

Multi-layer ceramic chip capacitors

MCH31 (3216 (1206) size, chip capacitor)

●Features

- 1) Miniature, high capacitance
- 2) Achieved high capacitance by thin and multi layer technology
- 3) Lead-free plating terminal
- 4) No polarity

●Quick Reference

The design and specifications are subject to change without prior notice. Please check the most recent technical specifications prior to placing orders or using the product. For more detail information regarding packaging style code, please check product designation.

●Thermal compensation

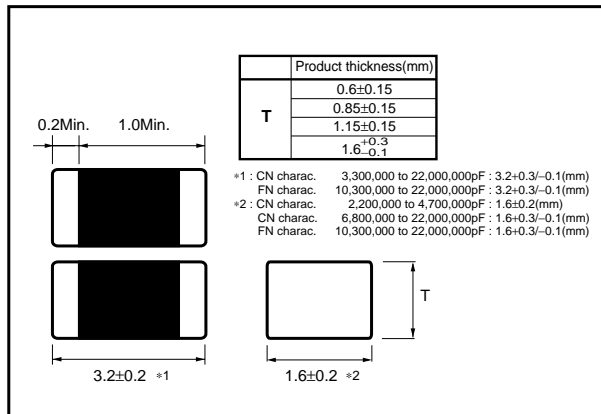
Part No.	Size code	Temperature characteristics		Operating temp. range (°C)	Rated voltage (V)	Capacitance (pF)	Capacitance tolerance	Thickness (mm)
		code	(ppm/°C)					
MCH31	3216 (1206)	A (AN)	0±30 (CG) (C0G)	-55 to +125	50	4,700 to 6,800 (E12 Series)	J(±5%)	0.6 ± 0.15
						8,200 to 10,000 (E12 Series)		0.85 ± 0.15
						15,000 to 22,000 (E12 Series)		1.15 ± 0.15
						33,000 (E12 Series)		1.6 ± 0.2

●High dielectric constant

Part No.	Size code	Temperature characteristics		Operating temp. range (°C)	Rated voltage (V)	Capacitance (pF)	Capacitance tolerance	Thickness (mm)
		code	(ppm/°C)					
MCH31	3216 (1206)	CN	±10% (B)	-25 to +85	50	220 to 68,000 (E6 Series)	K(±10%)	0.6 ± 0.15
						100,000 (E6 Series)		0.85 ± 0.15
						150,000 to 330,000 (E6 Series)		1.15 ± 0.15
						470,000 (E6 Series)		1.6 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$
			±15% (R) (X7R)	-55 to +125	25	680,000 (E6 Series)		0.85 ± 0.15
						220 to 68,000 (E6 Series)		0.6 ± 0.15
						100,000 (E6 Series)		0.85 ± 0.15
						150,000 to 330,000 (E6 Series)		1.15 ± 0.15
						470,000 (E6 Series)		1.6 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$
			±15% (X5R)	-55 to +85	25	680,000 (E6 Series)		0.85 ± 0.15
						1,000,000 (E6 Series)		0.6 ± 0.15
						1,500,000 to 4,700,000 (E6 Series)		1.6 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$
						6,800,000 to 10,000,000 (E6 Series)		1.6 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$
		FN	+30% , -80% (F)	-25 to +85	6.3	22,000,000 (E3 Series)	Z(+80% , -20%)	0.85 ± 0.15
						1,000,000 (E3 Series)		1.15 ± 0.15
						2,200,000 (E3 Series)		1.6 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$
						4,700,000 (E3 Series)		0.85 ± 0.15
						10,000,000 (E3 Series)		1.15 ± 0.15
						22,000,000 (E3 Series)		1.6 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$
			+22% , -82% (Y5V)	-30 to +85	50	47,000,000 (E3 Series)		0.85 ± 0.15
						1,000,000 (E3 Series)		1.15 ± 0.15
						2,200,000 (E3 Series)		1.6 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$
						4,700,000 (E3 Series)		0.85 ± 0.15
						10,000,000 (E3 Series)		1.15 ± 0.15
						22,000,000 (E3 Series)		1.6 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$
						47,000,000 (E3 Series)		1.6 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$

Ceramic capacitors

●External dimensions (Unit : mm)



