

# ALUMINUM ELECTROLYTIC CAPACITORS

## TH series 105°C GENERAL TYPE

105°C 一般品

- Load life of 2000 hours at 105°C  
105°C 壽命 2000 小時
- Has characteristics of withstanding high temperature 105°C and good reliability  
耐高溫 105°C, 高信賴度
- Suitable for communication equipment and industrial measurement instruments.  
適用於交通設備及工業測量儀器

### SPECIFICATIONS

Item 項目	Performance Characteristics 特性																				
Operating Temperature Range 工作溫度範圍	-40~+105°C																				
Rated Voltage Range 額定電壓範圍	6.3~100W.V.																				
Capacitance Range 靜電容量範圍	0.1~22000uF																				
Capacitance Tolerance 靜電容量誤差	±20% (M) at 120Hz, 25°C																				
Leakage Current 洩漏電流	$I=0.01CV$ or $3\mu A$ whichever is greater.(after 2 minutes) $I=0.01CV$ or $3\mu A$ 取較大值.( 2 分鐘後) $I$ =Leakage Current( $\mu A$ ), $C$ =Nominal Capacitance( $\mu F$ ), $V$ =Rated Voltage(V) $I$ =洩漏電流( $\mu A$ ), $C$ =額定容量( $\mu F$ ), $V$ =額定電壓(V)																				
Dissipation Factor ( $\tan \delta$ ) 散逸因素 (損失角正切值)	For capacitance of more than 1000uF, add 0.02 for every increase of 1000uF, Measurement frequency:120Hz, Temperature:25°C 額定容量超過 1000 $\mu F$ 時, 額定容量每增加 1000 $\mu F$ , 以下損失角增加 0.02 測試頻率:120HZ;溫度:25°C <table border="1" data-bbox="432 1518 1334 1697"> <tr> <td>Rated voltage 額定電壓 (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> </tr> <tr> <td>Tan <math>\delta</math> 損失角正切值</td> <td>0.26</td> <td>0.22</td> <td>0.18</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.08</td> <td>0.08</td> </tr> </table>	Rated voltage 額定電壓 (V)	6.3	10	16	25	35	50	63	80	100	Tan $\delta$ 損失角正切值	0.26	0.22	0.18	0.16	0.14	0.12	0.10	0.08	0.08
Rated voltage 額定電壓 (V)	6.3	10	16	25	35	50	63	80	100												
Tan $\delta$ 損失角正切值	0.26	0.22	0.18	0.16	0.14	0.12	0.10	0.08	0.08												
Low Temperature Stability Impedance Ratio(MAX) 低溫特性阻抗比率	Measurement frequency: 120Hz 測試頻率: 120Hz <table border="1" data-bbox="432 1800 1321 1899"> <tr> <td rowspan="2">Impedance ratio 阻抗比 ZT/Z20(MAX)</td> <td>Z(-25°C)/Z(+20°C)</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>8</td> <td>6</td> <td>6</td> <td>4</td> </tr> </table>	Impedance ratio 阻抗比 ZT/Z20(MAX)	Z(-25°C)/Z(+20°C)	4	3	3	2	Z(-40°C)/Z(+20°C)	8	6	6	4									
Impedance ratio 阻抗比 ZT/Z20(MAX)	Z(-25°C)/Z(+20°C)		4	3	3	2															
	Z(-40°C)/Z(+20°C)	8	6	6	4																

