VVZ (old series: RVZ)
VERTICAL CHIP TYPE ALUMINUM ELECTROLYTIC CAPACITORS

ELNA

Chip Type, 105°C Use, Low ESR Capacitors

GREEN CAP | SMD | Low ESR | 105°C 5000hours | Anti-cleaning solvent

- Compatible with surface mounting.
- Supplied with carrier taping.
- Guarantees 5000 hours at 105℃.
  (φ8×6.5L or less : 1000hours)
  (φ8×10L to φ10 : 2000hours)

Miniaturized
Low ESR

VVZ ⇦ VVJ

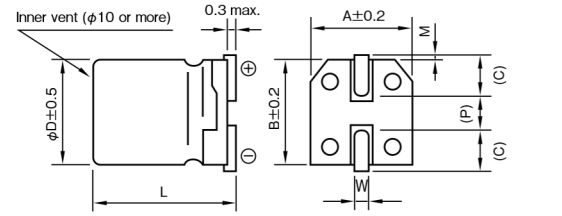
Marking color : Black print

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)	Rated voltage (V): 6.3, 10, 16, 25, 35 tanδ (max.): 0.28, 0.24, 0.20, 0.16, 0.14 0.02 is added to every 1000μF increase over 1000μF. (20℃,120Hz)
Characteristics at high and low temperature	Rated voltage (V): 6.3, 10, 16, 25, 35 Impedance ratio (max.) Z−25℃/Z+20℃: 4, 3, 2, 2, 2 Impedance ratio (max.) Z−55℃/Z+20℃: 8, 5, 4, 3, 3 (120Hz)
Endurance (105℃) (Applied ripple current)	Test time: 1000 hours (φ8×6.5L or less) 2000 hours (φ8×10L to φ10) 5000 hours (φ12.5) Leakage current: The initial specified value or less Percentage of capacitance change: Within ±25% of initial value Tangent of the loss angle: 200% or less of initial specified value
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)

Outline Drawing

Unit : mm



( ) : Reference size

φD	L	A	B	C	M	W	P	Size code
4	5.3±0.2	4.3	4.3	2.0	0.4±0.2	0.5 to 0.8	1.0	BC3
4	5.8±0.3	4.3	4.3	2.0	0.4±0.2	0.5 to 0.8	1.0	BC8
5	5.3±0.2	5.3	5.3	2.3	0.4±0.2	0.5 to 0.8	1.5	CC3
5	5.8±0.3	5.3	5.3	2.3	0.4±0.2	0.5 to 0.8	1.5	CC8
6.3	5.3±0.2	6.6	6.6	2.7	0.4±0.2	0.5 to 0.8	2.0	DC3
6.3	5.8±0.3	6.6	6.6	2.7	0.4±0.2	0.5 to 0.8	2.0	DC8
6.3	7.7±0.3	6.6	6.6	2.7	0.4±0.2	0.5 to 0.8	2.0	DE7
8	6.5±0.3	8.4	8.4	3.4	0.4±0.2	0.5 to 0.8	2.3	ED5
8	10.0±0.5	8.4	8.4	3.0	0.4±0.2	0.7 to 1.1	3.1	EH0
8	10.5±0.5	8.4	8.4	3.0	0.4±0.2	0.7 to 1.1	3.1	EH5
10	10.0±0.5	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	FH0
10	10.5±0.5	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	FH5
12.5	13.5±0.5	13.0	13.0	4.9	0.7±0.3	1.0 to 1.4	4.6	GL5

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

Coefficient of Frequency for Rated Ripple Current

Rated voltage (V) \ Frequency (Hz)	120	1k	10k	100k
6.3 to 35	0.50	0.75	0.90	1

Product code system (*For general product)

φ8×6.5L and φ6.3 or less (example : 6.3V330μF)

RS*	VVZ	331	M	1J	ED5	☐	U
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

φ8×10L, φ8×10.5L (example : 10V220μF)

RS*	VVZ	221	M	1L	EH0	☐	Y1U
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

φ10 (example : 16V330μF)

RS*	VVZ	331	M	1E	FH0	☐	EU
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

φ12.5 (example : 25V680μF)

RS*	VVZ	681	M	1T	GL5	005	T
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

- In the case of "for High Temperature Reflow" type, a series name is "VZA". (φ4 to φ10)
- If "For Vibration Resistance" type is required, please see the series VTZ.
- For details, refer to the various "Product Code System" pages.

