



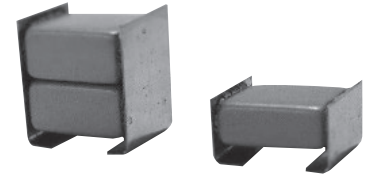
# METAL CAP TYPE MULTILAYER CERAMIC CAPACITORS

## KVJ Series



### ◆FEATURES

1. Automotive grade(AEC-Q200)
2. Small size and large capacitance, high ripple current.
3. Temperature cycle: 1000 cycles.
4. X8L temperature characteristics.
5. For reflow soldering use.
6. Suitable for aluminum substrate.



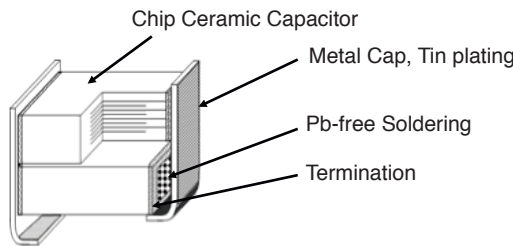
### ◆APPLICATIONS

1. For automotive equipment
2. Smoothing circuit of switching mode AC-DC or DC-DC converter.
3. On-board power supply.
4. Noise suppressor for various kinds of equipments.

### ◆CUSTOM MADE PRODUCTS

We can offer custom made one element metal cap type capacitors for request of customers. Please contact us if you have questions for details.

### ◆CONSTRUCTION



### ◆RATINGS

1. Category Temperature Range	-55~+150°C
2. Rated Voltage Range	25, 50, 100V <sub>dc</sub>
3. Rated Capacitance Range	0.68 to 22μF
4. Rated Capacitance Tolerance	M(±20%)
5. Temperature Characteristics	X8L
6. Rated Ripple Current	See No.5 on the following table

### ◆SPECIFICATIONS

No.	Items	Specification	Test Condition		
1	Withstand Voltage	No abnormality.	250% of rated voltage shall be applied for 5 seconds.		
2	Insulation Resistance	100/C <sub>R</sub> (MΩ) or 4000(MΩ) whichever is less.	Rated voltage shall be applied for 60±5 seconds at temperature 25±2°C.		
3	Rated Capacitance	Within specified tolerance.			
			C <sub>R</sub> ≤10μF	C <sub>R</sub> >10μF	
4	Dissipation Factor	5.0% maximum	Temperature	25±2°C	
			Frequency	1±0.1kHz	120±12Hz
			Voltage	1±0.2V <sub>rms</sub>	0.5±0.2V <sub>rms</sub>
5	Rated Ripple Current	See STANDARD RATINGS	10kHz~1MHz (sine curve) Ripple voltage V <sub>p</sub> shall be less than the rated voltage.		

As customer requirement, Chemi-Con has submits the test results according to AEC-Q200 for Multilayer ceramic capacitors. Please contact us for more information.

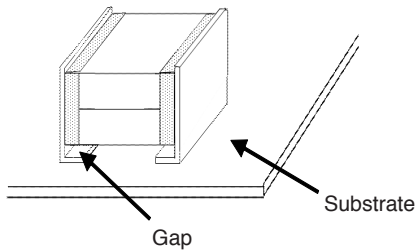
### ◆SPECIFICATIONS

No.	Items	Specification	Test Condition															
6	Temperature Cycle	Appearance : No visible damage. $\Delta C/C : \pm 15\%$ D.F. : To meet the initial specification. I.R. : To meet the initial specification.	<table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>(min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Min. Category temperature <math>\pm 3</math></td> <td>30<math>\pm</math>3</td> </tr> <tr> <td>2</td> <td>Room temperature</td> <td>3 max.</td> </tr> <tr> <td>3</td> <td>Max. Category temperature <math>\pm 3</math></td> <td>30<math>\pm</math>3</td> </tr> <tr> <td>4</td> <td>Room temperature</td> <td>3 max.</td> </tr> </tbody> </table> <Cycle> 1000 cycles	Step	Temperature (°C)	(min.)	1	Min. Category temperature $\pm 3$	30 $\pm$ 3	2	Room temperature	3 max.	3	Max. Category temperature $\pm 3$	30 $\pm$ 3	4	Room temperature	3 max.
Step	Temperature (°C)	(min.)																
1	Min. Category temperature $\pm 3$	30 $\pm$ 3																
2	Room temperature	3 max.																
3	Max. Category temperature $\pm 3$	30 $\pm$ 3																
4	Room temperature	3 max.																
7	Humidity Load Life	Appearance : No abnormality. $\Delta C/C : \pm 20\%$ D.F. : 10% max. I.R. : 25/ $C_R$ (M $\Omega$ ) or 1000(M $\Omega$ ) whichever is less.	Temperature : 85 $\pm$ 3°C Humidity : 80 to 85%RH Voltage : Rated voltage Time : 1000 $\pm$ <sub>0</sub> <sup>48</sup> hours															
8	Endurance	Appearance : No abnormality. $\Delta C/C : \pm 20\%$ D.F. : 10% max. I.R. : 50/ $C_R$ (M $\Omega$ ) or 1000(M $\Omega$ ) whichever is less.	Temperature : 150 $\pm$ 3°C Voltage : Rated voltage Time : 1000 $\pm$ <sub>0</sub> <sup>48</sup> hours															

\* $C_R$  : Rated Capacitance( $\mu$ F)

### ◆Note of mountig for KVJ series.

1. The gap of capacitor and a substrate shall be the mounting face.
2. To prevent degradation of temperature cycling capability, if need to be careful about amount of solder that would not go into the inner side of terminations.

