

- Miniaturized, Standard.
- 小型化尺寸、標準品

## ■ SPECIFICATIONS 規格表

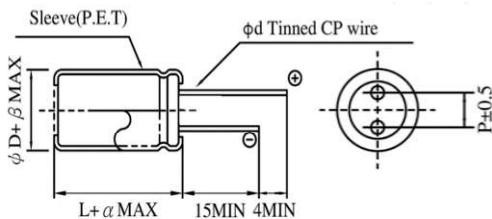
Item	Performance Characteristics 特性																																					
Operating Temperature Range 工作溫度範圍	-40 ~ +105°C																																					
Voltage Range 額定電壓範圍	6.3 ~ 100V																																					
Capacitance Tolerance 靜電容量容許差	$\pm 20\%$ at 120Hz, 20°C																																					
Leakage Current 漏電流	<p>After 1 minute application of rated voltage, leakage current is lower than 0.03CV or 4(μA), whichever is greater.  <math>I = 0.03CV</math>或<math>4(\mu A)</math>以下(1分鐘)          After 2 minutes application of rated voltage, leakage current is lower than 0.01CV or 3(μA), whichever is greater.  <math>I = 0.01CV</math>或<math>3(\mu A)</math>以下(2分鐘)  <math>I = \text{Leakage Current (漏電流)} C = \text{Capacitance (靜電容量)} V = \text{Rated Voltage (額定電壓)}</math></p>																																					
Tangent of loss angle 損失角正切值	<p>For capacitance of more than 1000 μF, add 0.02 for every increase of 1000 μF          對於超過1000 μF產品，每增加1000 μF，其值增加0.02</p> <table border="1"> <tr> <td>Rated voltage (V) 額定電壓</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td></tr> <tr> <td>Tanδ (MAX) 損失角正切值 (MAX)</td><td>0.28</td><td>0.24</td><td>0.20</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.08</td></tr> </table> <p>(Frequency : 120Hz, Temperature : 20°C)</p>								Rated voltage (V) 額定電壓	6.3	10	16	25	35	50	63	100	Tanδ (MAX) 損失角正切值 (MAX)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08												
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Stability at Low Temperature 溫度特性	<table border="1"> <tr> <td colspan="2">Rated voltage (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>100</td></tr> <tr> <td>Impedance Ratio 阻抗比</td><td>Z-25°C/Z+20°C</td><td>5</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td></tr> <tr> <td>ZT/Z 20 (MAX)</td><td>Z-40°C/Z+20°C</td><td>10</td><td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td></tr> </table> <p>(Frequency:120Hz)</p>								Rated voltage (V)		6.3	10	16	25	35	50	63	100	Impedance Ratio 阻抗比	Z-25°C/Z+20°C	5	4	3	2	2	2	2	2	ZT/Z 20 (MAX)	Z-40°C/Z+20°C	10	8	6	4	3	3	3	3
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Endurance 耐久性	<p>After applying rated voltage with rated ripple current for 2000 hours at 105°C, the capacitors shall meet the following requirements.          在105°C環境中，不超過額定電壓的範圍內疊加額定紋波電流，連續加載2000小時後，滿足下列各項要求</p> <table border="1"> <tr> <td>Capacitance Change 靜電容量變化率</td><td>Within <math>\pm 20\%</math> of initial Value 初期值的<math>\pm 20\%</math>以內</td></tr> <tr> <td>Tangent of loss angle (Tanδ) 損失角正切值</td><td>Not exceeding 200% of initial specified value 規格值200%以下</td></tr> <tr> <td>Leakage current 漏電流</td><td>Not exceeding of initial specified value 規格值以下</td></tr> </table>								Capacitance Change 靜電容量變化率	Within $\pm 20\%$ of initial Value 初期值的 $\pm 20\%$ 以內	Tangent of loss angle (Tanδ) 損失角正切值	Not exceeding 200% of initial specified value 規格值200%以下	Leakage current 漏電流	Not exceeding of initial specified value 規格值以下																								
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Shelf Life 高溫無負荷	<p>After storing the capacitors under no load at 105 °C for 1000 hours and then performing voltage treatment based on JIS C 5101-4, clause 4.1 at 20 °C, they shall meet the specified values for the endurance characteristics listed above.          在105°C下無負荷放置1000小時後，在20 °C下依據JIS C 5101-4 4.1項進行電壓處理後，將滿足以上耐久性的特性值</p>																																					

