

- Low Impedance, High Reliability withstanding.
- 低阻抗、高可靠性

■ SPECIFICATIONS 規格表

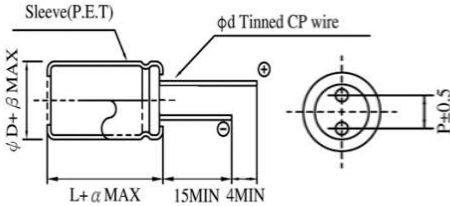
Item	Performance Characteristics 特性									
Operating Temperature Range 工作溫度範圍	-40 ~ +105°C									
Voltage Range 額定電壓範圍	6.3 ~ 100V									
Capacitance Tolerance 靜電容量容許差	±20% at 120Hz, 20°C									
Leakage Current 漏電流	After 2 minutes application of rated voltage, leakage current is lower than 0.01CV or 3(μA), whichever is greater. I = 0.01CV or 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)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	
(Frequency : 120Hz, Temperature : 20°C)										
Stability at Low Temperature 溫度特性	Rated voltage (V)		6.3	10	16	25	35	50	63	100
	Impedance Ratio 阻抗比	Z-25°C/Z+20°C	4	3	2	2	2	2	2	2
		ZT/Z 20 (MAX)	Z-40°C/Z+20°C	8	6	4	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 初期值的±25%以內			
		6.3-10	16-100	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≤6.3	4000	5000	Leakage current 漏電流			Not exceeding of initial specified value 規格值以下			
	φD= 8、10	6000	7000							
φD≥12.5	8000	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	50Hz	120Hz	300Hz	1KHz	10KHz ~
	Cap(μF)					
6.3~100	4.7-33	0.45	0.55	0.70	0.90	1.00
	39~330	0.60	0.70	0.85	0.95	1.00
	390~1000	0.65	0.75	0.90	0.98	1.00
	1200~18000	0.75	0.80	0.95	1.00	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	
	100	5 x 11	210	0.58	2.3	5 x 11	210	0.58	2.3
	150	5 x 11	210	0.58	2.3				
	220					6.3 x 11	340	0.22	0.87
	330	6.3 x 11	340	0.22	0.87				
	470					8 x 11.5	640	0.13	0.52
	680	8 x 11.5	640	0.13	0.52	8 x 15	840	0.087	0.35
	820	10 x 12.5	865	0.080	0.32	10 x 12.5	865	0.080	0.32
	1000	8 x 15	840	0.087	0.35	8 x 20	1050	0.069	0.27
						10 x 16	1210	0.060	0.24
	1200	8 x 20	1050	0.069	0.27	10 x 20	1400	0.046	0.18
		10 x 16	1210	0.060	0.24				
	1500	10 x 20	1400	0.046	0.18	10 x 25	1650	0.042	0.17
	1800	12.5 x 15	1450	0.049	0.16	12.5 x 15	1450	0.049	0.16
	2200	10 x 25	1650	0.042	0.17	10 x 30.5	1910	0.031	0.12
						12.5 x 20	1900	0.035	0.12
	2700	10 x 30.5	1910	0.031	0.12				
	3300	12.5 x 20	1900	0.035	0.12	12.5 x 25	2230	0.027	0.089
						12.5 x 30.5	2650	0.024	0.078
	3900	12.5 x 25	2230	0.027	0.089	16 x 20	2530	0.027	0.078
						12.5 x 35.5	3000	0.020	0.060
	4700	12.5 x 30.5	2650	0.024	0.078	16 x 25	2930	0.021	0.060
	5600	16 x 20	2530	0.027	0.078	16 x 30.5	3450	0.017	0.050
	6800	16 x 25	2930	0.021	0.060	18 x 25	3140	0.019	0.052
						16 x 35.5	3610	0.015	0.044
	8200	16 x 30.5	3450	0.017	0.050	18 x 30.5	4170	0.015	0.040
						18 x 35.5	4220	0.014	0.038
	10000	16 x 35.5	3610	0.015	0.044	18 x 40	4280	0.012	0.032
		18 x 25	3140	0.019	0.052				
	12000	18 x 30.5	4170	0.015	0.040				
	15000	18 x 35.5	4220	0.014	0.038				
	18000	18 x 40	4280	0.012	0.032				

