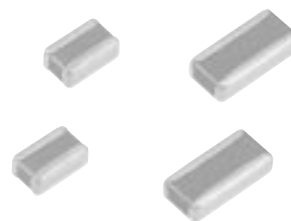


Multilayer Ceramic Chip Capacitors (Wide-width Type)

Series: **ECY**



■ Features

- Low ESL actualized by terminal electrodes placed in length direction and in parallel.
- Optimum for High-speed MPU power supply stability and noise filtering with Low ESL.

■ Recommended Applications

- Stabilizing of power supply voltage for High-speed MPU and noise filtering.

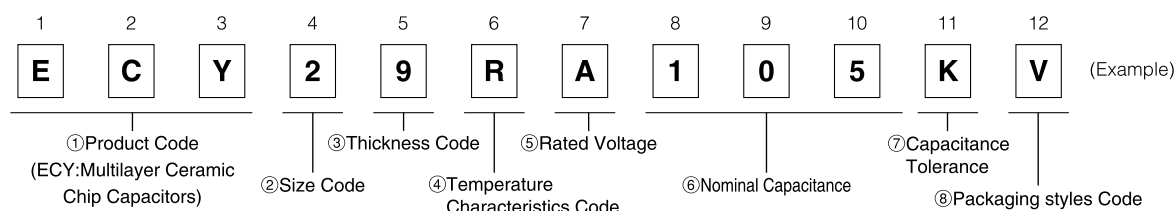
■ Precautions for Handling

See Page 51 to 57

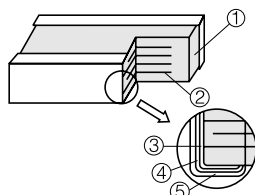
■ Packaging method

See Page 96

■ Explanation of Part Numbers

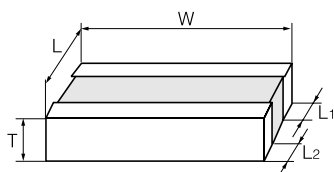


■ Construction



No	Name	
①	Ceramic dielectric	
②	Internal electrode	
③	Terminal electrode	Substrate electrode
④		Intermediate electrode
⑤		External electrode

■ Dimensions in mm (not to scale)



Unit : mm					
Code	Size Code (EIA)	L	W	T	L ₁ , L ₂
2	Type "21" (0508)	1.25±0.10	2.0±0.1	0.85±0.10	0.3±0.2
3	Type "31" (0612)	1.60±0.15	3.20±0.15	0.85±0.10	0.3±0.2
		1.6±0.2	3.2±0.2	0.85±0.10	0.3±0.2

■ Packaging Styles and standard Packaging Quantity

T : Thickness (mm)

Code	Packaging Styles		Quantity	Type "21" (0805)	Type "31" (0612)
V	φ180 reel	Paper taping (Pitch : 4mm)	Pcs./reel	4,000	4,000

■ Temperature Characteristics

Code	Temp. Char.	Capacitance Change	Measurement Temperature Range	Reference Temperature
R	X5R	±15%	-55 to 85 °C	25 °C

■ Rated Voltage

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

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

Nominal Capacitance

Ex.	103	104	105	106
Nominal capacitance	10,000 pF (0.01 μF)	100,000 pF (0.1 μF)	1,000,000 pF (1 μF)	10,000,000 pF (10 μF)

Capacitance Tolerance

Class	Temp. Char.	Tol. Code	Capacitance Tolerance
2	X5R	K	±10 %
		M	±20 %

Specification and Test Method

Item	Specification Class 2	Test Method
Operating Temperature Range	−55 to 85 °C	
Dielectric Withstanding Voltage	No break down	Test voltage: Rated voltage 250 % Electrification time: 1 to 5s. Charge/discharge current: Within 50mA
Insulation Resistance (IR)	10000 MΩ or 500/C(MΩ) whichever is less. Note:DC10V:100/C(MΩ)min. (C:Nominal Cap. in μF)	Measuring voltage: Rated voltage Measuring voltage time: 60 ± 5s Charge/discharge current: Within 50mA
Capacitance	Within the specified tolerance	Reference temperature: 20±2 °C
Dissipation Factor (tan δ)	DC50V, DC25V, DC16V: 0.025max. DC10V: 0.05max. DC6.3V: 0.15max.	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 1 KHz ± 10% Measuring voltage: 1.0 ± 0.2 Vrms

*Standard condition : Temperature 15 to 35 °C, Relative humidity 45 to 75%

Standard Products for Type “21” (0508), Taped Version

Capacitance (μF)	Code	R								
	Rated Voltage	DC50V			DC25V			DC10V		
	Capacitance Tolerance	Part No.	Dim. T (mm)	Temp. Char. X5R	Part No.	Dim. T (mm)	Temp. Char. X5R	Part No.	Dim. T (mm)	Temp. Char. X5R
0.01	±10%(K)	ECY29RH103□V	0.85	○						
0.1	or				ECY29RE104□V	0.85	○			
1	±20%(M)							ECY29RA105□V	0.85	○

□:Capacitance tolerance code. : “□” for “K” or “M”

Packaging style code: “V” for taped version. (φ180 reel, taping pitch: 4 mm)

Standard Products for Type “31” (0612), Taped Version

Capacitance (μF)	Code	R								
	Rated Voltage	DC50V			DC16V			DC6.3V		
	Capacitance Tolerance	Part No.	Dim. T (mm)	Temp. Char. X5R	Part No.	Dim. T (mm)	Temp. Char. X5R	Part No.	Dim. T (mm)	Temp. Char. X5R
0.1	±10%(K)	ECY39RH104□V	0.85	○						
1	or				ECY39RC105□V	0.85	○			
10	±20%(M)							ECY39RJ106MV*	0.85	○

□:Capacitance tolerance code. : “□” for “K” or “M”

Packaging style code: “V” for taped version. (φ180 reel, taping pitch: 4 mm)

*:“L” “W” Dimension tolerance ±0.2 mm

Impedance-Frequency [Ex.]

Wide-width Type Temp. Char. X5R, Type “31”

