

VT series

- Super low ESR, High ripple current capability
- Rated voltage : 4~50V.
- Endurance : 1,000hours at 125°C
- Applications : Motherboard, DC/DC Converter, Adapter, SPS, VCR, Camcorder, DSC, PDA, HD Drive, MO Drive, etc.
- RoHS compliant
- Halogen Free compliant

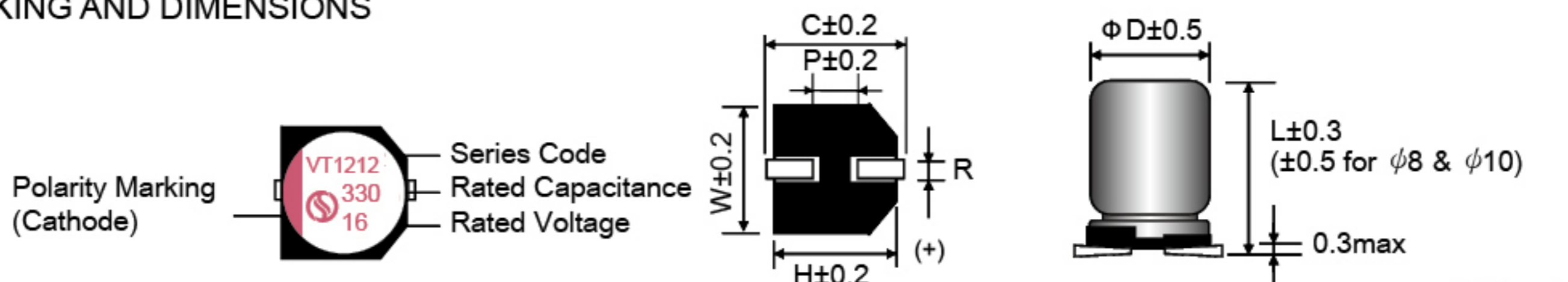


SPECIFICATIONS

Items	Conditions	Characteristics
Category Temperature Range	—	-55 to +125°C
Rated Voltage Range	—	4 ~ 50V
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 $300(\mu A)$ Whichever is greater measured, after 2 minutes application of rated working voltage at +20°C. Please see the attached characteristics list
Dissipation Factor ($\tan \delta$)	at 20°C, 120Hz	Please see the attached characteristics list
Characteristics of Impedance at low, high temperature	at -55°C, 100kHz	$Z(-55^\circ C)/Z(+20^\circ C) \leq 1.25$
	at -25°C, 100kHz	$Z(-25^\circ C)/Z(+20^\circ C) \leq 1.15$
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 1,000 hours at 125°C.	Appearance NO significant damage.
		Capacitance change $\leq \pm 20\%$ of the initial value.
		DF ($\tan \delta$) $\leq 150\%$ of the initial specified value.
		ESR $\leq 150\%$ of the initial specified value.
		Leakage current \leq The initial specified value.
Damp Heag (Steady State)	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to store 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 ($\tan \delta$) $\leq 150\%$ 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 = 1 kΩ) and discharge for 5 minutes 30 seconds.	Appearance NO significant damage.
		Capacitance change $\leq \pm 20\%$ of the initial value.
		DF ($\tan \delta$) $\leq 150\%$ 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 125°C.

MARKING AND DIMENSIONS



$\phi D \times L$	ϕD	L	W	H	C	R	P
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

(Unit:mm)

VT 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)		D.F. (tanδ) max. 120Hz / 20°C
					105°C 100kHz	125°C 100kHz	
4 (4.6)	150	6.3x6	300	35	2,450	700	0.12
	220	6.3x6	300	20	2,800	800	0.12
	560	6.3x9.5	448	20	3,000	857	0.12
	560	8x7	448	20	3,000	857	0.12
	820	8x9.5	656	15	3,500	1,000	0.12
	1,200	8x12	960	15	3,800	1,086	0.12
	1,500	10x10.5	1,200	12	4,500	1,286	0.12
	2,200	10x12.5	1,760	12	5,500	1,571	0.12
6.3 (7.2)	100	6.3x6	300	40	2,400	686	0.12
	150	6.3x6	300	40	2,400	686	0.12
	330	6.3x7	415	30	2,800	800	0.12
	470	6.3x9.5	592	25	2,800	800	0.12
	680	8x9.5	856	25	2,800	800	0.12
	820	8x12	1,033	20	3,000	857	0.12
	1,000	8x12	1,260	20	3,000	857	0.12
	1,200	10x10.5	1,512	20	3,000	857	0.12
	1,800	10x12.5	2,268	18	3,000	857	0.12
10 (11.5)	100	6.3x6	300	35	2,800	800	0.12
	330	6.3x9.5	660	25	2,800	800	0.12
	470	8x9.5	940	25	3,000	857	0.12
	560	8x9.5	1,120	25	3,000	857	0.12
	680	8x12	1,360	20	3,500	1,000	0.12
	820	10x10.5	1,640	20	3,500	1,000	0.12
	1,000	10x10.5	2,000	20	3,500	1,000	0.12
	1,200	10x12.5	2,400	12	5,200	1,486	0.12
16 (18.4)	100	6.3x6	320	35	2,050	586	0.12
	220	6.3x9.5	704	25	2,050	586	0.12
	330	8x9.5	1,056	25	2,700	771	0.12
	470	8x12	1,504	20	3,930	1,123	0.12
	680	10x10.5	2,176	18	4,520	1,291	0.12
	820	10x12.5	2,624	18	4,900	1,400	0.12
25 (28.8)	47	6.3x6	300	60	1,650	471	0.12
	100	6.3x9.5	500	30	1,650	471	0.12
	220	8x12	1,100	28	3,310	946	0.12
	330	10x10.5	1,650	30	4,320	1,234	0.12
	470	10x12.5	2,350	28	4,500	1,286	0.12
35 (40.3)	22	6.3x6	300	70	1,450	414	0.12
	68	6.3x9.5	476	40	1,450	414	0.12
	120	8x9.5	840	40	1,800	514	0.12
	150	8x12	1,050	30	2,000	571	0.12
	220	10x10.5	1,540	30	2,200	629	0.12
	270	10x12.5	1,890	30	2,500	714	0.12



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					105°C 100kHz	125°C 100kHz	
50 (57.5)	10	6.3x6	300	60	1,400	400	0.12
	33	6.3x9.5	330	40	1,500	429	0.12
	47	8x9.5	470	40	2,000	571	0.12
	68	8x12	680	35	2,300	657	0.12
	100	10x10.5	1,000	35	2,200	629	0.12
	100	10x12.5	1,000	35	2,500	714	0.12

※ 1. Capacitance tolerance : ±20% (M)

※ 2. After 2 minutes

FREQUENCY COEFFICIENT FOR RIPPLE CURRENT

Frequency	120Hz ≤ f < 1kHz	1kHz ≤ f < 10kHz	10kHz ≤ f < 100kHz	100kHz ≤ f < 500kHz
Coefficient	0.05	0.3	0.7	1

VT