5	120			10x12.5 10x16	110 130	8x14 8x16 10x12.5 12.5x16	70 100 80 120	10x16	120	10x16 10x20 12.5x16 16x16	120 135 140 160	10x20 12.5x15 16x20	140 150 170



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W.V		160(2C)		200(2D)		220(2B)		250(2E)		400(2G)		420(2H)		450(2W)		500(2Z)	
		Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current
18	180									8x20 8x25 10x14	85 90 95	8x20 10x15	120 125	10x16 12.5x16	135 140	8x30 10x20 12.5x16	150 150 175
22	220	10x12.5	110	8x15 10x12.5	115 125			10x16	165	8x18 10x15 10x30 12.5x16	90 100 140 125	8x40 10x15 12.5x16	180 110 125	8x45 10x18 12.5x20 16x20	240 150 168 180	10x25 12.5x25 14.5x15 16x25	170 189 200 200
25	250									10x18	120	10x18 12.5x16	120 130				
27	270									8x23 10x18 12.5x16	135 130 160	12.5x15	140	10x25 12.5x18 16x20	170 180 230		
33	330	10x16	145	8x16 10x12.5 12.5x16	125 135 181			8x18 12.5x16	150 181	10x18 10x40 12.5x16 16x16 16x25	130 200 180 210 240	8x55 10x40	310 360	10x40 12.5x25 16x16 18x20	360 200 210 250	16x25 16x31.5	260 280
39	390	10x16	165	8x18 10x23	150 183			8x20 12.5x20	180 200	10x35 12.5x18 16x20	195 215 240	10x40 12.5x30 16x16	220 230 240	10x40 12.5x25	400 220	18x25	290
47	470	10x16 12.5x20	165 190	10x15 10x20 12.5x16 16x20	180 185 192 210			10x23 12.5x20 16x20	200 240 260	10x40 12.5x25 13x20 16x16 18x18	380 210 190 230 230	12.5x25 13x20 14.5x20 16x20 18x20	220 220 250 250 275	10x40 12.5x30 13x25 16x20 18x20	410 300 250 220 260	16x25 16x30 18x25	260 290 260
49	490													10x50	500	10x50	500
56	560	10x23	188	12.5x20	223			12.5x20 12.5x25	235 250	12.5x30 13x25 16x18 16x25 18x20	275 250 265 282 285	12.5x30 14.5x30 16x20 18x20	288 338 285 312	10x45 12.5x31.5 16x23 16x35.5	420 295 250 350	18x25	300
68	680	12.5x20	223	12.5x20 16x20	253 253			12.5x20 12.5x25 16x20	330 360 400	12.5x35 14.5x20 16x20 18x20 18x31.5	325 260 320 325 399	13x30 14.5x25 16x20 18x20	300 320 320 350	12.5x40 16x25 16x35.5 18x20 18x31.5	380 350 360 295 380	16x23 16x28 16x35.5 18x30	335 370 380 383
82	820	12.5x25	250	12.5x25	290			16x20 18x25	310 355	10x60 12.5x40 16x20 18x20 18x35.5	550 400 335 360 404	12.5x40 13x35 16x25 18x25	480 470 360 330	10x60 12.5x40 16x25 18x25	560 530 350 350	16x31.5 18x30	365 400
100	101	12.5x25 16x20	280 300	12.5x25 16x20 18x20	335 340 380			12.5x30 16x20 18x20	347 340 356	12.5x35 12.5x50 14.5x30 16x25 18x20	460 730 450 360 420	12.5x40 14.5x35 16x25 18x25	520 450 380 500	12x55 13x45 16x30 18x25 18x35.5	700 630 430 430 490	18x35.5	430



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W.V		160(2C)		200(2D)		220(2B)		250(2E)		400(2G)		420(2H)		450(2W)		500(2Z)	
Cap(μF)		Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current	Size	Ripple Current
110	111	16x20	320	16X20	360			16x31.5	380	12.5x50 18x31.5	490 470	16x35.5	538	18x35.5	510		
120	121	16x20	340	12.5x25 16x20	357 380			18x20 16x31.5	408 450	12.5x45 14.5x31.5 16x30 18x25 18x35.5	450 480 430 450 510	12.5x45 14.5x45 16x30 16x35 18x30	480 480 455 470 610	13x55 14.5x45 16x35 18x25 18x45	550 480 470 465 550	18x45	610
150	151	12.5x25 16x25	335 380	12.5x25 12.5x30 16x25 18x20	400 445 445 445			12.5x35 16x25 18x25	420 400 500	16x35.51 16x40 18x30 18x40	530 530 520 585	16x38 18x31.5 18x45	630 600 730	16x45 18x35.5 20x41.5	770 740 840		
180	181	12.5x35 16x31.5	400 460	12.5x30 16x25 18x20 18x35.5	475 485 505 540			18x31.5 16x30	520 550	16x40 18x35 18x45	600 600 670	16x45 18x40 20x40	680 710 730	16x45 18x40 20x46.5	760 800 950		
220	221			16x25 18x25 18x35.5	533 580 600	16x31.5 18x25	600 610	16x31.5	625	18x40	700	18x45 20x50	730 850	16x55 18x50	800 790		
240	241									18x50	800	18x50	830	20x50	1050		
270	271	16x31.5	533	16x31.5 16x40 18x25 18x35.5	580 625 580 650	18x25	630	18x25 18x30	630 650								
330	331	18x31.5 18x35.5	625 700	16x35.5 18x25 18x40	640 650 770	18x30 18x40	680 790	18x40	830								
390	391	18x35.5	667	18x35	757	18x40 18x45	845 880										
470	471	18x40	753	18x35.5 18x40 22x35	820 865 1000	18x40 18x45	900 940	18x45	965								
560	561	18x45	865	18x45	965	18x45	1000	18x50	1000								
680	681			22x40	1150												