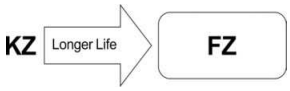
ELCON

Surface Mount Aluminum Electrolytic Capacitors

FZ Series

Long life with extra lower impedance

- Extra Low Impedance with temperature range -55 ~ +105℃
- Load life of 2000~5000 hours
- RoHS Compliance



■SPECIFICATIONS

Item	Characteristics								
Operation Temperature Range	-55 ~ +105℃								
Voltage Range	6.3 ~ 100V								
Capacitance Range	3.3 ~ 4700μF								
Capacitance Tolerance	± 20 % (at 120Hz , 20℃)								
Leakage Current	WV(V)	6.3 ~ 100							
	Size	Φ4 ~ 10				Φ12.5 ~ 16			
	Time	After 2 minutes (application of rated voltage)				After 1 minutes (application of rated voltage)			
	L.C.	I≤0.01CV or 3μA , whichever is greater				I≤0.03CV or 4μA , whichever is greater			

Dissipation Factor (MAX) (tanδ) (at 120Hz ,20℃)	WV	6.3	10	16	25	35	50	63~80	100
	tanδ Φ4~10	0.26	0.19	0.16	0.14	0.12	0.10	0.08	0.07
	tanδ Φ12.5~16	0.26	0.19	0.18	0.16	0.14	0.10	0.08	0.07

Low Temp.Impedance Stability at 120Hz	WV(V)	6.3 ~ 16	25 ~ 100
	Z(-25℃)/ Z(+20℃)	2	2
	Z(-40)℃/ Z(+20℃)	3	3
	Z(-55℃)/ Z(+20℃)	4	3

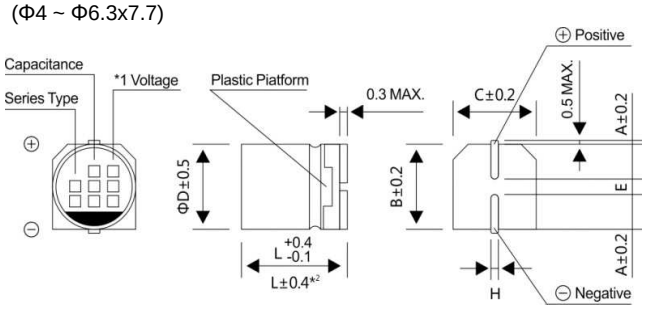
Load Life	After 5000hrs. (2000hrs. for Φ4~Φ6.3x5.8) application of the rated voltage at 105℃, they meet the characteristics listed below.	
	Capacitance change	Within ±30% of initial value
	Dissipation Factor	200% or less of initial specified value
	Leakage Current	initial specified value or less

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

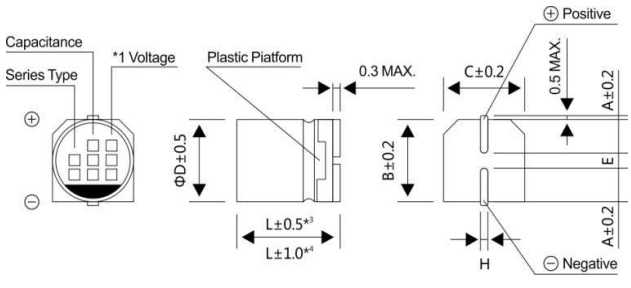
Marking	Black print on the case top

■ DRAWING (Unit: mm)

(Φ4 ~ Φ6.3x7.7)



Φ8x10.5 ~ Φ16



*1 Voltage mark for 6.3V is【6V】

*2 Applicable to Φ6.3x7.7

*3 Applicable to Φ8x10.5 ~ Φ10

*4 Applicable to Φ12.5 ~ Φ16

FZ Series

■ DIMENSIONS (Unit:mm)

ΦDxL	4x5.8	5x5.8	6.3x5.8	6.3x7.7	8x10.5	10x10.5	10x13.5	12.5x13.5	12.5x16	16x16.5
A	2.0	2.2	2.6	2.6	3.0	3.3	3.3	4.9	4.9	5.8
B	4.3	5.3	6.6	6.6	8.4	10.4	10.4	13.0	13.0	17.0
C	4.3	5.3	6.6	6.6	8.4	10.4	10.4	13.0	13.0	17.0
E±0.2	1.0	1.4	1.9	1.9	3.1	4.7	4.7	4.7	4.7	6.4
L	5.8	5.8	5.8	7.7	10.5	10.5	13.5	13.5	16.0	16.5
H	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.8~1.2	0.8~1.2	0.8~1.2	0.8~1.2	0.8~1.2	0.8~1.2

