

# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

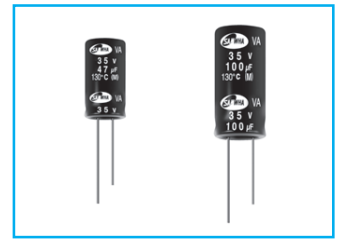
## VA

130°C, Long Life, Low Impedance Series

Low Impedance   
 Long Life   
 Solvent Proof

- Load life of 4000 hours at 130°C
- Low impedance at high frequency
- For Electronic Control Unit and other high temperature applications
- Complied to the RoHS directive

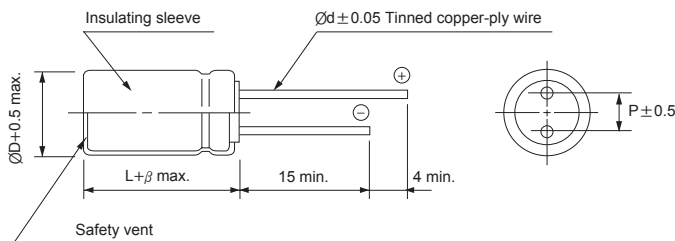
RB → **VA**  
 High Temp.  
 Low Imp.



Item	Characteristics						
Operating temperature range	-40 ~ +130°C						
Leakage current max.	I = 0.01CV or 3µA whichever is greater (after 2 minutes)						
Capacitance tolerance	±20% at 120Hz, 20°C						
Dissipation factor max. (at 120Hz, 20°C)	When the capacitance exceeds 1000µF, 0.02 for each 1000µF increase.						
	Rated Voltage(V)	10	16	25	35	50	63
	tanδ	0.20	0.16	0.14	0.12	0.10	0.09
Low temperature characteristics (Impedance ratio at 120Hz)	WV	10	16	25	35	50	63
	Z-25°C/Z+20°C	3	2	2	2	2	2
	Z-40°C/Z+20°C	6	4	3	3	3	3
Load life (after application of the rated voltage for 4000 hours at 130°C)	Leakage current	Less than specified value					
	Capacitance change	Within ±30% of initial value					
	tanδ	Less than 300% of specified value					
	Ø8 and Ø10 products are for 2000 hours.						
Shelf life (at 130°C)	After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value.						

### ● DRAWING

Unit : mm



ØD	8	10	12.5	16	18
P	3.5	5.0	5.0	7.5	7.5
Ød	0.6	0.6	0.6	0.8	0.8
β	1.5	2.0			

### ● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

µF \ Frequency(Hz)	60	120	1k	10k	100k ≤
~ 330	0.60	0.70	0.85	0.95	1.00
470 ~ 1500	0.65	0.75	0.90	0.98	1.00
2200 ~	0.75	0.80	0.95	1.00	1.00

## MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

**VA** series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV Item $\mu\text{F}$	10			16		
	$\varnothing\text{D} \times \text{L}$ (mm)	Impedance ( $\Omega$ )max. 20°C 100kHz	Ripple current (mA rms) 130°C 100kHz	$\varnothing\text{D} \times \text{L}$ (mm)	Impedance ( $\Omega$ )max. 20°C 100kHz	Ripple current (mA rms) 130°C 100kHz
220						
330	8 × 11.5	0.22	360	8 × 11.5	0.22	360
470	10 × 12.5	0.15	620	10 × 12.5	0.15	620
1000	10 × 20	0.073	960	10 × 20	0.073	960
2200	12.5 × 25	0.040	1430	12.5 × 25	0.040	1430
3300	16 × 25	0.038	1900	16 × 31.5	0.034	2300
4700	16 × 31.5	0.034	2300	16 × 35.5	0.031	2550

WV Item $\mu\text{F}$	25			35		
	$\varnothing\text{D} \times \text{L}$ (mm)	Impedance ( $\Omega$ )max. 20°C 100kHz	Ripple current (mA rms) 130°C 100kHz	$\varnothing\text{D} \times \text{L}$ (mm)	Impedance ( $\Omega$ )max. 20°C 100kHz	Ripple current (mA rms) 130°C 100kHz
220	8 × 11.5	0.22	360	8 × 11.5	0.22	360
330	10 × 12.5	0.15	620	10 × 12.5	0.15	620
470	10 × 20	0.10	800	10 × 16	0.10	800
1000	12.5 × 25	0.055	1100	10 × 20	0.073	960
2200	16 × 31.5	0.034	2300	12.5 × 25	0.040	1430
3300	16 × 35.5	0.031	2550	16 × 35.5	0.031	2550
4700				18 × 35.5	0.028	2800