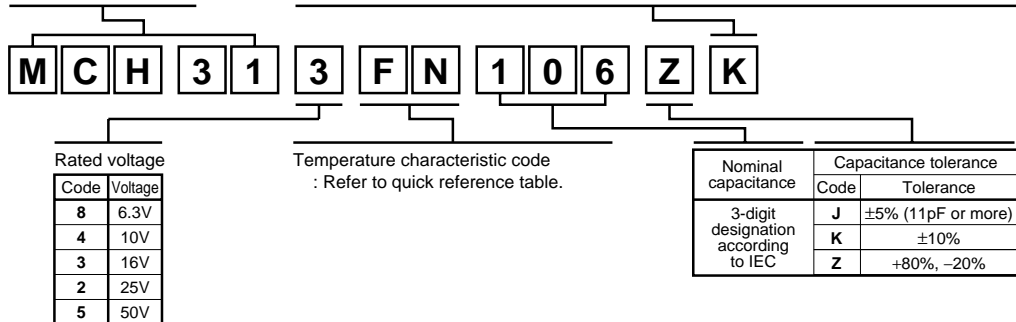
●Product designation

Code	Product thickness	Packing specification	Reel	Basic ordering unit (pcs.)
K	0.6mm	Paper tape (width 8mm, pitch 4mm)	φ180mm (7in.)	4,000
K	0.85mm	Paper tape (width 8mm, pitch 4mm)	φ180mm (7in.)	4,000
P	1.15mm	Plastic tape (width 8mm, pitch 4mm)	φ180mm (7in.)	2,000
P	1.60mm	Plastic tape (width 8mm, pitch 4mm)	φ180mm (7in.)	1,000

Reel (φ180mm) : compatible with EIAJ ET-7200A

Part No.

Packing Style



Ceramic capacitors

•Performance and test method

No.	Items	Performance		Test Method (As per JIS C 5101-1, JIS C 5101-10)																	
1	Appearance and dimensions	No marked defects shall be allowed for appearance. Dimensions shall be as specified the clause 4.		As per 4.4 of JIS C 5101-1. As per 4.5 of JIS C 5101-10 Using a Magnifier.																	
2	Withstanding voltage	No dielectrical breakdown or other damage shall be allowed.		As per 4.6 of JIS C 5101-1. As per 4.6.4 of JIS C 5101-10 Voltage shall be applied as per Table1. <table><tr><th colspan="2">Table 1</th></tr><tr><th>Charac- teristic</th><th>Voltage</th></tr><tr><td>A, AN</td><td>300% Rated voltage</td></tr><tr><td>CN</td><td rowspan="2">250% Rated voltage</td></tr><tr><td>FN</td></tr></table> Voltage shall be applied for 1 to 5s with 50mA charging and discharging current.	Table 1		Charac- teristic	Voltage	A, AN	300% Rated voltage	CN	250% Rated voltage	FN								
Table 1																					
Charac- teristic	Voltage																				
A, AN	300% Rated voltage																				
CN	250% Rated voltage																				
FN																					
3	Insulation resistance	Not less than 10000MΩ or 500MΩ・μF, whichever is less. (For products with rated voltage less than 16V, it is not less than 10000MΩ or 100MΩ・μF, whichever is less.)		As per 4.5 of JIS C 5101-1. As per 4.6.3 of JIS C 5101-10 Measurements shall be made after 60+/-5s period of the rated voltage applied.																	
4	Capacitance	Capacitance shall be within specified tolerance range.		As per 4.7 of JIS C 5101-1. As per 4.6.1 of JIS C 5101-10 Measurements shall be made under the conditions specified in Table 2. <table><tr><th colspan="3">Table 2</th></tr><tr><th>Charac- teristic</th><th colspan="2">Frequency・Voltage</th></tr><tr><td rowspan="2">A, AN</td><td>≤ 1000pF</td><td>> 1000pF</td></tr><tr><td>1+/-0.1MHz 1+/-0.1Vrms.</td><td>1+/-0.1kHz 1+/-0.1Vrms.</td></tr><tr><td>CN</td><td>≤ 10μF</td><td>> 10μF</td></tr><tr><td>FN</td><td>1+/-0.1KHz 1+/-0.1Vrms.</td><td>120+/-24Hz 0.5+/-0.2Vrms.</td></tr></table>	Table 2			Charac- teristic	Frequency・Voltage		A, AN	≤ 1000pF	> 1000pF	1+/-0.1MHz 1+/-0.1Vrms.	1+/-0.1kHz 1+/-0.1Vrms.	CN	≤ 10μF	> 10μF	FN	1+/-0.1KHz 1+/-0.1Vrms.	120+/-24Hz 0.5+/-0.2Vrms.
Table 2																					
Charac- teristic	Frequency・Voltage																				
A, AN	≤ 1000pF	> 1000pF																			
	1+/-0.1MHz 1+/-0.1Vrms.	1+/-0.1kHz 1+/-0.1Vrms.																			
CN	≤ 10μF	> 10μF																			
FN	1+/-0.1KHz 1+/-0.1Vrms.	120+/-24Hz 0.5+/-0.2Vrms.																			
5	Dielectric loss tangent	A, A N	tan δ ≤ 0.1%	As per 4.8 of JIS C 5101-1. As per 4.6.2 of JIS C 5101-10 Measurements shall be made under the conditions specified in Table 2.																	
		C N	Rated voltage≥25V tan δ ≤ 3.0% Rated voltage=16,10V tan δ ≤ 5.0% Rated voltage=6.3V tan δ ≤ 10.0%																		
		F N	Rated voltage=50V tan δ ≤ 5.0% Rated voltage=25V tan δ ≤ 7.5% Rated voltage=16V tan δ ≤ 10.0% Rated voltage=10V,6.3V tan δ ≤ 12.5%																		

