EXTRA LOWER IMPEDANCE
极低阻抗品

- Extra low impedance with temperature range –55~+105℃
  极低阻抗和适用于 –55~+105℃的温度范围
- Impedance 20~40% less than FVZ series
  阻抗值比FVZ系列低20~40%
- Comply with the RoHS directive
  符合 RoHS 指令

☐ SPECIFICATIONS 特性表

Items 项目	Characteristics 主要特性
Operation Temperature Range 使用温度范围	–55 ~ +105℃
Voltage Range 额定工作电压范围	6.3 ~ 50V
Capacitance Range 静电容量范围	4.7 ~ 4700 μF
Capacitance Tolerance 静电容量允许偏差	±20% at 120Hz, 20℃
Leakage Current 漏电流	Leakage current (Ø4~Ø10)≤0.01CV or 3 μA, whichever is greater (after 2 minutes application of rated voltage) Leakage current (Ø12.5~Ø16)≤0.03CV or 4 μA, whichever is greater (after 2minute application of rated voltage) 漏电流 (Ø4~Ø10)≤0.01CV 或 3μA，取较大值 (施加额定工作电压2 分钟后) 漏电流 (Ø12.5~Ø16)≤0.03CV 或 4μA，取较大值 (施加额定工作电压 2 分钟后)
Dissipation Factor (tanδ) 损耗角正切	Measurement frequency 测试频率: 120Hz, Temperature 温度: 20℃

Rated Voltage (V) 额定工作电压		6.3	10	16	25	35	50
tan δ(max.) 最大损耗角正切	Ø4~Ø10	0.22	0.20	0.18	0.16	0.14	0.12
	Ø12.5~Ø16	0.26	0.22	0.18	0.16	0.14	0.12

Stability at LowTemperature 低温特性 — Measurement frequency 测试频率: 120Hz

Rated Voltage (V) 额定工作电压			6.3	10	16	25	35	50
Impedance Ratio 阻抗比 ZT/Z20 (max.)	Ø4~Ø10	Z(–25℃) / Z(20℃)	2	2	2	2	2	2
		Z(–55℃) / Z(20℃)	5	4	4	3	3	3
	Ø12.5~Ø16	Z(–25℃)/Z(20℃)	3	3	2	2	2	2
		Z(–55℃) / Z(20℃)	10	8	6	4	3	3

Load Life 高温负荷特性 — After 3000 hrs. (2000 hrs. for Ø4~Ø6.3×7.7) applicationfotherated voltage at 105℃, they meet the characteristics listed below.
在105℃环境中施加额定工作电压3000小后 (Ø4~Ø6.3×7.7 为2000 小时) 后，电容器的特性符合下表的要求。

Capacitance Change 静电容量变化率	Within ± 30% of initial value初始值的 ±30%以内
Dissipation Factor 损耗角正切	200% or less of initial specified value 不大于规范值的200%
Leakage Current 漏电流	initial specified value or less 不大于规范值

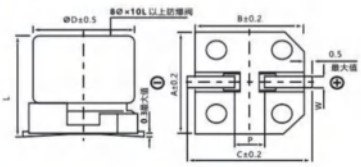
Shelf Life 高温贮存特性 — After leaving capacitors under no load at 105℃ for1000 hours, they meet the specified value for load life characteristics listed above. 在105℃ 环境中无负荷放置1000 小后后，电容器的特性符合高温负荷特性中所列的规定值。

Resistance to Soldering Heat 耐焊接热特性 — After reflow soldering and restored at room temperature, they meet the characteristics listed below. 经过回流焊并冷却至室温后，电容器的特性符合下表的要求。

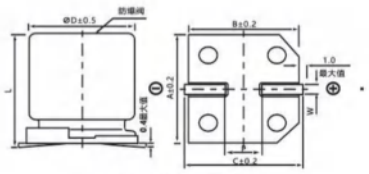
Capacitance Change 静电容量变化率	Within±10% of initial value 初始值的 ±10%以内
Dissipation Factor 损耗角正切	initial specified value or less 不大于规范值
Leakage Current 漏电流	initial specified value or less 不大于规范值