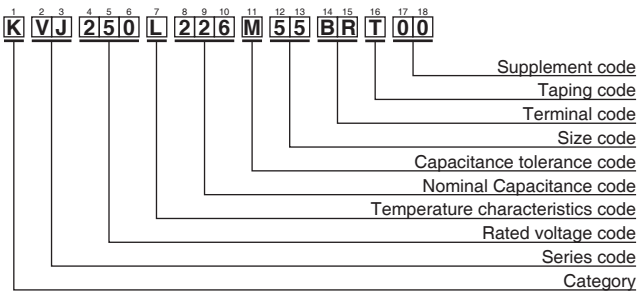


### ◆ STANDARD RATINGS

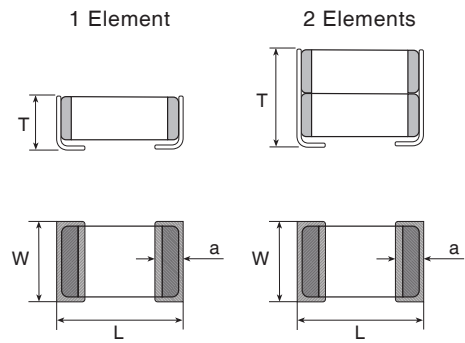
Rated voltage (Vdc)	Rated Capacitance (μF)	Electrostatic Capacitance Temperature Characteristics	Case Code	Dimensions(mm)				Element	Maximum ripple current (Arms)	Part Number	Taping Quantity per reel (pcs. / reel)
				inch / mm	L	W	T max.				
25	6.8	X8L	2220 / 5750	6.0±0.4	5.3±0.4	3.8	1.3±0.3	1	2.0	KVJ250L685M55ART00	400
	10	X8L	2220 / 5750	6.0±0.4	5.3±0.4	3.8	1.3±0.3	1	2.0	KVJ250L106M55ART00	400
	15	X8L	2220 / 5750	6.0±0.4	5.3±0.4	5.5	1.3±0.3	2	3.0	KVJ250L156M55BRT00	2,000
	22	X8L	2220 / 5750	6.0±0.4	5.3±0.4	6.0	1.3±0.3	2	3.0	KVJ250L226M55BRT00	2,000
50	2.2	X8L	2220 / 5750	6.0±0.4	5.3±0.4	3.8	1.3±0.3	1	2.0	KVJ500L225M55ART00	400
	3.3	X8L	2220 / 5750	6.0±0.4	5.3±0.4	3.8	1.3±0.3	1	2.0	KVJ500L335M55ART00	400
	4.7	X8L	2220 / 5750	6.0±0.4	5.3±0.4	3.8	1.3±0.3	1	2.0	KVJ500L475M55ART00	400
	6.8	X8L	2220 / 5750	6.0±0.4	5.3±0.4	5.5	1.3±0.3	2	3.0	KVJ500L685M55BRT00	2,000
	10	X8L	2220 / 5750	6.0±0.4	5.3±0.4	6.0	1.3±0.3	2	3.0	KVJ500L106M55BRT00	2,000
100	0.68	X8L	2220 / 5750	6.0±0.4	5.3±0.4	3.8	1.3±0.3	1	2.0	KVJ101L684M55ART00	400
	1.0	X8L	2220 / 5750	6.0±0.4	5.3±0.4	3.8	1.3±0.3	1	2.0	KVJ101L105M55ART00	400
	1.5	X8L	2220 / 5750	6.0±0.4	5.3±0.4	5.5	1.3±0.3	2	3.0	KVJ101L155M55BRT00	2,000
	2.2	X8L	2220 / 5750	6.0±0.4	5.3±0.4	6.0	1.3±0.3	2	3.0	KVJ101L225M55BRT00	2,000

※ Please consult with us when you consider the rating other than a standard table.

### ◆ PART NUMBERING SYSTEM



### ◆ DIMENSIONS



Please refer to "Part Numbering System" of the beginning of a catalog for the details.



- 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.

[Precautions and Guidelines · Recommended Soldering Conditions](#)

[Part Numbering System](#)

[List of Standardization and Obsolete Products](#)

[TAPING SPECIFICATION](#)

[Characteristics Data](#)

[Minimum Packaging Quantity](#)