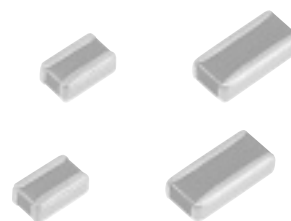


Multilayer Ceramic Chip Capacitors (Wide-width Type)

Series: **ECY**



■ Features

- Low ESL
- Ideal for High-speed MPU power supply stability and noise filtering

■ Recommended Applications

- Stabilizes power supply voltage for High-speed MPU and noise filtering circuitry.

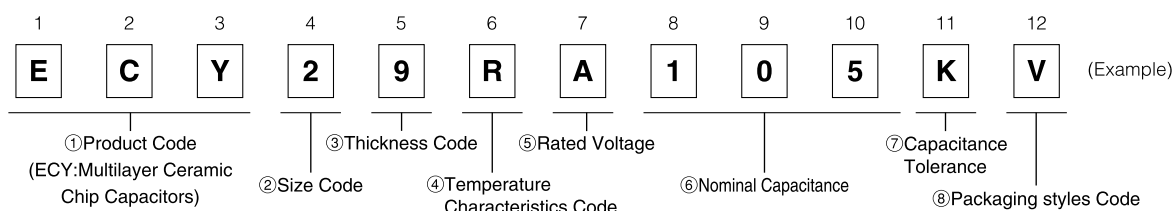
■ Precautions for Handling

See Page 51 to 57

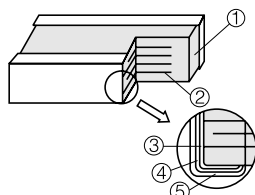
■ Packaging method

See Page 48, 96

■ Explanation of Part Numbers

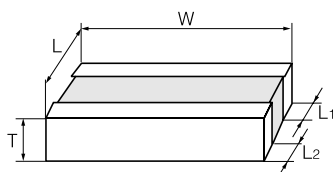


■ Construction



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 breakdown	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 Pretreatment: The capacitors should be kept in a temperature of 150+0/−10°C for 1 hour and stored in standard condition* for 48 ± 4 hours, before initial measurement.
Dissipation Factor (tan δ)	DC50V, DC25V, DC16V: 0.025max. DC10V: 0.05max. DC6.3V: 0.15max.	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. (ø180 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. (ø180 reel, taping pitch: 4 mm)

*:“L” “W” Dimension tolerance ±0.2 mm

■ Impedance-Frequency [Ex.]

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

