

# ALUMINUM ELECTROLYTIC CAPACITORS

## VRF series

**Lowest Impedance(更低阻抗) , Long Life Surface Mount Type(長壽命貼片品) ,**

### FEATURES

- Designed for surface mounting on high-density circuit board
- Emboss carrier tape packing system is available for automatic insertion

### SPECIFICATIONS

Item	Performance Characteristics					
Operating Temperature Range	-55°C ~ +105°C					
Rated Voltage Range	6.3~35W.V.					
Capacitance Range	1~1500 $\mu$ F					
Capacitance Tolerance	$\pm 20\%$ (20°C, 120Hz)					
Leakage Current (MAX)	I=0.01CV or 3uA whichever is greater.(After 2 minutes at 20°C) I=Leakage Current(uA) , C=Nominal Capacitance(uF) , V=Rated Voltage(V)					
Dissipation Factor (tan δ)	When nominal capacitance is over 1000uF, tan δ shall be added 0.02 to the listed value with increase of every 1000uF					
Low Temperature Stability Impedance Ratio	Rated voltage (V)	6.3	10	16	25	35
	Tan δ	0.26	0.19	0.16	0.14	0.12
	(20°C 120Hz)					
Load Life	Rated Voltage(V)	6.3	10	16	25	35
	Z(-25°C)/Z(+20°C)	2	2	2	2	2
	Z(-40°C)/Z(+20°C)	3	3	3	3	3
	Z(-55°C)/Z(+20°C)	4	4	4	3	3
Shelf Life	After apply rated voltage for 2000 hours (Φ 8 to Φ 10 (6.3W.V. to 35W.V) 5000h) at +105°C and then being stabilized, capacitor shall meet the following limits.					
	Capacitance Change	within $\pm 30\%$ of the initial value. (Φ 10:35%)				
	Dissipation Factor	Not more than 200% of the specified value. (Φ 10:300%)				
Standard	Leakage Current	Not more than the specified value.				
	According to JIS C 5101					

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### Case size table

### DIMENSIONS (mm)

	Φ 4×5.4	Φ 5×5.4	Φ 6.3×5.4	Φ 6.3×7.7	Φ 8×10.5	Φ 10×10.5
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.4	5.4	5.4	7.7	10.5	10.5
H	0.5 ~ 0.8				0.8 ~ 1.1	



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Ripple Current (mA 105°C, 100kHz) r.m.s

W.V Cap(μF)	6.3			10			16			25			35		
	0J			1A			1C			1E			1V		
	Size	Ripple Current	Impedance												
4.7													4x5.4	90	1.35
10							4x5.4	90	1.35	4x5.4	90	1.35	4x5.4	90	1.35
22	4x5.4	90	1.35	4x5.4	90	1.35	4x5.4	90	1.35	5x5.4	160	0.70	5x5.4	160	0.70
33	4x5.4	90	1.35	4x5.4	90	1.35	5x5.4	160	0.70	6.3x5.4	240	0.36	6.3x5.4	240	0.36
47	4x5.4	90	1.35	5x5.4	160	0.70	5x5.4	160	0.70	6.3x5.4	240	0.36	6.3x5.4	240	0.36
68	5x5.4	160	0.70	6.3x5.4	240	0.36	6.3x5.4	240	0.36	6.3x5.4	240	0.36			
100	5x5.4	160	0.70	6.3x5.4	240	0.36	6.3x5.4	240	0.36	6.3x5.4	240	0.36	8x10.5	600	0.16
150	6.3x5.4	240	0.36	6.3x5.4	240	0.36	6.3x7.7	240	0.36	8x10.5	600	0.16	8x10.5	600	0.16
220	6.3x7.7	240	0.36	6.3x7.7	240	0.36	6.3x7.7	240	0.36	8x10.5	600	0.16	8x10.5	600	0.16
330	6.3x7.7	240	0.36	8x10.5	600	0.16	8x10.5	600	0.16	8x10.5	600	0.16	10x10.5	850	0.08
470	8x10.5	600	0.16	8x10.5	600	0.16	8x10.5	600	0.16	10x10.5	850	0.08			
680	8x10.5	600	0.16	10x10.5	850	0.08									
1000	8x10.5	600	0.16	10x10.5	850	0.08									
1500	10x10.5	850	0.08												

Case Size ΦD x L(mm)