

Aluminum Electrolytic Capacitors



KZ Series EXTRA LOWER IMPEDANCE

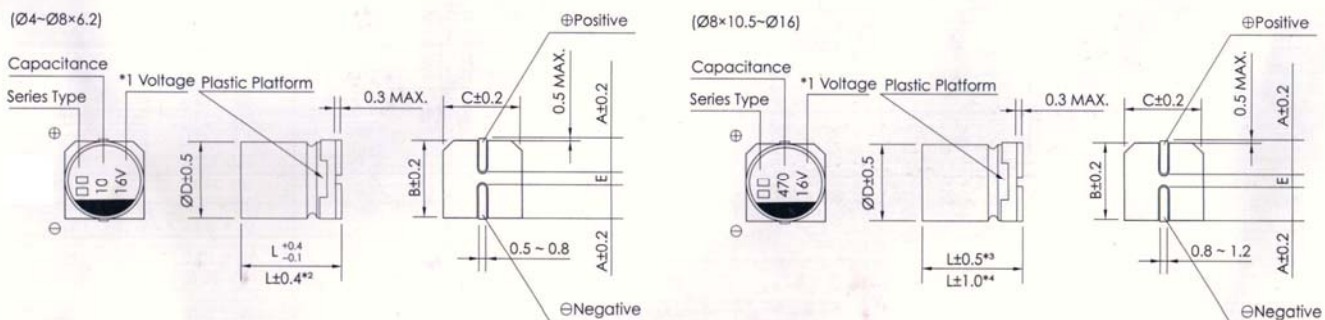
- Extra low impedance with temperature range -55~+105 °C
- Impedance 40~60% less than LZ series
- Comply with the RoHS directive



SPECIFICATIONS

Item	Characteristics							
Operating Temperature Range	-55 ~ +105 °C							
Voltage Range	6.3 ~ 50 V							
Capacitance Range	4.7 ~ 4700 μ F							
Capacitance Tolerance	- 20% ~ + 20% at 20 °C, 120Hz							
Leakage Current	Leakage current(Φ4~Φ10) ≤0.01CV or 3uA, whichever is greater (after 2 minutes application of rated voltage) Leakage current(Φ12.5~Φ16) ≤0.03CV or 4uA, whichever is greater (after 1 minute application of rated voltage)							
Dissipation Factor(tanδ)	Measurement frequency:120Hz ,Temperature:20°C							
	Rated Voltage (V)	6.3	10	16	25	35	50	
	tan δ(max.)	Φ4~Φ10	0.22	0.19	0.16	0.14	0.12	0.12
		Φ12.5~Φ16	0.26	0.22	0.18	0.16	0.14	0.12
Stability at Low Temperature	Measurement frequency:120Hz							
	Rated Voltage (V)		6.3	10	16	25	35	50
	Impedance Ratio ZT/Z20(max.)	Φ4~Φ10	Z(-25°C) / Z(+20°C)	2	2	2	2	2
			Z(-55°C) / Z(+20°C)	5	4	4	3	3
		Φ12.5~Φ16	Z(-25°C) / Z(+20°C)	3	3	2	2	2
	Z(-55°C) / Z(+20°C)		10	8	6	4	3	
Load Life	After 3000 hrs.(1000 hrs.forΦ4~Φ6.3×5.4,2000 hrs.for Φ6.3×7.7&Φ8) application of the rated voltage at 105°C, they meet the characteristics listed below.							
	Capacitance Change	Within ±25% of initial value						
	Dissipation Factor	200% or less of initial specified value						
	Leakage Current	initial specified value or less						
Shelf Life	After leaving capacitors under no load at 105 °C for 1000 hours,they meet the specified value for load life characteristics listed above.							
Resistance to Soldering Heat	After reflow soldering and restored at room temperature, they meet the characteristics listed below.							
	Capacitance Change	Within ±10% of initial value						
	Dissipation Factor	initial specified value or less						
	Leakage Current	initial specified value or less						
Marking	Black print on the case top.							

