

VA series

- Standard SMD type
- Rated voltage : 2.5~25V
- Endurance : 2,000 hours at 105°C
- Applications : motherboards, server, VGA, etc.
- RoHS compliance
- Halogen Free compliant



SPECIFICATIONS

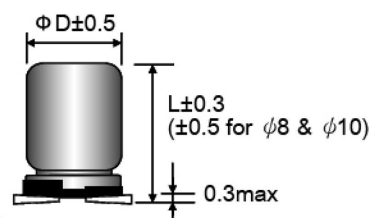
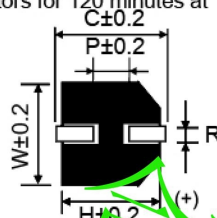
Items	Conditions	Characteristics
Category Temperature Range	—	-55 to +105°C
Rated Voltage Range	—	2.5 ~ 25V
Capacitance Tolerance	at 20°C, 120Hz	±20%(M)
Surge Voltage	at 105°C	Rated voltage × 1.15V
Leakage Current	at 20°C after 2 minutes	$I \leq 0.2CV$ or 300(μA) Whichever is greater measured, after 2 minutes application of rated working voltage at +20°C. Please see the attached characteristics list
Dissipation Factor (tan δ)	at 20°C, 120Hz	Please see the attached characteristics list
Characteristics of Impedance at low, high temperature	at -55°C, 100kHz	$Z(-55^{\circ}\text{C})/Z(+20^{\circ}\text{C}) \leq 1.25$
	at -25°C, 100kHz	$Z(-25^{\circ}\text{C})/Z(+20^{\circ}\text{C}) \leq 1.15$
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2,000 hours at 105°C.	Appearance NO significant damage.
		Capacitance change $\leq \pm 20\%$ of the initial value.
		DF (tan δ) $\leq 150\%$ of the initial specified value.
		ESR $\leq 150\%$ of the initial specified value.
		Leakage current $\leq$ The initial specified value.
Damp Heat (Steady State)	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to store at 60°C, 90 to 95% RH for 1,000 hours, without DC applied.	Appearance NO significant damage.
		Capacitance change $\leq \pm 20\%$ of the initial value.
		DF (tan δ) $\leq 150\%$ of the initial specified value.
		ESR $\leq 150\%$ of the initial specified value.
		Leakage current $\leq$ The initial specified value.
Surge Voltage	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 105°C for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30 seconds.	Appearance NO significant damage.
		Capacitance change $\leq \pm 20\%$ of the initial value.
		DF (tan δ) $\leq 150\%$ of the initial specified value.
		ESR $\leq 150\%$ of the initial specified value.
		Leakage current $\leq$ The initial specified value.

※ Note: If any doubt arises, measure the leakage current after following voltage treatment.

Voltage treatment : DC rated voltage are applied to the capacitors for 120 minutes at 105°C.

MARKING AND DIMENSIONS

Polarity Marking (Cathode) Series Code
Rated Capacitance
Rated Voltage



(Unit:mm)

φ D×L	φ D	L	W	H	C	R	P
5×6	5.0	6.0	5.3	5.3	6.0	0.5~0.8	1.4
6.3×6	6.3	6.0	6.6	6.6	7.3	0.5~0.8	2.1
6.3×7	6.3	7.0	6.6	6.6	7.3	0.5~0.8	2.1
6.3×9.5	6.3	9.5	6.6	6.6	7.3	0.5~0.8	2.1
8×7	8.0	7.0	8.3	8.3	9.0	0.5~0.8	3.2
8×9.5	8.0	9.5	8.3	8.3	9.0	0.8~1.1	3.2
8×12	8.0	12.0	8.3	8.3	9.0	0.8~1.1	3.2
10×10.5	10.0	10.5	10.3	10.3	11.0	0.8~1.1	4.6
10×12.5	10.0	12.5	10.3	10.3	11.0	0.8~1.1	4.6