# ALUMINUM ELECTROLYTIC CAPACITORS

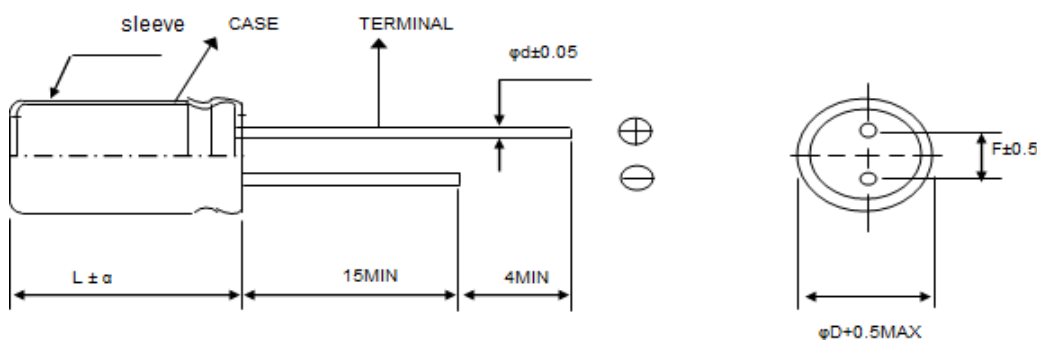
Load Life 負荷壽命	After 2000 hours' application of rated voltage at 105°C, capacitors meet the characteristics requirement listed as following. 在 105°C 下印加額定電壓 2000 小時後, 電容特性需滿足以下要求.	
	Leakage Current 洩漏電流	Specified value or less 規格值範圍內
	Capacitance Change 容量變化率	Within $\pm 25\%$ of initial value. 初始值 $\pm 25\%$ 以內
	$\tan \delta$ 損失角正切值	200% or less of 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 漏電流	Specified value or less 規格值範圍內
	Capacitance Change 容量變化率	Within $\pm 25\%$ of initial value. 初始值 $\pm 25\%$ 以內
	$\tan \delta$ 損失角正切值	200% or less of 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 標準	

## Frequency coefficient

頻率系數

Frequency(Hz) Cap(uF)	60(50)	120	300	1K	10K~
0.1~82	0.80	1.00	1.35	1.57	2.00
100~820	0.80	1.00	1.23	1.34	1.50
1000~22000	0.80	1.00	1.10	1.13	1.15

## DIMENSIONS (mm)



$\phi D$	5	6.3	8	10	12/12.5/13	16	18
$\phi d$	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
$\alpha$	$L \leq 19: \alpha = 1.5, \quad L \geq 20: \alpha = 2.0$						

