

Multilayer Ceramic Chip Capacitors (2 Array Type)

Series: **ECJU**



■ Features

- 2 Capacitors built in type in the miniature size of 0504
- Fast mounting and Space saving with less part placement
- Downsizing and High capacitance thanks to original material technology/thin and high lamination technology

■ Recommended Applications

- Stabilizing of power supply voltage and Noise filtering as Decoupling capacitors for Digital IC power circuit
- Bypass capacitors for CPU digital signal

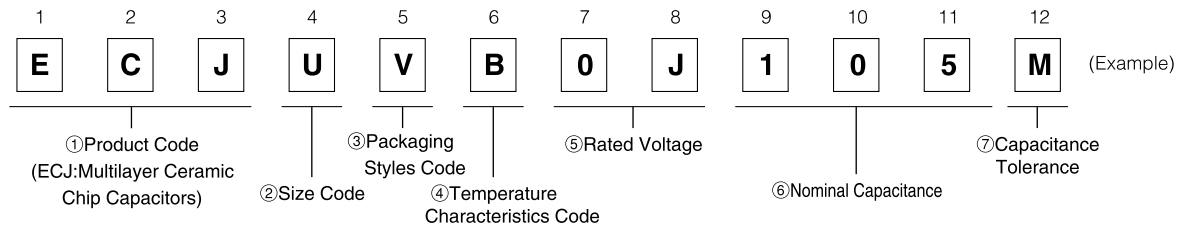
■ Precautions for Handling

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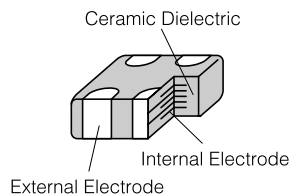
■ Packaging method

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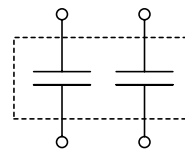
■ Explanation of Part Numbers



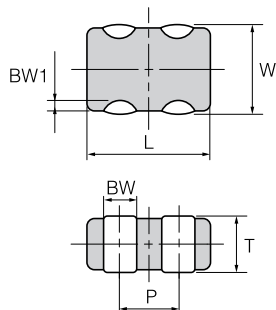
■ Construction



Schematic



■ Dimensions in mm (not to scale)



Unit : mm

Code	Size Code (EIA)	L	W	T	BW	BW1	P
U	Type "11" (0504)	1.37±0.15	1.0±0.1	0.8±0.1 0.60 ^{+0.06} _{-0.10}	0.36±0.10	2.0±0.1	0.64±0.10

■ Packaging Styles and Standard Packaging Quantity

Code	Packaging Styles		Quantity	Type "11" (0504)
V	φ180 reel	Paper taping (Pitch : 4mm)	pcs/reel	4,000

■ Temperature Characteristics

● Class 1

Code	Temp. Char.	Temperature. Coefficient.
C	CH	0±60 ppm/°C

● Class 2

Code	Temp. Char.	Capacitance Change	Measurement Temperature Range	Reference Temperature
B	B	±10 %	-25 to 85 °C	20 °C
	X7R	±15 %	-55 to 125 °C	25 °C
	X5R	±15 %	-55 to 85 °C	25 °C

■ Rated Voltage

Code	1H	1E	1C	1A	0J
Rated Voltage	DC 50 V	DC 25 V	DC 16 V	DC 10 V	DC 6.3 V

■ Nominal Capacitance

Ex.	100	101	103	104	105
Nominal Capacitance	10 pF	100 pF	10,000 pF (0.01 μF)	100,000 pF (0.1 μF)	1,000,000 pF (1.0 μF)

■ Capacitance tolerance

Class	Temp. Char.	Tolerance Code	Capacitance Tolerance	
1	CH	F	C=10 pF	±1 pF
		K	C≥15 pF	±10 %
2	B, X7R, X5R	M	±20 %	

■ Specifications and Test Method

Item	Specifications		Test Method
Operating Temperature Range	CH: -55 to 125 °C	B, X7R:-55 to 125 °C X5R:-55 to 85 °C	—
Dielectric Withstanding Voltage	No break down		Test voltage: Class 1: Rated voltage ×300% Class 2: Rated voltage ×250% Duration: 1 to 5 s Charge/discharge current: Within 50 mA
Insulation Resistance (IR)	10000 MΩ or 500/C (MΩ) Whichever is less (C: Nominal Cap. in μF)		Measuring voltage:Rated voltage Duration: 60 ± 5 s Charge/discharge current: Within 50 mA
Capacitance	Within the specified tolerance		Reference temperature:20 ± 2 °C Class 1 Measuring frequency :1 MHz ± 10% Measuring voltage :0.5 to 5 Vrms Class 2 Pretreatment : The capacitors shall be kept in a temperature of 150±0/-10°C for 1 hour and then shall be stored in standard condition* for 48 ± 4 hours, before initial measurement. Measuring frequency :1kHz ± 10% Measuring voltage :1.0 ± 0.2Vrms
Q Factor or Dissipation Factor (tan δ)	C < 30 pF: Q ≥ 400+20 C 30 pF ≤ C ≤ 1000 pF: Q ≥ 1000 (C:Nominal Cap. in pF)	tan δ : B, X7R:0.025 max. X5R:0.15 max.	

*Standard condition : Temperature 15 to 35 °C, Relative humidity 45 to 75 %
Soldering method for multilayer ceramic chip capacitor array shall be reflow soldering.
Flow soldering prohibited because solder bridge causes short circuit between terminal electrodes.

Standard Products for Type "11" (EIA "0504"), Taped Version

Class 1				
Code		CH		
Rated voltage		DC50V		
Capacitance (pF)	Capacitance	Part No	Dim. T (mm)	Temp.Char.
	Tolerance			
10	±1pF(F)	ECJUVC1H100F	0.6	○
22		ECJUVC1H220K	0.6	○
47	±10%(K)	ECJUVC1H470K	0.6	○
100		ECJUVC1H101K	0.6	○

Class 2															
Code		B													
Rated voltage		DC50V			DC25V			DC16V			DC10V				
Capacitance (pF)	Capacitance	Part No	Dim. T (mm)	Temp.Char.		Part No	Dim. T (mm)	Temp.Char.		Part No	Dim. T (mm)	Temp.Char.			
	Tolerance			B	X7R			B	X7R			X5R	B	X5R	
470	±20%(M)	ECJUVB1H471M	0.6	○	○										
1000		ECJUVB1H102M	0.6	○	○										
2200		ECJUVB1H222M	0.6	○	○										
4700						ECJUVB1E472M	0.6	○	○						
10000						ECJUVB1E103M	0.6	○	○						
47000										ECJUVB1C473M	0.6	○			
100000												ECJUVB1A104M	0.6	○	
1000000										ECJUVB1C105M	0.8	○	ECJUVB1A105M	0.8	○

Class 2				
Code		B		
Rated voltage		DC6.3V		
Capacitance (pF)	Capacitance	Part No	Dim. T (mm)	Temp.Char.
	Tolerance			
1,000,000	±20%(M)	ECJUVB0J105M	0.8	○

Packing style code : "V" for taped version. (φ180 reel, taping pitch : 4mm)

Cross talk characteristics [Ex.] Temp. Char. X5R, 1.0 μF