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Standard Ratings

Rated voltage (V) / Item / Rated capacitance (μF)	6.3 (1J)				10 (1L)				16 (1E)				25 (1T)				35 (1G)			
	Case φD×L (mm)	Size code	ESR (Ω max.)	Rated ripple current (mArms)	Case φD×L (mm)	Size code	ESR (Ω max.)	Rated ripple current (mArms)	Case φD×L (mm)	Size code	ESR (Ω max.)	Rated ripple current (mArms)	Case φD×L (mm)	Size code	ESR (Ω max.)	Rated ripple current (mArms)	Case φD×L (mm)	Size code	ESR (Ω max.)	Rated ripple current (mArms)
4.7	—	—	—	—	—	—	—	—	—	—	—	—	4×5.3	BC3	3.20	65	4×5.3	BC3	3.20	65
10	—	—	—	—	4×5.3	BC3	3.20	65	4×5.3	BC3	3.20	65	4×5.8	BC8	1.80	80	5×5.3	CC3	1.50	110
													5×5.3	CC3	1.50	110	5×5.8	CC8	0.76	150
15	—	—	—	—	—	—	—	—	4×5.8	BC8	1.80	80	5×5.8	CC8	0.76	150	5×5.8	CC8	0.76	150
22	4×5.3	BC3	3.20	65	4×5.8	BC8	1.80	80	5×5.3	CC3	1.50	110	5×5.8	CC8	0.76	150	5×5.8	CC8	0.76	150
	4×5.8	BC8	1.80	80	5×5.3	CC3	1.50	110	5×5.8	CC8	0.76	150	6.3×5.3	DC3	0.85	170	6.3×5.3	DC3	0.85	170
33	5×5.3	CC3	1.50	110	5×5.3	CC3	1.50	110	6.3×5.3	DC3	0.85	170	6.3×5.3	DC3	0.85	170	6.3×5.3	DC3	0.85	170
	5×5.8	CC8	0.76	150	5×5.8	CC8	0.76	150	6.3×5.8	DC8	0.44	230	6.3×5.8	DC8	0.44	230	6.3×5.8	DC8	0.44	230
47	5×5.3	CC3	1.50	110	6.3×5.3	DC3	0.85	170	6.3×5.3	DC3	0.85	170	6.3×5.3	DC3	0.85	170	6.3×5.8	DC8	0.44	230
	5×5.8	CC8	0.76	150	6.3×5.8	DC8	0.44	230	6.3×5.8	DC8	0.44	230	6.3×5.8	DC8	0.44	230	6.3×7.7	DE7	0.34	280
																	8×6.5	ED5	0.34	280
68	6.3×5.8	DC8	0.44	230	6.3×5.8	DC8	0.44	230	6.3×5.8	DC8	0.44	230	6.3×5.8	DC8	0.44	230	6.3×7.7	DE7	0.34	280
																	8×6.5	ED5	0.34	280
100	6.3×5.3	DC3	0.85	170	6.3×5.3	DC3	0.85	170	6.3×5.3	DC3	0.85	170	6.3×7.7	DE7	0.34	280	8×10	EH0	0.20	450
									6.3×5.8	DC8	0.44	230								
	6.3×5.8	DC8	0.44	230	6.3×5.8	DC8	0.44	230	8×6.5	ED5	0.34	280	8×6.5	ED5	0.34	280	8×10.5	EH5	0.17	450
150	6.3×5.8	DC8	0.44	230	6.3×5.8	DC8	0.44	230	6.3×7.7	DE7	0.34	280	8×10	EH0	0.20	450	8×10.5	EH5	0.17	450
									8×6.5	ED5	0.34	280	8×10.5	EH5	0.17	450	10×10	FH0	0.10	670
220	6.3×5.8	DC8	0.44	230	6.3×7.7	DE7	0.34	280	6.3×7.7	DE7	0.34	280	8×10.5	EH5	0.17	450	8×10.5	EH5	0.17	450
					8×6.5	ED5	0.34	280												
	6.3×7.7	DE7	0.34	280	8×10	EH0	0.20	450	8×10	EH0	0.20	450	10×10	FH0	0.10	670	10×10	FH0	0.10	670
330	6.3×7.7	DE7	0.34	280	8×10.5	EH5	0.17	450	8×10.5	EH5	0.17	450	8×10.5	EH5	0.17	450	10×10.5	FH5	0.09	670
	8×6.5	ED5	0.34	280																
	8×10	EH0	0.20	450	10×10	FH0	0.10	670	10×10	FH0	0.10	670	10×10	FH0	0.10	670				
470	8×10.5	EH5	0.17	450	8×10.5	EH5	0.17	450	8×10.5	EH5	0.17	450	10×10.5	FH5	0.09	670	12.5×13.5	GL5	0.06	1100
	10×10	FH0	0.10	670	10×10	FH0	0.10	670	10×10	FH0	0.10	670								
680	8×10.5	EH5	0.17	450	10×10.5	FH5	0.09	670	10×10.5	FH5	0.09	670	12.5×13.5	GL5	0.06	1100	12.5×13.5	GL5	0.06	1100
1000	8×10.5	EH5	0.17	450	10×10.5	FH5	0.09	670	12.5×13.5	GL5	0.06	1100	12.5×13.5	GL5	0.06	1100	—	—	—	—
	10×10	FH0	0.10	670																
1500	10×10.5	FH5	0.09	670	12.5×13.5	GL5	0.06	1100	12.5×13.5	GL5	0.06	1100	—	—	—	—	—	—	—	—
2200	12.5×13.5	GL5	0.06	1100	12.5×13.5	GL5	0.06	1100	—	—	—	—	—	—	—	—	—	—	—	—
2700	12.5×13.5	GL5	0.06	1100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(Note) Rated ripple current : 105℃, 100kHz ; ESR : 20℃, 100kHz

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