Ceramic capacitors

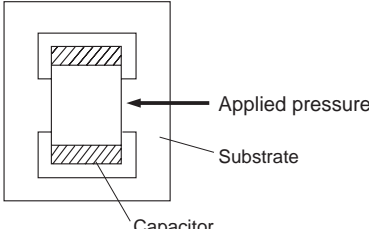
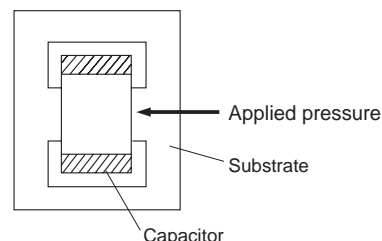
No.	Items		Performance		Test Method (As per JIS C 5101-1, JIS C 5101-10)
6	Temperature characteristic		A, A N	0+/-30ppm / °C (-55°C to +125°C)	As per 4.24 of JIS C 5101-1. As per 4.7 of JIS C 5101-10 Temperature coefficient shall be calculated at 20°C and 85°C.
			C N	X7R • R ----- B ----- X5R ----- +/-15% (-55°C to +125°C) ----- +/-10% (-25°C to +85°C) ----- +/-15% (-55°C to +85°C)	As per 4.24 of JIS C 5101-1. As per 4.7 of JIS C 5101-10 If required, measurements shall be made at a given temperature.
			F N	+30%, -80% (-25°C to +85°C) ----- +22%, -82% (-30°C to +85°C)	
7	Solderability		More than 3/4 of each end termination shall be covered with new solder.		As per 4.15.2 of JIS C 5101-1. As per 4.11 of JIS C 5101-10 The solder specified in JIS Z 3282 H63A shall be used. Ans the flux containing 25% rosin and ethanol solution shall be used. The specimens shall be immersed into the solder at 235+/-5°C for 2+/-0.5s So that both end terminations are completely under solder.
8	Resistance to soldering heat	Appearance	Without mechanical damage.		As per 4.14 of JIS C 5101-1. As per 4.10 of JIS C 5101-10 The solder specified in JIS Z 3282. H63A shall be used. The specimens shall be immersed into the solder at 260+/-5°C for 5+/-0.5s so that both end terminations are completely under the solder. Pre-heating at 150+/-10°C for 1 to 2min Initial measurements prior to test shall be performed after the thermal Pre-conditioning specified in Remarks (1). Final measurements shall be made after the specimens have been left at room temperature as per Table3.
		Change rate from initial value	A, A N	Within +/-2.5%	
			C N	Within +/-7.5%	
			F N	Within +/-20%	
		Dielectric loss tangent	Within specified initial value.		
		Insulation resistance	Within specified initial value.		
Withstanding voltage	No defects shall be allowed.				
9	End termination adherence	Without peeling or sign of peeling shall be allowed on the end terminations.		As per 4.13 of JIS C 5101-1. As per 4.8 ofJIS C 5101-10 A 5N weight for 10+/-1s shall be applied to the soldered specimens as shown by the arrow mark in the below sketch.	
					

