

- Miniaturized, Long Life, Low Impedance.
- 小型化尺寸、長壽命、低阻抗

■ SPECIFICATIONS 規格表

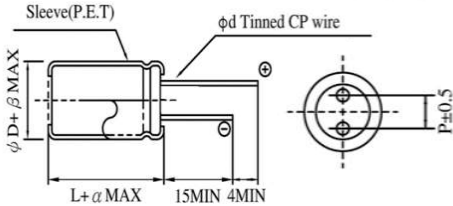
Item	Performance Characteristics 特性										
Operating Temperature Range 工作溫度範圍	-40 ~ +105°C										
Voltage Range 額定電壓範圍	6.3 ~ 100V										
Capacitance Tolerance 靜電容量容許差	±20% at 120Hz, 20°C										
Leakage Current 漏電流	After 2 minutes application of rated voltage, leakage current is lower than 0.01CV or 3(μA), whichever is greater. I = 0.01CV或3(μA) 以下(2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	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										
	Rated voltage (V) 額定電壓	6.3	10	16	25	35	50	63	100		
	Tanδ (MAX)	0.21	0.18	0.15	0.13	0.11	0.10	0.09	0.08		
(Frequency : 120Hz · Temperature : 20°C)											
Stability at Low Temperature 溫度特性	Rated voltage (V)										
	Impedance Ratio 阻抗比		Z-25°C/Z+20°C	2	2	2	2	2	2	2	2
	ZT/Z 20 (MAX)		Z-40°C/Z+20°C	3	3	3	3	3	3	3	3
(Frequency:120Hz)											
Endurance 耐久性	After applying rated voltage with rated ripple current for specified time 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，連續加載表內時間後，符合下列要求										
	Case size 鋁殼尺寸	Rated voltage (V)			Capacitance Change 靜電容量變化率			Within ±25% of initial Value (6.3V、10V:±30%) 初期值的±25%以內 (6.3V、10V:±30%)			
		6.3	10-50	63~100							
	ΦD≤6.3	6000	7000	6000	Tangent of loss angle (Tanδ) 損失角正切值			Not exceeding 200% of initial specified value 規格值200%以下			
	8 x 11.5	8000	9000	8000	Leakage current 漏電流			Not exceeding of initial specified value 規格值以下			
	8 x 15,8 x 20	9000	10000	9000							
10 x 12.5	9000										
10 x 16-25 ΦD≥12.5	10000										
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

V	Frequency	120Hz	1KHz	10KHz	100KHz ~
	Cap(μF)				
6.3~100	8.2~33	0.42	0.70	0.90	1.00
	47~270	0.50	0.73	0.92	1.00
	330~680	0.55	0.77	0.94	1.00
	820~1800	0.60	0.80	0.96	1.00
	2200~8200	0.70	0.85	0.98	1.00

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■ RADIAL LEAD TYPE 尺寸圖



ΦD	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.6	0.6	※0.6	0.8	0.8
β	0.5	0.5	0.5	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,100KHz)

W.V S.V	6.3V				10V				
	8V				13V				
	Item Cap(μF)	Size D x L(mm)	Ripple	Impedance(ΩMAX)		Size D x L(mm)	Ripple	Impedance(ΩMAX)	
20°C/100KHz				-10°C/100KHz	20°C/100KHz			-10°C/100KHz	
	150				5 x 11	450	0.22	0.80	
	220	5 x 11	450	0.22	0.80				
	330				6.3 x 11	700	0.094	0.35	
	470	6.3 x 11	700	0.094	0.35				
	560				8 x 11.5	1200	0.056	0.19	
	680				8 x 15	1600	0.045	0.15	
	820	8 x 11.5	1200	0.056	0.19	10 x 12.5	1700	0.039	0.14
	1000	8 x 15	1600	0.045	0.15	8 x 20	1960	0.029	0.11
	1200	10 x 12.5	1700	0.039	0.14	10 x 16	2000	0.028	0.090
	1500	8 x 20	1960	0.029	0.11				
	1800	10 x 16	2000	0.028	0.090	10 x 20	2500	0.019	0.057
	2200				10 x 25	2900	0.017	0.051	
	2700	10 x 20	2500	0.019	0.057	12.5 x 20	2600	0.016	0.048
	3300	10 x 25	2900	0.017	0.051	12.5 x 25	3200	0.015	0.045
	3900	12.5 x 20	2600	0.016	0.048				
	4700	12.5 x 25	3200	0.015	0.045	12.5 x 30.5	3795	0.012	0.036
16 x 20						3575	0.014	0.042	
	5600	12.5 x 30.5	3795	0.012	0.036	12.5 x 35.5	4120	0.011	0.033
16 x 25						3810	0.013	0.039	
	6800	12.5 x 35.5	4120	0.011	0.033	16 x 30.5	4230	0.012	0.036
		16 x 20	3575	0.014	0.042	18 x 20	4460	0.014	0.040
	8200	16 x 25	3810	0.013	0.039	18 x 25	4620	0.013	0.038

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Rated Ripple Current(mA r.m.s. at 105°C,100KHz)