Marking 标识 — Black print on the case top. 铝壳顶部黑字印刷。

☐ Diagramof Dimensions 尺寸图



ΦD=4~10 适用



Φ12.5 以上适用

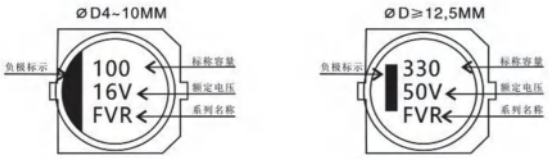
☐ DIMENSIONS (Unit: mm) 尺寸表

DXL	4X5.4	5X5.4	6.3X5.4	6.3X7.7	8X10.5	10X10.5	10X13.5	12.5X13.5	12.5X16	16X16.5
A	4.3	5.3	6.6	6.6	8.3	10.3	10.3	13.0	13.0	17.0
B	4.3	5.3	6.6	6.6	8.3	10.3	10.3	13.0	13.0	17.0
C	5.1	5.9	7.2	7.2	9.2	11.2	11.2	13.7	13.7	18.0
P±0.2	1.0	1.5	2.0	2.0	3.1	4.4	4.4	4.4	4.4	6.4
L	5.4±0.3	5.4±0.3	5.4±0.3	7.7±0.3	10.5±0.5	10.5±0.5	13.5±0.5	13.5±0.5	16±0.5	16.5±0.5

FVR

C-CON MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

☐ DRAWING (Unit: mm) 外形图



☐ DIMENSIONS& MAXIMUM PERMISSIBE RIPPLE CURRENT & IMPED ANCE 规格尺寸及最大允许纹波电流及阻抗值

WV / Code / μF / 代码		6.3			10			16		
		OJ			1A			1C		
10	100							4 × 5.4	1.8	80
15	150							4 × 5.4	1.8	80
22	220	4 × 5.4	1.8	80	4 × 5.4	1.8	80	5 × 5.4 (4 × 5.4)	0.76 (1.8)	150 (80)
33	330	5 × 5.4 (4 × 5.4)	0.76 (1.8)	150 (80)	5 × 5.4 (4 × 5.4)	0.76 (1.8)	150 (80)	6.3 × 5.4 (5 × 5.4)	0.44 (0.76)	230 (150)
47	470	5 × 5.4 (4 × 5.4)	0.76 (1.8)	150 (80)	6.3 × 5.4 (5 × 5.4)	0.44 (0.76)	230 (150)	6.3 × 5.4 (5 × 5.4)	0.44 (0.76)	230 (150)
56	560	5 × 5.4	0.76	150	6.3 × 5.4	0.44	230	6.3 × 5.4	0.44	230
68	680	6.3 × 5.4 (5 × 5.4)	0.44 (0.76)	230 (150)	6.3 × 5.4	0.44	230	6.3 × 7.7 (6.3 × 5.4)	0.34 (0.44)	280 (230)
100	101	6.3 × 5.4 (5 × 5.4)	0.44 (0.76)	230 (150)	6.3 × 7.7 (6.3 × 5.4)	0.34 (0.44)	280 (230)	6.3 × 7.7 (6.3 × 5.4)	0.34 (0.44)	280 (230)
150	151	6.3 × 5.4	0.44	230	6.3 × 7.7	0.34	280	6.3 × 7.7	0.34	280
220	221	6.3 × 7.7 (6.3 × 5.4)	0.34 (0.44)	280 (230)	6.3 × 7.7	0.34	280	8 × 10.5 (6.3 × 7.7)	0.17 (0.34)	450 (280)
330	331	6.3 × 7.7	0.34	280	8 × 10.5	0.17	450	10 × 10.5 (8 × 10.5)	0.09 (0.17)	670 (450)
470	471	8 × 10.5	0.17	450	8 × 10.5	0.17	450	10 × 10.5 (8 × 10.5)	0.09 (0.17)	670 (450)
680	681	10 × 10.5 (8 × 10.5)	0.09 (0.17)	670 (450)	10 × 10.5	0.09	670	10 × 13.5 (10 × 10.5)	0.075 (0.09)	800 (670)
1000	102	10 × 10.5 (8 × 10.5)	0.09 (0.17)	670 (450)	10 × 10.5	0.09	670	16 × 16.5 (12.5 × 16) (12.5 × 13.5)	0.055 (0.06) (0.065)	1350 (1050) (900)
1500	152	10 × 13.5 (10 × 10.5)	0.075 (0.09)	800 (670)	12.5 × 13.5	0.065	900	16 × 16.5	0.055	1350
2200	222	12.5 × 13.5	0.065	900	12.5 × 16	0.060	1050	16 × 16.5	0.055	1350
3300	332	12.5 × 16	0.060	1050	16 × 16.5	0.055	1350	Case size ØD×L(mm) 尺寸	Impedance (Ω) at 20°C, 100KHz 阻抗值	Ripple current (mA rms) at 105°C, 100KHz 纹波电流
4700	472	16 × 16.5	0.055	1350						

