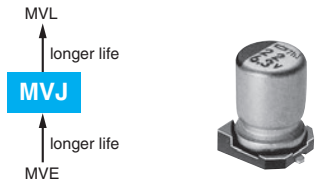


# Alchip™-MVJ Series

- Endurance : 2,000 hours at 105°C
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant

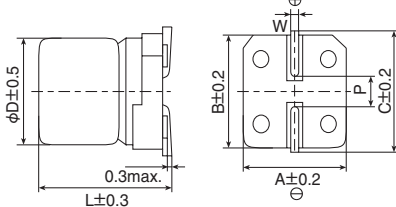


## ◆ SPECIFICATIONS

Items	Characteristics						
<b>Category Temperature Range</b>	-40 to +105°C						
<b>Rated Voltage Range</b>	6.3 to 50V <sub>dc</sub>						
<b>Capacitance Tolerance</b>	±20% (M) (at 20°C, 120Hz)						
<b>Leakage Current</b>	I=0.01CV or 3μA, whichever is greater. Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)						
<b>Dissipation Factor (tan δ)</b>	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V
	tan δ (Max.)	0.30	0.24	0.20	0.16	0.14	0.12
<b>Low Temperature Characteristics (Max. Impedance Ratio)</b>	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V
	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2
	Z(-40°C)/Z(+20°C)	12	8	6	4	3	3
<b>Endurance</b>	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.						
	Rated voltage	6.3V <sub>dc</sub>		10 & 16V <sub>dc</sub>		25 to 50V <sub>dc</sub>	
	Capacitance change	≤ ±30% of the initial value		≤ ±25% of the initial value		≤ ±20% of the initial value	
	D.F. (tan δ)	≤ 300% of the initial specified value		≤ 300% of the initial specified value		≤ 200% of the initial specified value	
	Leakage current	≤ The initial specified value		≤ The initial specified value		≤ The initial specified value	
<b>Shelf Life</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.						
	Rated voltage	6.3V <sub>dc</sub>		10 & 16V <sub>dc</sub>		25 to 50V <sub>dc</sub>	
	Capacitance change	≤ ±30% of the initial value		≤ ±25% of the initial value		≤ ±20% of the initial value	
	D.F. (tan δ)	≤ 300% of the initial specified value		≤ 300% of the initial specified value		≤ 200% of the initial specified value	
	Leakage current	≤ The initial specified value		≤ The initial specified value		≤ The initial specified value	

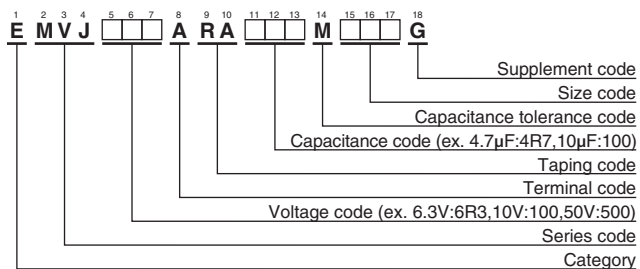
## ◆ DIMENSIONS [mm]

● Terminal Code : A



Size code	D	L	A	B	C	W	P
D60	4	5.7	4.3	4.3	5.1	0.5 to 0.8	1.0
E60	5	5.7	5.3	5.3	5.9	0.5 to 0.8	1.4
F60	6.3	5.7	6.6	6.6	7.2	0.5 to 0.8	1.9

## ◆ PART NUMBERING SYSTEM



Please refer to "Product code guide (surface mount type)"