Table3

Charac-teristic	Time
A, AN	24 \pm 2 h
CN, FN	48 \pm 4 h



Ceramic capacitors

No.	Items		Performance		Test Method (As per JIS C 5101-1, JIS C 5101-10)															
10	Bending strength	Appearance	Without mechanical damage.		As per 4.35 of JIS C 5101-1. As per 4.9 of JIS C 5101-10 Glass epoxy board with soldered specimens shall be bent till 1mm by 1.0mm/s.															
11	Vibration	Appearance	Without mechanical damage.		As per 4.17 of JIS C 5101-1. The specimens shall be soldered on the specified test jig. Initial measurements shall be made after the thermal pre-conditioning specified in Remarks(1). Final measurements shall be made after the specimens have been left at room temperature as per Table3. [Condition] Directions : 2h each X, Y and Z directions Total : 6h Frequency range : 10 to 55 to 10Hz(1min) Applitude : 1.5mm (shall not exceed acceleration196m/s²) Table3 <table><tr><td>Charac-teristic</td><td>Time</td></tr><tr><td>A, AN</td><td>24+/-2 h</td></tr><tr><td>CN, FN</td><td>48+/-4 h</td></tr></table>	Charac-teristic	Time	A, AN	24+/-2 h	CN, FN	48+/-4 h									
		Charac-teristic	Time																	
		A, AN	24+/-2 h																	
		CN, FN	48+/-4 h																	
	Change rate from initial value	A, A N	Capacitance shall be within specified tolerance range.																	
	C N	Within +/-7.5%																		
	F N	Within +/-20%																		
	Dielectric loss tangent	Within specified initial value.																		
12	Temperature cycling	Appearance	Without mechanical damage.		As per 4.16 of JIS C 5101-1 As per 4.12 of JIS C 5101-10 The specimens shall be soldered on the test jig shown in Remarks. Temperature cycle : 100cycles Initial measurements prior to test shall be performed after the thermal per-conditioning specified in Remarks (1). Final measurements shall be made after the specimens have been left at room temperature as per Table3. Test condition <table><tr><td>Step</td><td>Temp. (°C)</td><td>Time (min)</td></tr><tr><td>1</td><td>Min operating temp.</td><td>30+/-3</td></tr><tr><td>2</td><td>Room temp.</td><td>≤ 3</td></tr><tr><td>3</td><td>Max operating temp.</td><td>30+/-3</td></tr><tr><td>4</td><td>Room temp.</td><td>≤ 3</td></tr></table>	Step	Temp. (°C)	Time (min)	1	Min operating temp.	30+/-3	2	Room temp.	≤ 3	3	Max operating temp.	30+/-3	4	Room temp.	≤ 3
		Step	Temp. (°C)	Time (min)																
		1	Min operating temp.	30+/-3																
		2	Room temp.	≤ 3																
		3	Max operating temp.	30+/-3																
		4	Room temp.	≤ 3																
		Change rate from initial value	A, A N			Within +/-2.5%														
	C N		Rated vcoltage 25V,16V,10V	Within +/-7.5%																
			Rated vcoltage 6.3V	Within +/-15%																
		F N		Within +/-20%																
	Dielectric loss tangent	Within specified initial value.																		
	Insulation resistance	Within specified initial value.																		
	Withstanding voltage	No defects shall be allowed.																		
				Table3 <table><tr><td>Charac-teristic</td><td>Time</td></tr><tr><td>A, AN</td><td>24+/-2 h</td></tr><tr><td>CN, FN</td><td>48+/-4 h</td></tr></table>	Charac-teristic	Time	A, AN	24+/-2 h	CN, FN	48+/-4 h										
Charac-teristic	Time																			
A, AN	24+/-2 h																			
CN, FN	48+/-4 h																			

