

# Vertical Chip Type Aluminum Electrolytic Capacitors VZF, VMF series

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

- · Compatible with surface mounting, low ESR, high CV, long life capacitors.
- Environmental : GREEN CAP™ , RoHS compliance.
- · Supplied with carrier taping.
- Guaranteed 4000 hours at 125°C. (2000 hours : φ6.3)



Vibration resistance High CV, Long Life







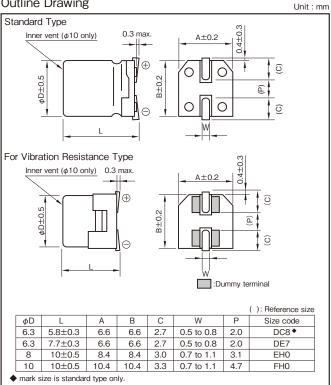


Marking color: Black print

#### **Specifications**

Item	Performance									
Category temperature range (°C)	-40 to +125									
Tolerance at rated capacitance (%)	±20 (20°C,120Hz									
Leakage current (μΑ) (max.)	0.01	0.01 CV or 3 whichever is larger (after 2 minutes) C: Rated capacitance (μF); V: Rated voltage (V) (20°C								
Tangent of loss angle	Rated vo	oltage (V)	10	16	25	35				
(tanδ)	tanδ	(max.)	0.24	0.20	0.16	0.14				
						(20	0°C,120Hz)			
	Rated vo	oltage (V)	10	16	25	35				
Characteristics at high	Impedance ratio (max.)	Z-25°C/Z+20°C	3	2	2	2				
and low temperature		Z-40°C/Z+20°C	6	4	4	3				
	(120									
(405°0)	Test	time	2000 hours ( 4000 hours (							
Endurance (125°C)	Leakage	current	The initial specified value or less							
(Applied ripple current)	Percentage of cap	pacitance change	Within ±30% of initial value							
	Tangent of the loss angle 300% or less of the initial specified value									
Shelf life (125℃)	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**



Refer to individual page.

(Soldering conditions, Land pattern size, The taping specifications)

## Coefficient of Frequency for Rated Ripple Current

Frequency (Hz) Rated voltage(V)	120	1k	10k	100k
10 to 35	0.77	0.88	0.96	1

#### Product code system (\*For general product)

Standard Type (example :  $35V100\mu F$ )

RS*	VZF	101	М	1 G	DE7	002	U
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

For Vibration Resistance Type (example :  $25\text{V}330\mu\text{F})$ 

RS*	VMF	331	М	1T	FH0	002	U
Category	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.



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#### Standard Ratings

Rated voltage (V)	10 (1L)				16 (1E)			25 (1T)				
Rated Item capacitance	Case	ESR (	Ω max.)	Rated ripple current	Case	ESR (	Ω max.)	Rated ripple current	Case	ESR (	Ω max.)	Rated ripple current
	$\phi$ D × L (mm)	20℃	- 40°C	(mArms)	$\phi$ D × L (mm)	20°C	- 40°C	(mArms)	$\phi$ D × L (mm)	20℃	- 40°C	(mArms)
47	-	-	-	-	6.3 × 5.8	1.2	22	110	6.3 × 5.8	1.2	22	110
100	6.3 × 5.8	1.2	22	110	6.3 × 5.8	1.2	22	110	6.3 × 7.7	0.60	12	220
220	6.3 × 7.7	0.60	12	220	6.3 × 7.7	0.60	12	220	8 × 10	0.30	5.5	296
330	8 × 10	0.30	5.5	296	8 × 10	0.30	5.5	296	10 × 10	0.20	3.6	440
470	8 × 10	0.30	5.5	296	10 × 10	0.20	3.6	440	_	_	_	_
680	10 × 10	0.20	3.6	440	10 × 10	0.20	3.6	440	_	_	_	_

Rated voltage (V)	35 (1G)								
Rated Item capacitance	Case	Rated ripple current							
(µF)	$\phi$ D × L (mm)	20°C	- 40°C	(mArms)					
47	6.3 × 5.8	1.2	22	110					
100	6.3 × 7.7	0.60	12	220					
220	8 × 10	0.30	5.5	296					
330	10 × 10	0.20	3.6	440					

(Note) Rated ripple current : 125°C , 100kHz ESR : 100kHz