

- High ripple current, Long Life product withstanding.
- 高紋波電流、長壽命耐壓產品

**BY** ■ **SPECIFICATIONS 規格表**

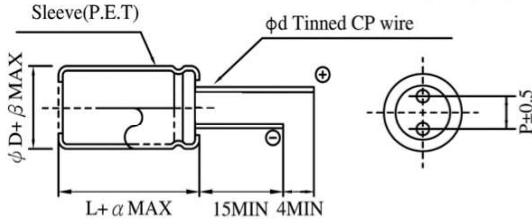
Item	Performance Characteristics 特性																																										
Operating Temperature Range 工作溫度範圍	-40 ~ +105°C																																										
Voltage Range 額定電壓範圍	160 ~ 500V																																										
Capacitance Tolerance 靜電容量容許差	±20% at 120Hz, 20°C																																										
Leakage Current 漏電流	After 1 minute application of rated voltage, leakage current is lower than 0.04CV+100(μA). I = 0.04CV+100 (μA) 以下 (1分鐘) I = Leakage Current (漏電流) C = Capacitance (靜電容量) V = Rated Voltage (額定電壓)																																										
Tangent of loss angle 損失角正切值	<table border="1"> <tr> <td>Rated voltage (V) 額定電壓</td> <td>160</td><td>200</td><td>220</td><td>250</td><td>350</td><td>400</td><td>420</td><td>450</td><td>500</td> </tr> <tr> <td>Tanδ (MAX)</td> <td>0.20</td><td>0.20</td><td>0.20</td><td>0.20</td><td>0.24</td><td>0.24</td><td>0.24</td><td>0.24</td><td>0.24</td> </tr> </table>										Rated voltage (V) 額定電壓	160	200	220	250	350	400	420	450	500	Tanδ (MAX)	0.20	0.20	0.20	0.20	0.24	0.24	0.24	0.24	0.24													
	Rated voltage (V) 額定電壓	160	200	220	250	350	400	420	450	500																																	
Tanδ (MAX)	0.20	0.20	0.20	0.20	0.24	0.24	0.24	0.24	0.24																																		
(Frequency : 120Hz , Temperature : 20°C)																																											
Stability at Low Temperature 溫度特性	<table border="1"> <tr> <td colspan="2">Rated voltage (V)</td> <td>160</td><td>200</td><td>220</td><td>250</td><td>350</td><td>400</td><td>420</td><td>450</td><td>500</td> </tr> <tr> <td>Impedance Ratio 阻抗比</td> <td>Z-25°C/Z+20°C</td> <td>3</td><td>3</td><td>3</td><td>3</td><td>5</td><td>5</td><td>5</td><td>5</td><td>5</td> </tr> <tr> <td colspan="2">ZT/Z 20 (MAX)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>										Rated voltage (V)		160	200	220	250	350	400	420	450	500	Impedance Ratio 阻抗比	Z-25°C/Z+20°C	3	3	3	3	5	5	5	5	5	ZT/Z 20 (MAX)										
	Rated voltage (V)		160	200	220	250	350	400	420	450	500																																
Impedance Ratio 阻抗比	Z-25°C/Z+20°C	3	3	3	3	5	5	5	5	5																																	
ZT/Z 20 (MAX)																																											
(Frequency:120Hz)																																											
Endurance 耐久性	After applying rated voltage with rated ripple current for 10000 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10000小時後，滿足下列各項要求																																										
	Case size 鋁殼尺寸	Life time 時間(hrs)	Capacitance Change 靜電容量變化率				Within ±20% of initial Value 初期值的±20%以內																																				
	φD≤10	8000	Tangent of loss angle (Tanδ) 損失角正切值				Not exceeding 200% of initial specified value 規格值200%以下																																				
φD≥12.5	10000	Leakage current 漏電流				Not exceeding of initial specified value 規格值以下																																					
Shelf Life 高溫無負荷	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																																										

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

Frequency 頻率	50Hz	120Hz	1KHz	10KHz	100KHz ~
Coefficient 係數	0.80	1.00	1.60	1.80	2.00

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### ■ RADIAL LEAD TYPE 尺寸圖



ΦD	10	12.5	16	18
P	5.0	5.0	7.5	7.5
Φd	0.6	※0.6	0.8	0.8
β	0.5	0.5	0.5	0.5
α	L < 20 : 1.5			
	L ≥ 20 : 2.0			