Ceramic capacitors

No.	Items		Performance		Test Method (As per JIS C 5101-1, JIS C 5101-10)						
13	Humidity (Steady)	Appearance	Without mechanical damage.		As per 4.22 of JIS C 5101-1 JIS C 5101-10 Test temperature : 60+/-2°C Relative humidity : 90 to 95% Test time : 500 +24/-0 h Initial measurements prior to test shall be made after the voltage pre-conditioning specified in Remarks (2). Final measurements have been left at room temperature as per Table3. Table3 <table><tr><td>Charac-teristic</td><td>Time</td></tr><tr><td>A, AN</td><td>24+/-2 h</td></tr><tr><td>CN, FN</td><td>48+/-4 h</td></tr></table>	Charac-teristic	Time	A, AN	24+/-2 h	CN, FN	48+/-4 h
		Charac-teristic	Time								
		A, AN	24+/-2 h								
		CN, FN	48+/-4 h								
		Change rate from initial value	A, A N			Within +/-5.0%					
			C N	Rated voltaeg 25V,16V,10V		Within +/-12.5%					
				Rated voltaeg 6.3V		Within +/-25.0%					
			F N			Within +/-30%					
		Dielectric tangent	A, A N			$\tan \delta \leq 0.3\%$					
			C N			Less than 200% of initial spec.					
F N			Less than 150% of initial spec.								
Insulation resistance	Not less than 1000MΩ or 50MΩ · μF, whichever is less. (For products with rated voltage less than 16V, it is not less than 1000MΩ or 10MΩ · μF, whichever is less.)										
14	Humidity life test	Appearance	Without mechanical damage.		As per 4.22 of JIS C 5101-1 As per 4.14 of JIS C 5101-10 Test temperature : 60+/-2°C Relative humidity : 90 to 95% Voltage : Rated voltage Test time : 500 +24/-0 h Initial measurements prior to test shall be made after the voltage pre-conditioning specified in Remarks (2). Final measurements shall be made after the specimens have been left at room temperature as per Table3. Table3 <table><tr><td>Charac-teristic</td><td>Time</td></tr><tr><td>A, AN</td><td>24+/-2 h</td></tr><tr><td>CN, FN</td><td>48+/-4 h</td></tr></table>	Charac-teristic	Time	A, AN	24+/-2 h	CN, FN	48+/-4 h
		Charac-teristic	Time								
		A, AN	24+/-2 h								
		CN, FN	48+/-4 h								
		Change rate from initial value	A, A N			Within +/-7.5%					
			C N	Rated voltaeg 25V,16V,10V		Within +/-12.5%					
				Rated voltaeg 6.3V		Within +/-25.0%					
			F N			Within +/-30%					
		Dielectric loss tangent	A, A N			$\tan \delta \leq 0.5\%$					
			C N			Less than 200% of initial spec.					
F N			Less than 150% of initial spec.								
Insulation resistance	Not less than 500MΩ or 25MΩ · μF, whichever is less. (For products with rated voltage less than 16V, it is not less than 500mΩ or 5MΩ · μF, whichever is less.)										

Ceramic capacitors

No.	Items		Performance		Test Method (As per JIS C 5101-1, JIS C 5101-10)															
15	Heat life test	Appearance	Without mechanical damage.		As per 4.23 of JIS C 5101-1. As per 4.15 of JIS C 5101-10															
		Change rate from initial value	A, A N		Within +/-3.0%															
			C N	Rated voltage 25V,16V,10V	Within +/-15%															
				Rated voltage 6.3V	Within +/-25%															
			F N		Within +/-30%															
		Dielectric loss tangent	A, A N		$\tan \delta \leq 0.5\%$															
			C N		Less than 200% of initial spec.															
			F N		Less than 150% of initial spec.															
		Insulation resistance	Not less than 1000MΩ or 50MΩ · μF, whichever is less. (For products with rated voltage less than 16V, it is not less than 1000mΩ or 10MΩ · μF, whichever is less.)			Initial measurements prior to test shall be made after the voltage pre-conditioning specified in Remarks (2). Final measurements shall be made after the specimens have been left at room temperature														
				Table3																
					<table><tr><td>Charac-teristic</td><td colspan="3">Time</td></tr><tr><td>A, AN</td><td colspan="3">24+/-2 h</td></tr><tr><td>CN, FN</td><td colspan="3">48+/-4 h</td></tr></table>				Charac-teristic	Time			A, AN	24+/-2 h			CN, FN	48+/-4 h		
Charac-teristic	Time																			
A, AN	24+/-2 h																			
CN, FN	48+/-4 h																			

[Remarks]