DRAWING (Unit: mm) 外形圖



- *1. Voltage mark for 6.3V is [6V] 6.3V的產品標識為 [6V]
 *2. Applicable to Ø6.3×7.7 適用於Ø6.3×7.7
 *3. Applicable to Ø8×10.5~Ø10 適用於Ø8×10.5~Ø10
 *4. Applicable to Ø12.5~Ø16 適用於Ø12.5~Ø16

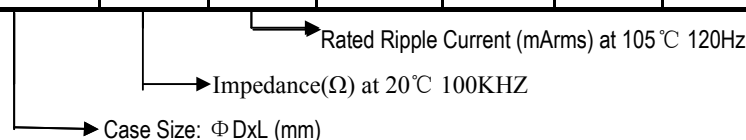
KZ Series

● DIMENSIONS(Unit:mm)

(ΦDxL)	4x5.4	5x5.4	6.3x5.4	6.3x7.7	8x6.2	8x10.5	10x10.5	10x13.5	12.5x13.5	12.5x16	16x16.5
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2	3.2	4.7	4.7	5.5
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0	13.0	17.0
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	13.0	13.0	17.0
E±0.2	1.0	1.3	2.2	2.2	3.1	3.1	4.4	4.4	4.4	4.4	6.7
L	5.4	5.4	5.4	7.7	6.2	10.5	10.5	13.5	13.5	16.0	16.5

■ DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT & IMPEDANCE

WV(Vdc) μF		6.3			10			16		
		10	100						4x5.4	1.8
15	150						4x5.4	1.8	80	
22	220	4x5.4	1.8	80	4x5.4	1.8	80	5x5.4 (4x5.4)	0.76 (1.8)	150 (80)
33	330	5x5.4 (4 x5.4)	0.76 (1.8)	150 (80)	5x5.4 (4x5.4)	0.76 (1.8)	150 (80)	6.3x5.4 (5x5.4)	0.44 (0.76)	230 (150)
47	470	5x5.4	0.76 (80)	150 (80)	6.3x5.4	0.44 (0.76)	230 (150)	6.3x5.4 (5x5.4)	0.44 (0.76)	230
56	560	5x5.4	0.76	150	6.3x5.4	0.44	230	6.3x5.4	0.44	230
68	680	6.3x5.4 (5x5.4)	0.44 (0.76)	230 (150)	6.3x5.4	0.4	230	6.3x7.7 (6.3x5.4) (8x6.2)	0.34 (0.44) (0.34)	280 (230) (280)
100	101	6.3x5.4 (5x5.4)	0.44 (0.76)	230 (150)	6.3x7.7 (6.3x5.4) (8x6.2)	0.34 (0.44) (0.34)	280 (230) (280)	6.3x7.7 (6.3x5.4) (8x6.2)	0.34 (0.44) (0.34)	280 (230) (280)
150	151	6.3x5.4	0.44	230	6.3x7.7	0.34	280	6.3x7.7	0.34	280
220	221	6.3x7.7 (6.3x5.4) (8x6.2)	0.34 (0.44) (0.34)	280 (230) (280)	6.3x7.7 (8x6.2)	0.34 (0.34)	280 (280)	8x10.5 (6.3x7.7)	0.17 (0.34)	450 (280)
330	331	6.3x7.7 (8x6.2)	0.34 (0.34)	280 (280)	8x10.5	0.17	450	10x10.5 (8x10.5)	0.09 (0.17)	670 (450)
470	471	8x10.5	0.17	450	8x10.5	0.17	450	10x10.5 (8x10.5)	0.09 (0.17)	670 (450)
680	681	10x10.5 (8x10.5)	0.09 (0.17)	670 (450)	10x10.5	0.09	670	10x13.5 (10x10.5)	0.075 (0.09)	800 (670)
1000	102	10x10.5 (8x10.5)	0.09 (0.17)	670 (450)	10x10.5	0.09	670	16x16.5 (12.5x16) (12.5x13.5)	0.055 (0.06) (0.065)	1350 (1050) (900)
1500	152	10x13.5 (10x10.5)	0.075 (0.09)	800 (670)	12.5x13.5	0.065	900	16x16.5	0.06	1350
2200	222	12.5x 13.5	0.065	900	12.5x16	0.060	1050	16x16.5	0.06	1350 (1050) (900)
3300	332	12.5x16	0.060	1050	16x16.5	0.055	1350			
4700	472	16x16.5	0.055	1350						