W.V S.V	16V 20V				25V 32V				
Cap(μF)	Item	Size D x L(mm)	Ripple	Impedance(ΩMAX)		Size D x L(mm)	Ripple	Impedance(ΩMAX)	
				20°C/100KHz	-10°C/100KHz			20°C/100KHz	-10°C/100KHz
68						5 x 11	450	0.22	0.80
100						5 x 11	450	0.22	0.80
120		5 x 11	450	0.22	0.80				
150						6.3 x 11	700	0.094	0.35
220		6.3 x 11	700	0.094	0.35				
270		6.3 x 11	700	0.094	0.35				
330						8 x 11.5	1200	0.056	0.19
390						8 x 15	1600	0.045	0.15
470		8 x 11.5	1200	0.056	0.19	10 x 12.5	1700	0.039	0.14
560		8 x 15	1600	0.045	0.15	8 x 20	1960	0.029	0.11
680		10 x 12.5	1700	0.039	0.14	10 x 16	2000	0.028	0.090
820		8 x 20	1960	0.029	0.11				
1000		10 x 16	2000	0.028	0.090	10 x 20	2500	0.019	0.057
						12.5 x 15	2000	0.022	0.075
1200						10 x 25	2900	0.017	0.051
1500		10 x 20	2500	0.019	0.057	12.5 x 20	2600	0.016	0.048
1800		10 x 25	2900	0.017	0.051	12.5 x 25	3200	0.015	0.045
2200		10 x 30.5	3150	0.015	0.048	12.5 x 30.5	3795	0.012	0.036
		12.5 x 20	2600	0.016	0.048	16 x 20	3575	0.014	0.042
2700		12.5 x 25	3200	0.015	0.045	12.5 x 35.5	4120	0.011	0.033
3300		12.5 x 30.5	3795	0.012	0.036	16 x 25	3810	0.013	0.039
		16 x 20	3575	0.014	0.042	18 x 20	4460	0.014	0.040
3900		12.5 x 35.5	4120	0.011	0.033	18 x 25	4620	0.013	0.038
4700		16 x 25	3810	0.013	0.039				

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Rated Ripple Current(mA r.m.s. at 105°C,100KHz)

W.V S.V	Item	Size D x L(mm)	Ripple	35V 44V		50V 63V			
				Impedance(QMAX)		Size D x L(mm)	Ripple	Impedance(QMAX)	
				20°C/100KHz	-10°C/100KHz			20°C/100KHz	-10°C/100KHz
22						5 x 11	310	0.34	1.18
27						5 x 11	310	0.34	1.18
33									
47		5 x 11	450	0.22	0.80				
56						6.3 x 11	500	0.14	0.50
100		6.3 x 11	700	0.094	0.35	8 x 11.5	950	0.074	0.22
120						8 x 15	1230	0.061	0.18
150						10 x 12.5	1280	0.061	0.18
180		8 x 11.5	1200	0.056	0.19	8 x 20	1580	0.046	0.14
220		8 x 15	1600	0.045	0.15	10 x 16	1650	0.042	0.126
270		10 x 12.5	1700	0.039	0.14				
330		8 x 20	1960	0.029	0.11	10 x 20	2060	0.030	0.090
390		10 x 16	2000	0.028	0.090	10 x 25	2420	0.028	0.084
470						12.5 x 20	2300	0.027	0.081
560		10 x 20	2500	0.019	0.057				
680		10 x 25	2900	0.017	0.051	12.5 x 25	2800	0.023	0.069
820		10 x 30.5	3150	0.015	0.048	12.5 x 30.5	3500	0.020	0.060
		12.5 x 20	2600	0.016	0.048	16 x 20	3070	0.023	0.069
1000						12.5 x 35.5	3810	0.019	0.057
						16 x 25	3270	0.021	0.063
1200		12.5 x 25	3200	0.015	0.045	16 x 30.5	3410	0.020	0.061
1500		12.5 x 30.5	3795	0.012	0.036				
		16 x 20	3575	0.014	0.042				
1800		12.5 x 35.5	4120	0.011	0.033				
		16 x 25	3810	0.013	0.039				

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Rated Ripple Current(mA r.m.s. at 105°C,100KHz)

W.V S.V	63V 79V				100V 125V				
Cap(μF)	Item	Size D x L(mm)	Ripple	Impedance(ΩMAX)		Size D x L(mm)	Ripple	Impedance(ΩMAX)	
				20°C/100KHz	-10°C/100KHz			20°C/100KHz	-10°C/100KHz
8.2						5 x 11	220	1.20	5.4
10		5 x 11	200	1.00	4.8				
18		5 x 11	240	0.71	3.2	6.3 x 11	370	0.46	2.1
33						8 x 11.5	620	0.29	1.3
47		6.3 x 11	420	0.28	1.3	8 x 15	780	0.20	0.90
56						10 x 12.5	780	0.17	0.66
68						8 x 20	1040	0.16	0.66
82		8 x 11.5	720	0.18	0.79	10 x 16	1040	0.11	0.47
100		8 x 15	990	0.13	0.58	10 x 20	1430	0.084	0.34
	12.5 x 15					1430	0.11	0.34	
120		10 x 12.5	990	0.11	0.44	10 x 25	1620	0.069	0.28
150		8 x 20	1200	0.096	0.43	12.5 x 20	1750	0.062	0.18
180		10 x 16	1200	0.076	0.31				
220						12.5 x 25	2210	0.047	0.14
270		10 x 20	1570	0.056	0.23	12.5 x 30.5	2400	0.042	0.13
		12.5 x 15	1570	0.072	0.27	16 x 20	1950	0.048	0.15
330		10 x 25	1990	0.046	0.19	12.5 x 35.5	2600	0.036	0.11
390		12.5 x 20	1900	0.041	0.13	12.5 x 40	2860	0.032	0.095
	16 x 25					2430	0.038	0.12	
	18 x 20					2270	0.045	0.14	
470		12.5 x 25	2460	0.031	0.093	16 x 30.5	2640	0.032	0.095
	18 x 25					2500	0.036	0.11	
560		12.5 x 30.5	2760	0.028	0.084	16 x 35.5	2860	0.029	0.086
		16 x 20	2380	0.032	0.096	18 x 30.5	2860	0.030	0.090
680		12.5 x 35.5	3040	0.024	0.072	18 x 35.5	3510	0.027	0.081
820		16 x 25	2890	0.025	0.075	18 x 40	3860	0.026	0.076