※In case L ≥ 35 for the φ12.5 dia. unit, lead dia. φd = 0.8mm

### ■ DIMENSIONS 尺寸

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

Cap(μF)	Item	160V		200V		220V	
		Size D x L(mm)	Ripple	Size D x L(mm)	Ripple	Size D x L(mm)	Ripple
10		10 x 12.5	100	10 x 12.5	115	10 x 16	120
12		10 x 12.5	110	10 x 12.5	125	10 x 16	130
15		10 x 12.5	125	10 x 16	150	10 x 16	185
18		10 x 16	180	10 x 16	195	10 x 16	210
22		10 x 16	210	10 x 16	225	10 x 16	225
33		10 x 16	260	10 x 20	305	10 x 20	305
39		10 x 16	295	10 x 20	325	10 x 25	335
47		10 x 20	375	10 x 20	360	10 x 25	380
		12.5 x 15	350	12.5 x 20	390	12.5 x 20	440
56		10 x 20	380	10 x 25	415	12.5 x 20	475
				12.5 x 20	440		
68		10 x 25	455	10 x 30.5	485	12.5 x 25	615
		12.5 x 20	590	12.5 x 25	650		
82		10 x 30.5	534	12.5 x 25	660	12.5 x 30.5	695
		12.5 x 20	640	16 x 20	690		
100		12.5 x 20	645	12.5 x 25	695	16 x 20	710
				16 x 20	710		
120		12.5 x 25	760	12.5 x 30.5	810	16 x 25	800
				16 x 20	775		
				16 x 25	945		
150		12.5 x 30.5	905	16 x 25	945	16 x 30.5	960
		16 x 20	940	18 x 20	910	18 x 25	945
180		12.5 x 35.5	1050	12.5 x 40	1090	18 x 30.5	1090
		16 x 20	1000	16 x 25	1035		
220		16 x 25	1185	16 x 30.5	1230	18 x 30.5	1200
		18 x 20	1105	18 x 25	1185		
270		18 x 25	1235	16 x 35.5	1400	18 x 35.5	1430
				18 x 30.5	1410		
330		16 x 30.5	1510	18 x 35.5	1560	18 x 40	1580
		18 x 25	1445				
390		18 x 30.5	1695	18 x 40	1780		
470		18 x 35.5	1920				
560		18 x 40	2130				

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### ■ DIMENSIONS 尺寸

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

W.V	250V		350V		400V		
S.V	300V		400V		450V		
Cap(μF)	Item	Size D x L(mm)	Ripple	Size D x L(mm)	Ripple	Size D x L(mm)	Ripple
6.8				10 x 16	130	10 x 16	140
10				10 x 16	140	10 x 16	150
12				10 x 20	160	10 x 20	175
15				10 x 20	180	10 x 20	180
18				10 x 20	215	10 x 25	235
22	10 x 16	225		10 x 25	255	10 x 25	275
				12.5 x 20	325	12.5 x 20	360
27	10 x 20	255		10 x 30.5	305	12.5 x 20	360
33	10 x 20	305		12.5 x 20	380	12.5 x 25	385
				16 x 20	450	16 x 20	450
39	10 x 25	345		12.5 x 25	455	12.5 x 30.5	465
47	10 x 30.5	405		12.5 x 25	510	16 x 20	520
	12.5 x 20	490		16 x 20	540		
56	12.5 x 20	515		12.5 x 30.5	590	16 x 25	585
				16 x 20	655	18 x 20	600
68	12.5 x 25	615		16 x 25	700	12.5 x 40	720
	16 x 20	650		18 x 20	660	18 x 25	735
82	12.5 x 30.5	715		16 x 30.5	740	16 x 30.5	805
	16 x 20	690		18 x 25	765	18 x 25	765
100	12.5 x 35.5	785		16 x 30.5	825	16 x 35.5	850
	16 x 20	715		18 x 25	790	18 x 30.5	875
120	16 x 25	845		16 x 35.5	925	18 x 35.5	900
	18 x 20	815		18 x 30.5	940		
150	18 x 25	970		18 x 35.5	1080	18 x 40	1030
180	18 x 30.5	1120		18 x 40	1205	18 x 45	1110
220	18 x 30.5	1250				18 x 50	1150
270	18 x 35.5	1450					
330	18 x 45	1600					

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### ■ DIMENSIONS 尺寸

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

W.V S.V	420V 470V		450V 500V		500V 550V	
Cap(μF) Item	Size D x L(mm)	Ripple	Size D x L(mm)	Ripple	Size D x L(mm)	Ripple
6.8	10 x 16	105	10 x 20	110		
10	10 x 20	135	12.5 x 20	180	12.5 x 20	160
12	10 x 20	150				
15	10 x 25	185	12.5 x 25	240	12.5 x 25	220
					16 x 20	220
18	10 x 30.5	245			12.5 x 30.5	240
					16 x 20	240
22	12.5 x 20	285	16 x 20	290	16 x 25	280
					18 x 20	280
27	12.5 x 25	360			12.5 x 40	310
					16 x 25	310
33	12.5 x 30.5	400	16 x 25	390	16 x 30.5	350
			18 x 20	380		
39	12.5 x 30.5	430			16 x 35.5	380
47	16 x 25	500	18 x 25	480	18 x 30.5	440
	18 x 20	480				
56	12.5 x 40	570			18 x 30.5	450
	18 x 25	600				
68	16 x 30.5	645	18 x 30.5	630	18 x 35.5	520
	18 x 25	615				
82	16 x 35.5	725	18 x 35.5	715	18 x 40	620
	18 x 30.5	730				
100	16 x 40	825	18 x 40	800	18 x 45	700
	18 x 35.5	910				
120	18 x 40	930	18 x 45	880		
150	18 x 45	965	18 x 50	970		