

FZ Series

LONG LIFF WITH EXTRA LOWER IMPEDANCE

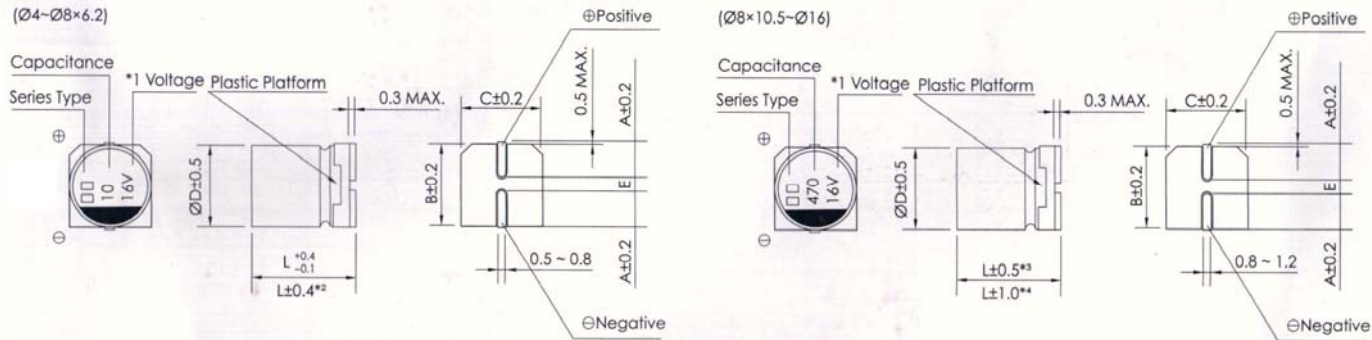
- Extra lower impedance with temperature range -55~+105℃
- Load life of 2000~5000 hours
- Impedance 5~25% less than KZ series
- Comply with the RoHS directive



SPECIFICATIONS

Item	Characteristics									
Operating Temperature Range	-55 ~ +105℃									
Voltage Range	6.3 ~ 100 V									
Capacitance Range	3.3 ~ 4700 μ F									
Capacitance Tolerance	- 20% ~ + 20% at 20℃, 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℃									
	Rated Voltage (V)		6.3	10	16	25	35	50	63~80	100
	tan δ(max.)	Φ4~Φ10	0.26	0.19	0.16	0.14	0.12	0.10	0.08	0.07
		Φ12.5~Φ16	0.26	0.19	0.18	0.16	0.14	0.10	0.08	0.07
Stability at Low Temperature	Measurement frequency:120Hz									
	Rated Voltage (V)			6.3~16			25~100			
	Impedance Ratio ZT/Z20(max.)	Z(- 25℃) / Z (+ 20℃)			2			2		
		Z(- 40℃) / Z (+ 20℃)			3			3		
		Z(- 55℃) / Z (+ 20℃)			4			3		
Load Life	After 5000 hrs.(2000 hrs.forΦ4~Φ6.3×5.4&Φ8) application of the rated voltage at 105℃, they meet the characteristics listed below.									
	Capacitance Change			Within ±30% 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℃ 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

Aluminum Electrolytic Capacitors

YUSCON®

FZ Series

● DIMENSIONS(Unit:mm)

(ΦDxL)	4×5.4	5×5.4	6.3×5.4	6.3×7.7	8×6.2	8×10.5	10×10.5	10×13.5	12.5×13.5	12.5×16	16×16.5
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							4×5.8	1.35	90
15	150							4×5.8	1.35	90
22	220	4×5.4	1.35	90	4×5.8	1.35	90	5×5.8 (4×5.8)	0.70 (1.35)	160 (90)
33	330	5×5.8 (4×5.8)	0.70 (1.35)	160 (90)	5×5.8 (4×5.8)	0.70 (1.35)	160 (90)	6.3×5.8 (5×5.8)	0.36 (0.70)	240 (160)
47	470	5×5.8 (4×5.8)	0.70 (1.35)	160 (90)	6.3×5.8 (5×5.8)	0.36 (0.70)	240 (160)	6.3×5.8 (5×5.8)	0.36 (0.70)	240 (160)
56	560	5×5.8	0.70	160	6.3×5.8	0.36	240	6.3×5.8	0.36	240
68	680	6.3×5.8 (5×5.8)	0.36 (0.70)	240 (160)	6.3×5.8	0.36	240	6.3×7.7 (6.3×5.8)	0.26 (0.36)	300 (240)
100	101	6.3×5.8 (5×5.8)	0.36 (0.70)	240 (160)	6.3×7.7 (6.3×5.8)	0.26 (0.36)	300 (240)	6.3×7.7 (6.3×5.8)	0.26 (0.36)	300 (240)
150	151	6.3×5.8	0.36	240	6.3×7.7	0.26	300	6.3×7.7	0.26	300
220	221	6.3×7.7 (6.3×5.8) (8×6.2)	0.26 (0.36) (0.26)	300 (240) (300)	6.3×7.7 (8×6.2)	0.26 (0.26)	300 (300)	8×10.5 (6.3×7.7)	0.16 (0.26)	600 (300)
330	331	6.3×7.7 (8×6.2)	0.26 (0.26)	300 (300)	10×10.5 (8×10.5)	0.08 (0.16)	850 (600)	10×10.5 (8×10.5)	0.08 (0.16)	850 (600)
470	471	8×10.5	0.16	600	10×10.5 (8×10.5)	0.08 (0.16)	850 (600)	10×10.5 (8×10.5)	0.08 (0.16)	850 (600)
680	681	10×10.5 (8×10.5)	0.08 (0.16)	850 (600)	10×10.5	0.08	850	10×13.5 (10×10.5)	0.07 (0.08)	950 (850)
1000	102	10×10.5 (8×10.5)	0.08 (0.16)	850 (600)	10×13.5 (10×10.5)	0.07 (0.08)	950 (850)	16×16.5 (12.5×16) (12.5×13.5)	0.05 (0.055) (0.06)	1450 (1200) (1100)
1500	152	10×13.5 (10×10.5)	0.07 (0.08)	950 (850)	12.5×13.5	0.06	1100	16×16.5	0.05	1450
2200	222	12.5× 13.5	0.06	1100	12.5×16	0.055	1200			
3300	332	12.5×16	0.055	1200	16×16.5	0.05	1450			
4700	472	16×16.5	0.05	1450						