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

W.V	16V				25V			
S.V	20V				32V			
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
47					5 x 11	210	0.58	2.3
56	5 x 11	210	0.58	2.3				
100	6.3 x 11	340	0.22	0.87	6.3 x 11	340	0.22	0.87
120	6.3 x 11	340	0.22	0.87	6.3 x 11	340	0.22	0.87
220	6.3 x 11	340	0.22	0.87	8 x 11.5	640	0.13	0.52
330	8 x 11.5	640	0.13	0.52	8 x 15	840	0.087	0.35
					10 x 12.5	865	0.080	0.32
470	8 x 15	840	0.087	0.35	8 x 20	1050	0.069	0.27
	10 x 12.5	865	0.080	0.32	10 x 16	1210	0.060	0.24
680	8 x 20	1050	0.069	0.27	10 x 20	1400	0.046	0.18
	10 x 16	1210	0.060	0.24	12.5 x 15	1450	0.049	0.16
820					10 x 25	1650	0.042	0.17
1000	10 x 20	1400	0.046	0.18	10 x 30.5	1910	0.031	0.12
	12.5 x 15	1450	0.049	0.16	12.5 x 20	1900	0.035	0.12
1200	10 x 25	1650	0.042	0.17				
1500	10 x 30.5	1910	0.031	0.12	12.5 x 25	2230	0.027	0.089
	12.5 x 20	1900	0.035	0.12				
1800					12.5 x 30.5	2650	0.024	0.078
					16 x 20	2530	0.027	0.078
2200	12.5 x 25	2230	0.027	0.089	12.5 x 30.5	2650	0.024	0.078
2700	12.5 x 30.5	2650	0.024	0.078	16 x 25	2930	0.021	0.060
	16 x 20	2530	0.027	0.078				
3300	12.5 x 30.5	2650	0.024	0.078	16 x 30.5	3450	0.017	0.050
	16 x 25	2930	0.021	0.060	18 x 25	3140	0.019	0.052
3900	12.5 x 35.5	2800	0.022	0.075	16 x 35.5	3610	0.015	0.044
	16 x 25	2930	0.021	0.060	18 x 30.5	4170	0.015	0.040
4700	16 x 30.5	3450	0.017	0.050	18 x 35.5	4220	0.014	0.038
	18 x 25	3140	0.019	0.052				
5600	16 x 35.5	3610	0.015	0.044	18 x 40	4280	0.012	0.032
	18 x 30.5	4170	0.015	0.040				
8200	18 x 35.5	4220	0.014	0.038				
10000	18 x 40	4280	0.012	0.032				

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

W.V	35V				50V			
S.V	44V				63V			
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
10					5 x 11	100	1.50	5.8
22					5 x 11	180	0.70	2.8
33	5 x 11	210	0.58	2.3	6.3 x 11	295	0.30	1.2
47	5 x 11	210	0.58	2.3	6.3 x 11	295	0.30	1.2
56	6.3 x 11	340	0.22	0.87	6.3 x 11	295	0.30	1.2
100	8 x 11.5	640	0.13	0.52	8 x 11.5	555	0.17	0.68
120					8 x 15	730	0.12	0.48
150	8 x 11.5	640	0.13	0.52	10 x 12.5	760	0.12	0.48
180					8 x 20	910	0.091	0.36
220	8 x 15	840	0.087	0.35	10 x 16	1050	0.084	0.34
	10 x 12.5	865	0.080	0.32				
270	8 x 20	1050	0.069	0.27	10 x 20	1220	0.060	0.24
					12.5 x 15	1260	0.061	0.20
330	10 x 16	1210	0.060	0.24	10 x 25	1440	0.055	0.22
470	10 x 20	1400	0.046	0.18	10 x 30.5	1690	0.043	0.17
	12.5 x 15	1450	0.049	0.16	12.5 x 20	1660	0.045	0.15
560	10 x 25	1650	0.042	0.17	12.5 x 25	1950	0.034	0.11
680	10 x 30.5	1910	0.031	0.12	12.5 x 30.5	2310	0.030	0.10
	12.5 x 20	1900	0.035	0.12				
820	12.5 x 20	1900	0.035	0.12	16 x 20	2210	0.034	0.10
1000	12.5 x 25	2230	0.027	0.089	16 x 25	2555	0.025	0.075
1200	12.5 x 30.5	2650	0.024	0.078	16 x 30.5	3010	0.022	0.066
	16 x 20	2530	0.027	0.078	18 x 25	2740	0.026	0.078
1500	12.5 x 35.5	2800	0.022	0.075	16 x 35.5	3150	0.019	0.057
1800	16 x 25	2930	0.021	0.060	18 x 30.5	3580	0.021	0.057
	18 x 20	3000	0.025	0.065				
2200	16 x 30.5	3450	0.017	0.050	18 x 35.5	3635	0.017	0.046
	18 x 25	3140	0.019	0.052				
2700	16 x 35.5	3610	0.015	0.044	18 x 40	3800	0.014	0.038
	18 x 30.5	4170	0.015	0.040				
3300	18 x 35.5	4220	0.014	0.038				
3900	18 x 40	4280	0.012	0.032				
4700	18 x 40	4280	0.012	0.032				

