ELNA Vertical Chip Type Aluminum Electrolytic Capacitors For Audio VVM series

Code in front of series have been extracted from product code, which describes the segment of products, such as type and features.

- New developed Al-Foil and Electrolyte for Audio grade allow lower distortion.
- New range of bright and smooth sound is achieved in SMD area.
- Guaranteed 2000 hours 105℃.
- Environmental : GREEN CAP™ , RoHS compliance.

High temperature, Long life

VVM ⇦ VVG

Marking color : Black print

Specifications

Item	Performance
Category temperature range (℃)	−55 to +105
Tolerance at rated capacitance (%)	±20 (20℃,120Hz)
Leakage current (μA) (max.)	0.01CV or 3 whichever is larger (after 2 minutes) C : Rated capacitance (μF), V: Rated voltage (V) (20℃)
Tangent of loss angle (tanδ)	See table below (20℃,120Hz)
Characteristics at high and low temperature	See table below (120Hz)
Endurance (105℃)	See table below
Shelf life (105℃)	Test time : 1000hours ; other items are same as the endurance. Voltage application treatment : According to JIS C5101-4 4.1
Applicable standards	JIS C5101 - 1, - 18 (IEC 60384 - 1, - 18)

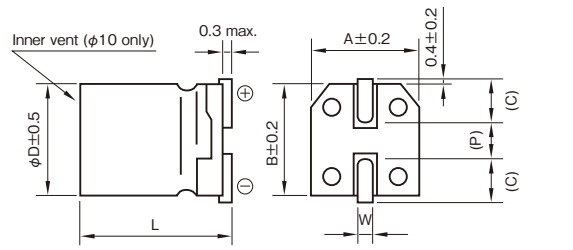
Rated voltage (V)	6.3	10	16	25	35	50
tanδ (max.)	0.28	0.24	0.20	0.16	0.13	0.12

Rated voltage (V)		6.3	10	16	25	35	50
Impedance ratio (max.)	Z−25℃/Z+20℃	2	2	2	2	2	2
	Z−55℃/Z+20℃	8	4	4	3	3	3

Test time	2000 hours
Leakage current	The initial specified value or less
Percentage of capacitance change	Within ±30% of initial value
Tangent of the loss angle	300% or less of the initial specified value

Outline Drawing

Unit : mm



( ) : Reference size

ϕD	L	A	B	C	W	P	Size code
4	5.8±0.3	4.3	4.3	2.0	0.5 to 0.8	1.0	BC8
5	5.8±0.3	5.3	5.3	2.3	0.5 to 0.8	1.5	CC8
6.3	5.8±0.3	6.6	6.6	2.7	0.5 to 0.8	2.0	DC8
8	6.5±0.3	8.4	8.4	3.4	0.5 to 0.8	2.3	ED5
8	10.5±0.5	8.4	8.4	3.0	0.7 to 1.1	3.1	EH5
10	10.5±0.5	10.4	10.4	3.3	0.7 to 1.1	4.7	FH5

Refer to individual page.
(Soldering conditions, Land pattern size, The taping specifications)

Coefficient of Frequency for Rated Ripple Current

Rated voltage (V) \ Frequency (Hz)		50	120	1k	10k・100k
6.3 to 16		0.80	1	1.15	1.25
25 to 35		0.80	1	1.25	1.40
50	1 to 3.3μF	0.50	1	1.35	1.50
	4.7μF or more	0.70	1	1.35	1.50

Product code system : 6.3V220μF (*For general product)

RS*	VVM	221	M	1J	EH5	002	PU
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

For details, refer to the various "Product Code System" pages.

Standard Ratings

Rated voltage (V) / Item: Rated capacitance (μF)	6.3 (1J) Case ϕD×L (mm)	6.3 (1J) Rated ripple current (mArms)	10 (1L) Case ϕD×L (mm)	10 (1L) Rated ripple current (mArms)	16 (1E) Case ϕD×L (mm)	16 (1E) Rated ripple current (mArms)	25 (1T) Case ϕD×L (mm)	25 (1T) Rated ripple current (mArms)	35 (1G) Case ϕD×L (mm)	35 (1G) Rated ripple current (mArms)	50 (1U) Case ϕD×L (mm)	50 (1U) Rated ripple current (mArms)
1	–	–	–	–	–	–	–	–	–	–	4×5.8	7
2.2	–	–	–	–	–	–	–	–	–	–	4×5.8	10
3.3	–	–	–	–	–	–	–	–	–	–	4×5.8	12
4.7	–	–	–	–	4×5.8	11	4×5.8	13	4×5.8	14	5×5.8	17
10	–	–	4×5.8	15	4×5.8	17	5×5.8	21	5×5.8	24	6.3×5.8	29
22	4×5.8	21	5×5.8	26	5×5.8	28	6.3×5.8	37	6.3×5.8	41	8×6.5	52
33	5×5.8	29	5×5.8	32	6.3×5.8	41	6.3×5.8	45	8×6.5	62	8×10.5	75
47	5×5.8	35	6.3×5.8	44	6.3×5.8	48	8×6.5	66	8×10.5	86	8×10.5	90
100	6.3×5.8	60	8×6.5	79	8×6.5	86	8×10.5	113	10×10.5	145	10×10.5	151
					8×10.5	101						
220	8×10.5	127	8×10.5	137	8×10.5	150	10×10.5	194	10×10.5	216	–	–
					10×10.5	174						
330	8×10.5	156	10×10.5	194	10×10.5	213	–	–	–	–	–	–
470	10×10.5	215	10×10.5	232	10×10.5	254	–	–	–	–	–	–

(Note) Rated ripple current : 105℃, 120Hz.

NOTE : Design, Specifications are subject to change without notice.
It is recommended that you shall obtain technical specifications from ELNA to ensure that the component is suitable for your use.