## ■ Frequency Coefficient of Allowable Ripple Current 容許紋波電流的頻率係數

V	Frequency Cap(μF)	50Hz	120Hz	300Hz	1KHz	10KHz ~
		0.1~68	0.75	1.00	1.35	1.57
6.3~100	100~470	0.80	1.00	1.23	1.34	1.50
	1000~22000	0.85	1.00	1.10	1.13	1.15

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### ■ RADIAL LEAD TYPE 尺寸圖



$\Phi D$	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
$\Phi d$	0.5	0.5	0.6	0.6	0.6	0.8	0.8
$\beta$	0.5	0.5	0.5	0.5	0.5	0.5	0.5
$L < 20 : 1.5$							
$L \geq 20 : 2.0$							

\*In case  $L \geq 35$  for the  $\Phi 12.5$  dia. unit, lead dia.  $\Phi d = 0.8$  mm

### ■ DIMENSIONS 尺寸

Rated Ripple Current(mA r.m.s. at 105°C,120Hz)

Cap(μF)	Item	W.V		6.3V		10V		16V		25V	
		S.V			Ripple	D x L(mm)	Ripple	D x L(mm)	Ripple	D x L(mm)	Ripple
4.7										5 x 11	25
10										5 x 11	36
22		5 x 11	45	5 x 11	45	5 x 11	54	5 x 11	58		
33		5 x 11	55	5 x 11	58	5 x 11	65	5 x 11	68		
47		5 x 11	65	5 x 11	68	5 x 11	79	5 x 11	83		
100		5 x 11	95	5 x 11	105	5 x 11	115	6.3 x 11	140		
220		5 x 11	145	6.3 x 11	175	6.3 x 11	190	8 x 11.5	240		
330		6.3 x 11	195	6.3 x 11	210	8 x 11.5	265	8 x 11.5	275		
470		6.3 x 11	230	6.3 x 11	250	8 x 11.5	315	10 x 12.5	380		
1000		8 x 11.5	390	10 x 12.5	460	10 x 16	560	10 x 20	680		
2200		10 x 20	710	10 x 20	760	12.5 x 25	920	12.5 x 25	1090		
3300		10 x 20	840	12.5 x 20	1000	12.5 x 25	1170	16 x 25	1400		
4700		12.5 x 20	1090	12.5 x 25	1260	16 x 25	1480	16 x 30.5	1710		
6800		12.5 x 25	1350	16 x 25	1570	16 x 30.5	1690	16 x 35.5	1850		
10000		16 x 25	1650	16 x 30.5	1820	16 x 35.5	1930	18 x 40	2000		
15000		16 x 30.5	1820	18 x 35.5	2180	18 x 40	2100				
22000		18 x 35.5	2280	18 x 40	2420						

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## ■ DIMENSIONS 尺寸

Rated Ripple Current(mA r.m.s. at 105°C,120Hz)

W.V S.V	35V		50V		63V		100V	
	44V		63V		79V		125V	
Item Cap(μF)	Size D x L(mm)	Ripple						
0.1			5 x 11	1.3			5 x 11	1.5
0.22			5 x 11	2.9			5 x 11	3.4
0.33			5 x 11	4.3			5 x 11	5.0
0.47			5 x 11	7			5 x 11	7.1
1			5 x 11	13			5 x 11	15
2.2			5 x 11	20			5 x 11	21
3.3			5 x 11	25			5 x 11	29
4.7	5 x 11	28	5 x 11	30	5 x 11	32	5 x 11	32
10	5 x 11	41	5 x 11	46	5 x 11	46	6.3 x 11	54
22	5 x 11	61	5 x 11	68	5 x 11	71	6.3 x 11	93
33	5 x 11	75	5 x 11	90	6.3 x 11	100	8 x 11.5	130
47	5 x 11	93	5 x 11	115	6.3 x 11	120	10 x 12.5	165
68	6.3 x 11	110	6.3 x 11	150	8 x 11.5	155	10 x 12.5	190
100	6.3 x 11	150	8 x 11.5	190	10 x 12.5	215	10 x 20	265
220	8 x 11.5	250	10 x 12.5	300	10 x 16	335	12.5 x 25	440
330	10 x 12.5	350	10 x 16	410	10 x 20	510	12.5 x 25	540
470	10 x 16	460	12.5 x 20	530	12.5 x 20	640	16 x 25	715
1000	12.5 x 20	810	12.5 x 25	950	16 x 25	930	18 x 35.5	960
2200	16 x 25	1260	16 x 35.5	1470	18 x 35.5	1650		
3300	16 x 30.5	1500	18 x 35.5	1770				
4700	16 x 35.5	1780						