WV / Code / μF / 代码		25			35			50		
		1E			1V			1H		
4.7	4R7				4 × 5.4	1.8	80	5 × 5.4 (4 × 5.4)	1.52 (3.0)	85 (60)
10	100	4 × 5.4	1.8	80	5 × 5.4 (4 × 5.4)	0.76 (1.8)	150 (80)	6.3 × 5.4 (5 × 5.4)	0.88 (1.52)	165 (85)
15	150	5 × 5.4	0.76	150	5 × 5.4	0.76	150	6.3 × 5.4	0.88	165
22	220	6.3 × 5.4 (5 × 5.4)	0.44 (0.76)	230 (150)	6.3 × 5.4 (5 × 5.4)	0.44 (0.76)	230 (150)	6.3 × 7.7 (6.3 × 5.4)	0.68 (0.88)	185 (165)
33	330	6.3 × 5.4 (5 × 5.4)	0.44 (0.76)	230 (150)	6.3 × 5.4	0.44	230	6.3 × 7.7	0.68	185
47	470	6.3 × 7.7 (6.3 × 5.4)	0.34 (0.44)	280 (230)	6.3 × 7.7 (6.3 × 5.4)	0.34 (0.44)	280 (230)	6.3 × 7.7	0.68	185
56	560	6.3 × 7.7 (6.3 × 5.4)	0.34 (0.44)	280 (230)	6.3 × 7.7	0.34	280	8 × 10.5 (6.3 × 7.7)	0.34 (0.68)	350 (185)
68	680	6.3 × 7.7	0.34	280	6.3 × 7.7	0.34	280	8 × 10.5	0.34	350
100	101	6.3 × 7.7	0.34	280	8 × 10.5	0.17	450	10 × 10.5 (8 × 10.5)	0.18 (0.34)	670 (350)
150	151	8 × 10.5 (6.3 × 7.7)	0.17 (0.34)	450 (280)	10 × 10.5	0.09	670	10 × 10.5	0.18	670
								Case size ØD×L(mm) 尺寸	Impedance (Ω) at 20°C, 100KHz 阻抗值	Ripple current (mA rms) at 105°C, 100KHz 纹波电流

•Case size ØD×L(mm), ripple current (mA rms) at 105°C, 100KHz, Impedance (Ω) at 20℃ 100KHz •尺寸ØD×L(mm), 纹波电流(mA rms)于105°C, 100KHz,阻抗值(Ω)于20℃ 100KHz

□DIMENSIONS&MAXIMUM PERMISSIBE RIPPLE CURRENT & IMPEDANCE 规格尺寸及最大允许纹波电流及阻抗值

WV / Code / μF / 代码		25			35			50		
		1E			1V			1H		
220	221	8 × 10.5	0.17	450	10 × 10.5	0.09	670	10 × 13.5 (10 × 10.5)	0.16 (0.18)	750 (670)
330	331	10 × 10.5 (8 × 10.5)	0.09 (0.17)	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	Case size ØD×L(mm) 尺寸	Impedance (Ω) at 20°C, 100KHz 阻抗值	Ripple current (mA rms) at 105°C, 100KHz 纹波电流
1500	152	16 × 16.5	0.055	1350						

•Case size ØD×L(mm), ripple current (mA rms) at 105°C, 100KHz，Impedance (Ω) at 20℃ 100KHz

•尺寸ØD×L(mm)，纹波电流(mA rms)于105°C, 100KHz,阻抗值(Ω)于20℃ 100KHz

□ FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT 纹波电流频率补偿系数

Frequency 频率			50Hz	120Hz	300Hz	1KHz	10KHz~
Coefficient 系数	Ø4 ~ Ø10	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
	Ø12.5 ~ Ø16	~ 680μF	0.45	0.65	0.80	0.90	1.00
		1000 ~ 4700μF	0.65	0.85	0.95	1.00	1.00

- The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime wiht every 10°C rise.When long life performance is required in actual use,the rms ripple current has to be reduced.
- 铝电解电容器由于在纹波电流叠加时自我发热，温度上升而老化，每升温10°C寿命减少一半；要想保持长寿命请在使用过程中降低纹波电流。