■ DIMENSIONS&MAXIMUM PERMISSIBLE RIPPLE CURRENT & IMPEDANCE

WV / μF \ Code		6.3			10			16		
		0J			1A			1C		
10	100							4x5.8	1.35	90
15	150							4x5.8	1.35	90
22	220	4x5.8	1.35	90	4x5.8	1.35	90	5x5.8	0.70	160
33	330	5x5.8	0.70	160	5x5.8	0.70	160	6.3x5.8	0.36	240
		(4x5.8)	(1.35)	(90)						
47	470	5x5.8	0.70	160	6.3x5.8	0.36	240	6.3x5.8	0.36	240
		(4x5.8)	(1.35)	(90)						
56	560	5x5.8	0.70	160	6.3x5.8	0.36	240	6.3x5.8	0.36	240
68	680	6.3x5.8	0.36	240	6.3x5.8	0.36	240	6.3x7.7	0.26	300
								(6.3x5.8)	(0.36)	(240)
100	101	6.3x5.8	0.36	240	6.3x7.7	0.26	300	6.3x7.7	0.26	300
150	151	6.3x5.8	0.36	240	6.3x7.7	0.26	300	6.3x7.7	0.26	300
220	221	6.3x7.7	0.26	300	6.3x7.7	0.26	300	8x10.5	0.16	600
330	331	8x10.5	0.16	600	10x10.5	0.08	850	10x10.5	0.08	850
					(8x10.5)	(0.16)	(600)	(8x10.5)	(0.16)	(600)
470	471	8x10.5	0.16	600	10x10.5	0.08	850	10x10.5	0.08	850
					(8x10.5)	(0.16)	(600)			
680	681	10x10.5	0.08	850	10x10.5	0.08	850	10x13.5	0.07	950
		(8x10.5)	(0.16)	(600)						
1000	102	10x10.5	0.08	850	10x13.5	0.07	950	16x16.5	0.05	1450
		(8x10.5)	(0.16)	(600)	(10x10.5)	(0.08)	(850)	（12.5x16）	(0.055)	(1200)
								（12.5x13.5	(0.06)	(1100)
1500	152	10x13.5	0.07	950	12.5x13.5	0.06	1100	16x16.5	0.05	1450
2200	222	12.5x13.5	0.06	1100	12.5x16	0.055	1200			
3300	332	12.5x16	0.055	1200	16x16.5	0.05	1450	Case size	Impedance	Ripple current
4700	472	16x16.5	0.05	1450						

WV / μF \ Code		25			35			50		
		1E			1V			1H		
4.7	4R7				4x5.8	1.35	90	5x5.8	1.52	85
10.0	100.0	4x5.8	1.35	90	5x5.8	0.70	160	6.3x7.7	0.68	195
								(6.3x5.8)	(0.88)	(165)
15	150	5x5.8	0.70	160	5x5.8	0.70	160	6.3x5.8	0.88	165
22	220	6.3x5.8	0.36	240	6.3x5.8	0.36	240	6.3x7.7	0.68	195
		(5x5.8)	(0.70)	(160)				(6.3x5.8)	(0.88)	(165)
33	330	6.3x5.8	0.36	240	6.3x5.8	0.36	240	6.3x7.7	0.68	195
47	470	6.3x7.7	0.26	300	6.3x7.7	0.26	300	8x10.5	0.34	350
								(6.3x7.7)	(0.68)	(195)
56	560	6.3x7.7	0.26	300	6.3x7.7	0.26	300	8x10.5	0.34	350
68	680	6.3x7.7	0.26	300	8x10.5	0.16	600	8x10.5	0.34	350
100	101	8x10.5	0.16	600	8x10.5	0.16	600	10x10.5	0.18	670
150	151	8x10.5	0.16	600	10x10.5	0.08	850	10x13.5	0.14	780
220	221	8x10.5	0.16	600	10x10.5	0.08	850	12.5x13.5	0.12	900
								(10x13.5)	(0.14)	(780)
330	331	10x10.5	0.08	850	12.5x13.5	0.06	1100	12.5x13.5	0.12	900
					(10x13.5)	(0.07)	(950)			
470	471	10x13.5	0.07	950	12.5x13.5	0.06	1100	16x16.5	0.08	1250
								(12.5x16)	(0.10)	(1050)
680	681	12.5x13.5	0.06	1100	12.5x16	0.055	1200			
1000	102	16x16.5	0.05	1450	16x16.5	0.05	1450	Case size	Impedance	Ripple current
		(12.5x16)	(0.055)	(1200)						
1500	152	16x16.5	0.05	1450						

FZ Series

■ DIMENSIONS&MAXIMUM PERMISSIBLE RIPPLE CURRENT & IMPEDANCE

WV / μF / Code	63			80			100		
	1J			1K			2A		
3.3 / 3R3				5x5.8	5.0	25			
4.7 / 4R7	5x5.8	3.00	50	6.3x5.8	3.0	40			
10 / 100	6.3x7.7	1.20	120	6.3x7.7	2.4	60	8x10.5	1.30	130.00
	(6.3x5.8)	(1.50)	(80)						
22 / 220	8x10.5	0.65	250	8x10.5	1.3	130	10x10.5	0.70	200
	(6.3x7.7)	(1.20)	(120)						
33 / 330	8x10.5	0.65	250	10x10.5	0.7	200	10x13.5	0.70	200
47 / 470	10x10.5	0.65	250	10x13.5	0.45	300	12.5x13.5	0.32	500
68 / 680	12.5x13.5	0.15	800	12.5x13.5	0.32	500	12.5x13.5	0.32	500
	(10x10.5)	(0.65)	(250)						
100 / 101	12.5x13.5	0.16	800	12.5x13.5	0.32	500	16x16.5	0.2	795
	(10x13.5)	(0.25)	(400)				(12.5x16)	(0.26)	(550)
150 / 151	12.5x13.5	0.16	800	12.5x13.5	0.32	500			
	(10x13.5)	(0.25)	(650)						
220 / 221	12.5x13.5	0.16	800	12.5x16	0.26	550	Case size	Impedance	Ripple current
330 / 331	16x16.5	0.082	1400	16x16.5	0.17	795			

·Case size ΦDxL (mm), Impedance (Ω) at 20℃, 100KHz, Ripple current (mA rms) at 105℃, 100KHz

■ 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
	Φ12.5~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