Pre-conditioning

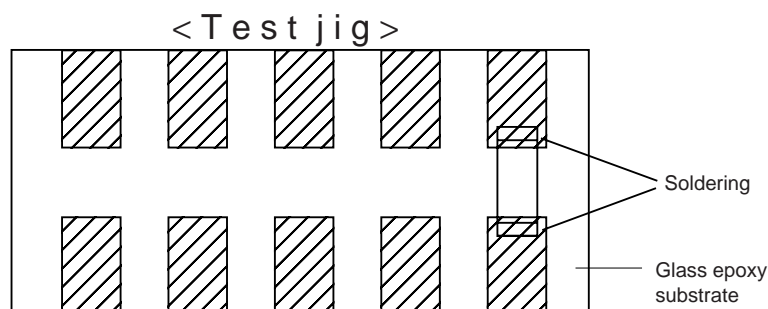
If specified in test method of as per 3(Performance and test method), capacitors of CN, FN characteristics shall be pre-conditioned as follows.

(1) Thermal pre-conditioning

Prior to initial measurements, specimens shall be conditioned at a temperature of $150 \pm 10^\circ\text{C}$ for a period of 1hr., and shall be allowed to stabilize at room temperature for 48 \pm 4h

(2) Voltage pre-conditioning

Prior to initial measurements, voltage specified as a test condition shall be applied to specimens for a period of 1hr., and the specimens shall be allowed to stabilize at room temperature for 48 \pm 4h



Ceramic capacitors

●Packaging specifications

Taping dimensions

Diagram illustrating the dimensions for a ceramic capacitor tape. The main dimensions are labeled: C (total width), D (height), E (height of the top layer), F (pitch), G (pitch), H (pitch), J (pitch), and A, B (height of the individual components). The diagram also shows cross-sections for Paper tape (K) and Plastic tape (P) with thicknesses t and t_1 . A pulling direction arrow is indicated.

Symbol	C	D	E	F	G	H	J	t	t	t ₁
								Paper	Plastic	
Dimensions	8.0 +/-0.3	3.5 +/-0.05	1.75 +/-0.1	4.0 +/-0.1	2.0 +/-0.05	4.0 +/-0.1	φ1.5 +0.1/-0	1.1 MAX.	0.3 MAX.	2.5 MAX.

Symbol Style	A	B
MCH31	1.9+/-0.2	3.5+/-0.2

(Unit : mm)

Reel dimensions

Diagram illustrating the dimensions for a reel. The main dimensions are labeled: 9.0+1.0/-0 (width), φ13.0±0.2 (inner diameter), φ60.0+1.0/-0 (middle diameter), and φ180+0/-1.5 (outer diameter). A pulling direction arrow is shown. The label pasting area is indicated.

As per EIAJ ET-7200A

(Unit : mm)

(1) The quantity for one reel is as bellows.

Kind of reel	Series	Paper tape		Plastic tape	
		Quantity	Symbol	Quantity	Symbol
φ180 reel	MCH31	4,000 pcs.	K	2,000 pcs.	P

(2) When the tape is pulled out towards the operator with the cover tape facing upward, the feeding holes shall be found on the right portion of the tape.

(3) Specification of beginning and ending of the tape are as follows.

Ending(reel's center) : Approx. Over 160mm (no chips)
 Beginning(reel's round) : Approx. Over 160mm (no chips)
 : Approx. 240mm (cover tape only)

(4) No juncture of tape shall be allowed.

(5) The share strength of tape shall be more than 5N at the break down strength.

(6) The peel strength of the cover tape shall be 0.1 to 0.7(N) when the cover tape are peeled 0 to 15° degree from the surface.

(7) The number of missing components shall not exceed 0.1% of the total number of components (marked number) or one whichever is the larger, and no consecutive missing exceeding two is allowed.

(8) The reels made from resin shall be used, as per EIAJ ET-7200A.

●Marking

No marking shall be performed on the chip.

Trademark, parts number, quantity, lot No. , and country of origin shall be labeled on each reel.

●Numbering system for LOT No.

Example	<u>04</u>	<u>01</u>	<u>A0001</u>	<u>F</u>
	(1)	(2)	(3)	(4)

(1) The end of the Christian Era <two digits> of production finish.

(2) Week in completing part of production finish.

(3) Manufacture continuity number.

(4) The symbol of manufacturing plant.