VA SERIES STANDARD CHARACTERISTICS LIST

Rated Voltage (S.V.)	Cap (μF)	Size DxL	Leakage current (μA) max. ※2	ESR (mΩ) max. 100k to 300kHz / 20°C	Rated Ripple Current (mA rms) 100kHz / 105°C	D.F. (tanδ) max. 120Hz / 20°C
2.5 (2.9)	220	6.3×6	300	25	2,390	0.12
	330	6.3×6	300	25	2,390	0.12
	560	6.3×7	300	25	2,390	0.12
	820	6.3×9.5	410	20	3,000	0.12
	1,200	8×9.5	600	20	4,520	0.12
	1,500	8×9.5	750	20	4,520	0.12
	1,800	8×12	900	13	4,520	0.12
	2,200	10×10.5	1,100	18	4,520	0.12
	2,700	10×12.5	1,350	15	5,200	0.12
4 (4.6)	220	6.3×6	300	25	2,000	0.12
	560	6.3×9.5	448	20	4,500	0.12
	820	8×9.5	656	20	4,500	0.12
	1,000	8×9.5	800	20	4,500	0.12
	1,200	8×12	960	15	4,820	0.12
	1,500	10×10.5	1,200	15	4,820	0.12
	2,200	10×12.5	1,760	15	5,200	0.12
6.3 (7.2)	100	6.3×6	300	25	2,400	0.12
	220	6.3×6	300	25	2,400	0.12
	220	8×7	300	25	3,020	0.12
	560	6.3×9.5	705	20	3,020	0.12
	820	8×9.5	1,033	20	4,500	0.12
	1,000	8×9.5	1,260	20	4,500	0.12
	1,200	8×12	1,512	15	4,800	0.12
	1,500	10×10.5	1,890	15	4,950	0.12
	2,200	10×12.5	2,772	15	5,200	0.12
10 (11.5)	33	5×6	300	45	1,100	0.12
	100	6.3×6	300	30	1,700	0.12
	150	6.3×6	300	45	1,700	0.12
	330	6.3×9.5	660	45	2,050	0.12
	560	8×9.5	1,120	35	2,560	0.12
	680	8×9.5	1,360	35	2,560	0.12
	820	8×12	1,640	17	3,950	0.12
	1,000	10×10.5	2,000	15	3,950	0.12
	1,500	10×12.5	3,000	13	5,230	0.12
16 (18.4)	22	5×6	300	40	1,000	0.12
	100	6.3×6	320	35	1,620	0.12
	270	6.3×9.5	864	20	2,500	0.12
	270	8×9.5	864	20	3,200	0.12
	330	8×9.5	1,056	20	3,690	0.12
	470	8×9.5	1,504	20	3,890	0.12
	560	8×12	1,792	20	3,940	0.12
	680	10×10.5	2,176	20	4,220	0.12
	820	10×12.5	2,624	16	4,720	0.12
	1,000	10×12.5	3,200	16	5,200	0.12

※ 1. Capacitance tolerance : ±20% (M)

※ 2. After 2 minutes

VA SERIES STANDARD CHARACTERISTICS LIST

Rated Voltage (S.V.)	Cap (μF)	Size DxL	Leakage current (μA) max. ※2	ESR (mΩ) max. 100k to 300kHz / 20°C	Rated Ripple Current (mA rms) 100kHz / 105°C	D.F. (tanδ) max. 120Hz / 20°C
20 (23.0)	68	6.3×6	300	38	1,450	0.12
	180	6.3×9.5	720	30	2,450	0.12
	330	8×9.5	1,320	30	3,000	0.12
	470	8×12	1,880	28	3,320	0.12
	560	10×10.5	2,240	28	3,320	0.12
	680	10×12.5	2,720	28	4,220	0.12
25 (28.8)	47	6.3×6	300	40	1,200	0.12
	100	6.3×9.5	500	30	2,000	0.12
	100	8×7	500	40	2,000	0.12
	150	8×9.5	750	35	3,000	0.12
	220	8×12	1,100	28	3,500	0.12
	330	10×10.5	1,650	30	3,800	0.12
	470	10×12.5	2,350	28	4,000	0.12

※ 1. Capacitance tolerance : ±20% (M)

※ 2. After 2 minutes

FREQUENCY COEFFICIENT FOR RIPPLE CURRENT

Frequency	$120\text{Hz} \leq f < 1\text{kHz}$	$1\text{kHz} \leq f < 10\text{kHz}$	$10\text{kHz} \leq f < 100\text{kHz}$	$100\text{kHz} \leq f < 500\text{kHz}$
Coefficient	0.05	0.3	0.7	1.0

VA

合源电子