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

W.V	63V				100V				
S.V	79V				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
4.7						5 x 11	55	2.30	9.3
6.8						5 x 11	55	2.30	9.3
10		5 x 11	55	2.30	9.3	6.3 x 11	115	1.80	6.5
15		5 x 11	55	2.30	9.3	6.3 x 11	115	1.20	5.0
22						8 x 11.5	232	0.63	2.8
27		6.3 x 11	110	1.20	5.0	8 x 11.5	232	0.63	2.8
33		6.3 x 11	115	1.20	5.0				
39						8 x 15	300	0.45	2.1
47		8 x 11.5	232	0.63	2.8	10 x 12.5	288	0.43	1.8
56		8 x 11.5	232	0.63	2.8	8 x 20	362	0.33	1.6
68						10 x 16	357	0.31	1.5
82		8 x 15	300	0.45	2.1	10 x 20	466	0.21	0.94
		10 x 12.5	288	0.43	1.8	12.5 x 15	466	0.23	1.1
100						10 x 25	531	0.20	0.84
120		8 x 20	362	0.33	1.6	10 x 30.5	663	0.15	0.71
		10 x 16	357	0.31	1.5	12.5 x 20	690	0.16	0.64
180		10 x 20	466	0.21	0.94	12.5 x 25	784	0.12	0.45
		12.5 x 15	466	0.23	1.1				
220		10 x 25	531	0.20	0.84	12.5 x 30.5	905	0.10	0.42
						16 x 20	1040	0.091	0.38
270		10 x 30.5	663	0.15	0.71	16 x 25	1250	0.073	0.27
		12.5 x 20	690	0.16	0.64				
330		12.5 x 25	784	0.12	0.45	12.5 x 35.5	1330	0.080	0.25
390		12.5 x 25	784	0.12	0.45	16 x 30.5	1570	0.054	0.20
						18 x 25	1490	0.057	0.22
470		12.5 x 30.5	905	0.10	0.42	16 x 35.5	1790	0.045	0.17
		16 x 20	1040	0.091	0.38	18 x 30.5	1630	0.047	0.17
560		12.5 x 35.5	1375	0.080	0.25	18 x 30.5	1630	0.047	0.17
		16 x 25	1250	0.073	0.27				
680		16 x 25	1250	0.073	0.27	18 x 35.5	1790	0.040	0.15
820		16 x 30.5	1570	0.054	0.20	18 x 40	2330	0.036	0.13
		18 x 25	1490	0.057	0.22				
1000		16 x 35.5	1790	0.045	0.17	18 x 40	2330	0.036	0.13
		18 x 30.5	1630	0.047	0.17				
1200		18 x 35.5	1790	0.040	0.15				
1500		18 x 40	2330	0.036	0.13				
1800		18 x 40	2330	0.036	0.13				