KZ Series

μF \diagdown WV(Vdc)		25			35			50		
4.7	4R7				4x5.4	1.8	80	5x5.4 (4x5.4)	1.52 (3.0)	85 (60)
10	100	4x5.4	1.8	80	5x5.4 (4x5.4)	0.76 (1.8)	150 (80)	6.3x5.4 (5x5.4)	0.88 (1.52)	165 (85)
15	150	5x5.4	0.76	150	5x5.4	0.76	150	6.3x5.4	0.88	165
22	220	6.3x5.4 (5x5.4)	0.44 (0.76)	230 (150)	6.3x5.4 (5x5.4)	0.44 (0.76)	230 (150)	6.3x7.7 (6.3x5.4) (8x6.2)	0.68 (0.88) (0.68)	185 (165) (185)
33	330	6.3x5.4 (5x5.4)	0.44 (0.76)	230 (150)	6.3x7.7 (8x6.2)	0.44 (0.34)	230 (280)	6.3x7.7 (8x6.2)	0.68 (0.68)	185 (185)
47	470	6.3x7.7 (6.3x5.4) (8x6.2)	0.34 (0.44) (0.34)	280 (230) (280)	6.3x7.7 (6.3x5.4) (8x6.2)	0.34 (0.44) (0.34)	280 (230) (280)	6.3x7.7 (8x6.2)	0.68 (0.68)	185 (185)
56	560	6.3x7.7 (5x5.4)	0.34 (0.44)	280 (230)	6.3x7.7	0.34	280	8x10.5 (6.3x7.7)	0.34 (0.68)	350 (185)
68	680	6.3x7.7	0.34	280	6.3x7.7	0.34	280	8x10.5	0.34	350
100	101	6.3x7.7 (8x6.2)	0.34 (0.34)	280 (280)	8x10.5	0.17	450	10x10.5 (8x10.5)	0.18 (0.34)	670 (350)
150	151	8x10.5 (6.3x7.7)	0.17 (0.34)	450 (280)	10x10.5	0.09	670	10x10.5	0.18	670

→ Rated Ripple Current (mA rms) at 105°C 120Hz
 → Impedance(Ω) at 20°C 100KHZ
 → Case Size: Φ D x L (mm)

KZ Series

■ DIMENSIONS MAXIMUM PERMISSIBLE RIPPLE CURRENT

VV(Vdc) μF		6.3(OJ)			10			16		
		220	221	8×10.5	0.17	450	10×10.5	0.09	670	10×13.5 (10×10.5)
330	331	10×10.5 (8×10.5)	0.09 (0.170)	670 (450)	10×10.5	0.09	670	12.5×13.5	0.14	800
470	471	10×13.5 (10×10.5)	0.075 (0.09)	800 (670)	12.5×13.5 (10×13.5)	0.065 (0.075)	900 (800)	16×16.5 (12.5×16)	0.10 (0.12)	1150 (900)
680	681	12.5×13.5	0.065	900	12.5×16 (12.5×13.5)	0.060 (0.065)	1050 (900)			
1000	102	16×16.5 (12.5×16)	0.055 (0.060)	1350 (1050)	16×16.5	0.055	1350			
1500	152	16×16.5	0.055	1350						

→ Rated Ripple Current (mAmps) at 105°C 120Hz
 → Impedance(Ω) at 20°C 100KHZ
 → Case Size: Φ DxL (mm)

□ FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Frequency		50HZ	120HZ	300HZ	1KHZ	10KHZ-	
Coefficient	Φ4-Φ10	4.7-68μF	0.35	0.50	0.64	0.83	1.00
		100-1500μF	0.40	0.55	0.70	0.85	1.00
	12.5-Φ16	~680μF	0.45	0.65	0.80	0.90	1.00
		1000-4700μF	0.65	0.85	0.95	1.00	1.00