## ◆ MARKING

EX) 6.3V100μF



## ◆ STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Size code	tan δ	Rated ripple current (mAmps/105°C,120Hz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Size code	tan δ	Rated ripple current (mAmps/105°C,120Hz)	Part No.
6.3	22	D60	0.30	21	EMVJ6R3ARA220MD60G	35	4.7	D60	0.14	15	EMVJ350ARA4R7MD60G
	47	E60	0.30	36	EMVJ6R3ARA470ME60G		10	E60	0.14	25	EMVJ350ARA100ME60G
	100	F60	0.30	56	EMVJ6R3ARA101MF60G		22	F60	0.14	40	EMVJ350ARA220MF60G
10	33	E60	0.24	34	EMVJ100ARA330ME60G	50	1.0	D60	0.12	5.6	EMVJ500ARA1R0MD60G
16	10	D60	0.20	16	EMVJ160ARA100MD60G		2.2	D60	0.12	10	EMVJ500ARA2R2MD60G
	22	E60	0.20	30	EMVJ160ARA220ME60G		3.3	D60	0.12	14	EMVJ500ARA3R3MD60G
	47	F60	0.20	48	EMVJ160ARA470MF60G		4.7	E60	0.12	19	EMVJ500ARA4R7ME60G
25	33	F60	0.16	45	EMVJ250ARA330MF60G		10	F60	0.12	29	EMVJ500ARA100MF60G

Production of the products shown in [ ] is scheduled to be discontinued.

## ◆ RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

Capacitance(μF)	Frequency(Hz)			
	120	1k	10k	100k
1.0	1.00	1.50	1.75	1.80
2.2 to 10	1.00	1.30	1.40	1.50
22 to 100	1.00	1.05	1.08	1.08

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.

Product specifications in this catalog are subject to change without notice. Request our product specifications before purchase and/or use. Please use our products based on the information contained in this catalog and product specifications.



- Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.
- Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.
- The products listed in this catalog are designed and manufactured for general electronics equipment use and are not intended for use in applications that can adversely affect human life; where the malfunction of equipment may cause damage to life or property. In addition, our products are not intended to be used in specific applications that may cause a major social impact. Please consult with us in advance of usage of our products in the following listed applications. ① Aerospace equipment ② Power generation equipment such as thermal power, nuclear power etc. ③ Medical equipment ④ Transport equipment (automobiles, trains, ships, etc.) ⑤ Transportation control equipment ⑥ Disaster prevention / crime prevention equipment ⑦ Highly publicized information processing equipment ⑧ Submarine equipment ⑨ Other applications that are not considered general-purpose applications.
- The circuits described as examples in this catalog and the "delivery specifications" are featured in order to show the operations and usage of our products, however, this fact does not guarantee that the circuits are available to function in your equipment systems. We are not in any case responsible for any failures or damage caused by the use of information contained herein. You should examine our products, of which the characteristics are described in the "delivery specifications" and other documents, and determine whether or not our products suit your requirements according to the specifications of your equipment systems. Therefore, you bear final responsibility regarding the use of our products.  
Please make sure that you take appropriate safety measures such as use of redundant design and malfunction prevention measures in order to prevent fatal accidents and/or fires in the event any of our products malfunction.
- We strongly recommend our customers to purchase Nippon Chemi-Con products only through our official sales channels. We assume no responsibility for any defects or damages caused by using products purchased from outside our official sales channel or of counterfeit goods. In addition, we will ask the customer to pay the investigation cost for products purchased outside our official sales channel.
- We reserve the right to discontinue production and delivery of products. We do not guarantee that all the products included in this catalog will be available in the future.  
The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products
- We continually strive to improve the quality and reliability of our products, but in any case that our product does not meet our published specifications, please stop using it promptly and contact us immediately. As for compensation for non-conforming goods delivered by Chemi-Con, we will limit it only to goods found in non-compliance of our published specifications. This may be accomplished by a no cost replacement of non-conforming individual products, a credit of the piece price paid per each individual non-conforming product, or in other ways deemed necessary.  
In addition, we have an established system with enhanced traceability, therefore we will limit the applicable lot items for any potential compensation.

[Part Numbering System](#)

[Part Numbering System \(Appendix\)](#)

[Standardization](#)

[Available Items by Manufacturing Locations](#)

[Environmental Measures](#)

[Technical Note](#)

[Precautions and Guidelines](#)

[Recommended Soldering Conditions](#)

[Taping, Lead-preforming and Packaging](#)

[Available Terminals for Snap-in and Screw Mount Type](#)