# ALUMINUM ELECTROLYTIC CAPACITORS

TH series

STANDARD SIZES AND RIPPLE CURRENT (mA 105°C, 120Hz) r.m.s

尺寸及紋波標準

W.V. Code Cap(uF)	6.3		10		16		25		35		50		63		100		
	0J		1A		1C		1E		1V		1H		1J		2A		
0.1	0R1											5x11	2	5x11	5		
0.22	R22											5x11	6				
0.33	R33											5x11	7				
0.47	R47											5x11 6.3x11	10 10			5x11	11
1	010											5x11	14			5x11	16
2.2									5x11	20	4x7 5x11	17 21				5x11	24
3.3	3R3					5x11	17	5x11	20	5x11	23	5x11	26			5x11 6.3x11	30 34
4.7	4R7									5x11	24	5x11	31	5x11	32	5x11 6.3x11	37 40
6.8	6R8									5x11	33	5x11	38	5x11	36		
10	100					5x11	42	4x7 5x11	29 39	5x11	43	5x11	45	5x11 6.3x11	41 50	6.3x11 8x11.5	52 65
22	220			5x11	50	5x11	60	5x11	60	5x11 6.3x11	67 75	5x11 6.3x11	70 80	6.3x11 8x11.5	85 90	6.3x11 8x11.5 10x12.5	75 92 120
33	330					5x11	65	5x11 6.3x11	70 80	5x11 6.3x11	82 90	6.3x11 8x11.5	90 100	6.3x11 8x11.5	102 120	10x12.5	135
47	470	5x11	65	5x11	70	5x11 6.3x11	75 85	5x11 6.3x11	82 100	5x11 6.3x11 8x11.5	105 110 120	6.3x11 8x11.5	115 130	8x11.5 10x12.5	135 140	8x16 10x12.5	150 165
56	560									6.3x11	120						
68	680			5x11	80	6.3x11	105	6.3x11	110	6.3x11 8x11.5	132 135	8x11.5	162	8x14	170	10x16	205
82	820							6.3x11	120								
100	101	5x11 6.3x11	98 110	5x11 6.3x11	95 120	5x11 6.3x11	125 130	6.3x11 8x11.5	145 160	6.3x11 8x11.5 10x12.5	150 175 190	8x11.5 10x16	195 220	10x12.5	205	10x20 12.5x20	257 310
120	121					6.3x11	150	6.3x11	170					10x20	260		
150	151	5x11	123	6.3x11	140	6.3x11 8x11.5	175 180	6.3x11 8x11.5	200 210	10x12.5	260	10x12.5	270	10x16	290	12.5x25	400
180	181			5x11	130												
220	221	6.3x11 8x11.5	150 190	5x11 6.3x11 8x11.5	160 170 200	6.3x11 8x11.5 10x12.5	200 220 240	8x11.5 10x12.5	230 260	8x11.5 8x16 10x12.5	240 270 295	8x16 10x12.5	288 300	10x16 12.5x20	350 390	12.5x20 16x25	420 445 490
330	331	6.3x11 8x11.5 10x12.5	200 225 250	6.3x11 8x11.5 10x12.5	203 235 270	6.3x11 8x11.5 10x12.5	225 260 290	8x11.5 10x12.5	315 330	8x20 10x12.5	265 340	10x16 12.5x16	360 470	12.5x20	510	10x40 12.5x25 16x25 18x20	530 516 580 526
470	471	6.3x11 8x11.5 10x12.5	225 250 300	6.3x11 8x11.5 10x16	200 275 350	8x11.5 10x12.5	330 382	8x15 10x12.5	390 415	10x16 10x28 12.5x20	450 525 570	10x20 12.5x20	465 600	12.5x25 16x31.5	660 700	12.5x35 16x25 18x35.5	550 687 890
680	681	8x14	330	8x11.5 8x14	350 380	8x11.5 10x16	415 500	10x16 10x20	520 560	10x16 12.5x20	570 705	12.5x20	745	16x25	900	16x35.5	900



# ALUMINUM ELECTROLYTIC CAPACITORS

TH series

W.V. Code		6.3		10		16		25		35		50		63		100	
Cap(uF)		0J		1A		1C		1E		1V		1H		1J		2A	
820	821			8x11.5	400			10x16	540								
1000	102	8x11.5 8x15 10x12.5	420 480 480	8x16 10x12.5	470 510	8x20 10x12.5 12.5x20	580 570 670	10x20 12.5x16	650 670	12.5x20 16x35.5	800 880	12.5x25 16x25	840 935	13x25 16x30 18x35.5	900 1000 1100	18x30	920
1500	152	10x16	565	10x16	585	10x20 12.5x20	660 740	12.5x20	844	16x25	1027	16x31.5	1185				
2200	222	10x20 12.5x20 12.5x25	607 725 910	10x20 12.5x20	610 775	10x23 12.5x20 16x25	750 780 1000	12.5x20 16x25	870 1050	16x25 18x35.5	1101 1470	16x35.5 18x40	1345 1660				
2500	252							12.5x30	995								
3300	332	12.5x20	920	10x23 12.5x20	820 980	12.5x20 16x25	900 1020	16x20	1050	16x35.5 18x35.5	1490 1510	18x40	1690				
3500	352							16x25	1200								
3700	372							16x25	1260								
4700	472	12.5x20 12.5x30	948 1000	12.5x25 16x25 18x35.5	1035 1080 1190	16x31.5	1230	16x30 18x35.5	1300 1420	18x35.5	1580						
6800	682	16x25	1150	16x25	1190	16x31.5 18x35.5	1375 1520	18x40	1710	18x45	1750						
10000	103	16x31.5 18x31.5	1430 1630	18x35.5	1580	18x40	1790										
15000	153	16x35.5 18x35.5	1830 1940	18x40	1870												
22000	223	18x40	2290														