Rated Ripple Current (mA rms) at 105 °C 120Hz

Impedance(Ω) at 20°C 100KHZ

Case Size: Φ DxL (mm)

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WV(Vdc) μF		25			35			50		
4.7	4R7				4×5.8	1.35	90	5×5.8 (4×5.8)	1.52 (2.9)	85 (60)
10	100	4×5.8	1.35	90	5×5.8 (4×5.8)	0.70 (1.35)	160 (90)	6.3×5.8 (5×5.8)	0.88 (1.52)	165 (85)
15	150	5×5.8	0.70	160	5×5.8	0.70	160	6.3×5.8	0.88	165
22	220	6.3×5.8 (5×5.8)	0.36 (0.70)	240 (160)	6.3×5.8 (5×5.8)	0.36 (0.70)	240 (160)	6.3×7.7 (6.3×5.8) (8×6.2)	0.68 (0.88) (0.68)	195 (165) (195)
33	330	6.3×5.8 (5×5.8)	0.36 (0.70)	240 (160)	6.3×7.7 (8×6.2)	0.36 (0.26)	240 (300)	6.3×7.7 (8×6.2)	0.68 (0.68)	195 (195)
47	470	6.3×7.7 (6.3×5.8) (8×6.2)	0.26 (0.36) (0.26)	300 (240) (300)	6.3×7.7 (6.3×5.8) (8×6.2)	0.26 (0.36) (0.26)	300 (240) (300)	6.3×7.7 (8×6.2)	0.68 (0.68)	195 (195)
56	560	6.3×7.7 (6.3×5.8)	0.26 (0.36)	300 (240)	6.3×7.7	0.26	300	8×10.5	0.34	350
68	680	6.3×7.7	0.26	300	6.3×7.7	0.26	300	8×10.5	0.34	350
100	101	6.3×7.7 (8×6.2)	0.26 (0.26)	300 (300)	8×10.5	0.16	600	10×10.5 (8×10.5)	0.18 (0.34)	670 (350)
150	151	8×10.5 (6.3×7.7)	0.16 (0.26)	600 (300)	10×10.5 (8×10.5)	0.08 (0.16)	850 (600)	10×10.5	0.18	670
220	221	8×10.5	0.16	600	10×10.5 (8×10.5)	0.08 (0.16)	850 (600)	10×13.5 (10×10.5)	0.14 (0.18)	780 (670)
330	331	10×10.5 (8×10.5)	0.08 (0.16)	850 (600)	10×10.5	0.08	850	12.5×13.5	0.12	900
470	471	10×13.5 (10×10.5)	0.07 (0.08)	950 (850)	12.5×13.5 (10×13.5)	0.06 (0.07)	1100 (950)	16×16.5 (12.5×16) (12.5×13.5)	0.08 (0.10)	1250 (1050)
680	681	12.5×13.5	0.06	1100	12.5×16	0.055	1200			
1000	102	16×16.5 (12.5×16)	0.05 (0.055)	1450 (1200)	16×16.5	0.05	1450			
1500	152	16×16.5	0.05	1450						

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

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■DIMENSIONS MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV(Vdc) μF		63			80			100		
3.3	3R3				5×5.8	5.0	25			
4.7	4R7	5×5.8	3.0	50	6.3×5.8	3.0	40			
10	100	6.3×7.7 (6.3×5.8)	1.2 (1.5)	120 (80)	6.3×7.7 (8 ×6.2)	2.4 (2.4)	60 (60)	8×10.5	1.3	130
22	220	8×10.5 (6.3×7.7) (8 ×6.2)	0.65 (1.2) (1.2)	250 (120) (120)	8×10.5	1.3	130	10×10.5 (8 ×10.5)	0.7 (1.3)	200 (130)
33	330	8×10.5	0.65	250	8×10.5	1.3	130	10×10.5	0.7	200
47	470	8×10.5	0.65	250	10×10.5	0.7	200	12.5×13.5 (10×13.5)	0.32 (0.60)	500 (250)
68	680	12.5×13.5 (8×10.5)	0.16 (0.65)	800 (250)	12.5×13.5	0.32	500	12.5×13.5	0.32	500
100	101	12.5×13.5 (10×10.5)	0.16 (0.35)	800 (400)	12.5×13.5	0.32	500	16×16.5 (12.5×16)	0.17 (0.26)	795 (550)
150	151	12.5×13.5 (10×13.5)	0.16 (0.25)	800 (650)	12.5×13.5	0.32	500			
220	221	12.5×13.5 (10×13.5)	0.16 (0.25)	800 (650)	12.5×16	0.26	550			
330	331	16×16.5	0.082	1400	16×16.5	0.17	795			

→ Rated Ripple Current (mAmps) at 105°C 120Hz

 → Impedance(Ω) at 20°C 100KHZ

 → Case Size: ΦDxL (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	~68μF	0.40	0.55	0.70	0.85	1.00
		100~680μF	0.45	0.65	0.80	0.90	1.00
		1000~4700μF	0.65	0.85	0.95	1.00	1.00