Ceramic capacitors

●Label expression

The Figure below is label expression

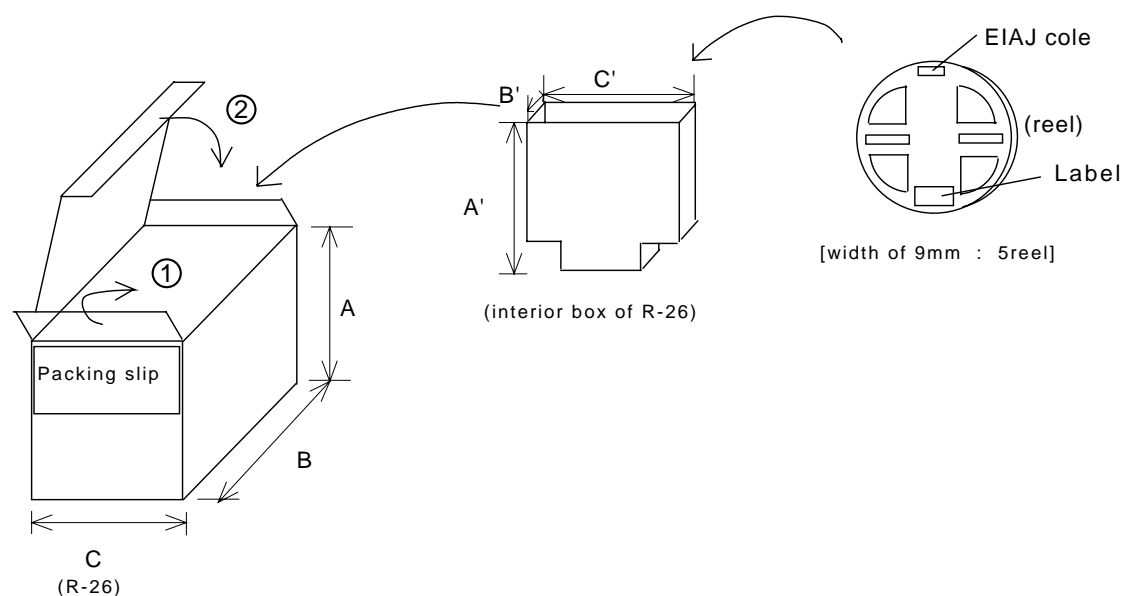
< Label Example > Part Number : MCH315A103JK



- ① Part Number
- ② Division cord
- ③ Quantity
- ④ Lot No.
- ⑤ The Country of origin
- ⑥ Inspector
- ⑦ QR code
- ⑧ Trademark

●Packing method

1) ϕ 180mm Reel



Ceramic capacitors

< Packaging unit >

Symbol	K
Quantity of reel in interior box	5
Quantity of reel in box of R-26	20

Dimensions	Packaging	
	R-26	interior box of R-26
A (A')	195	185
B (B')	255	60
C (C')	190	185

(Unit : mm)

< Appearance >

Carton

< Accumulation >

You must do accumulation by ten boxes

< Packaging slip >

1. Customer
2. Parts number
3. Quantity
4. Box quantity
5. Trade mark

Notes

- No technical content pages of this document may be reproduced in any form or transmitted by any means without prior permission of ROHM CO.,LTD.
- The contents described herein are subject to change without notice. The specifications for the product described in this document are for reference only. Upon actual use, therefore, please request that specifications to be separately delivered.
- Application circuit diagrams and circuit constants contained herein are shown as examples of standard use and operation. Please pay careful attention to the peripheral conditions when designing circuits and deciding upon circuit constants in the set.
- Any data, including, but not limited to application circuit diagrams information, described herein are intended only as illustrations of such devices and not as the specifications for such devices. ROHM CO.,LTD. disclaims any warranty that any use of such devices shall be free from infringement of any third party's intellectual property rights or other proprietary rights, and further, assumes no liability of whatsoever nature in the event of any such infringement, or arising from or connected with or related to the use of such devices.
- Upon the sale of any such devices, other than for buyer's right to use such devices itself, resell or otherwise dispose of the same, no express or implied right or license to practice or commercially exploit any intellectual property rights or other proprietary rights owned or controlled by
- ROHM CO., LTD. is granted to any such buyer.
- Products listed in this document are no antiradiation design.

The products listed in this document are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys).

Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

About Export Control Order in Japan

Products described herein are the objects of controlled goods in Annex 1 (Item 16) of Export Trade Control Order in Japan.

In case of export from Japan, please confirm if it applies to "objective" criteria or an "informed" (by MITI clause) on the basis of "catch all controls for Non-Proliferation of Weapons of Mass Destruction.