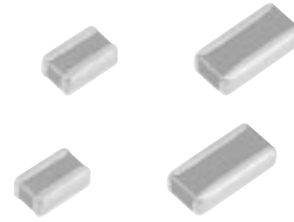


### Multilayer Ceramic Capacitors (Wide-width Type)

Series: **ECY**



#### ■ Features

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

#### ■ Recommended Applications

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

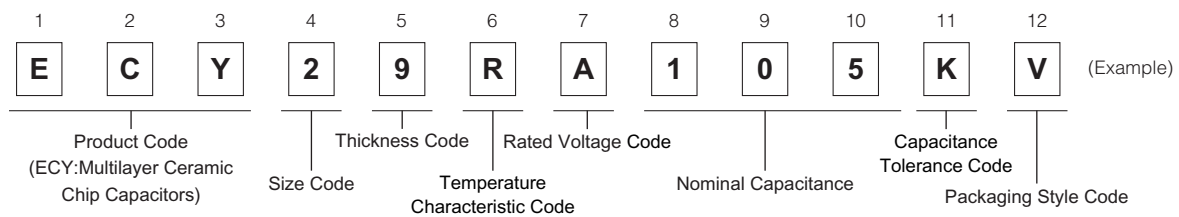
#### ■ Handling Precautions

See Page 48 to 53

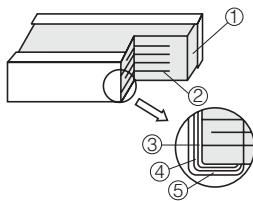
#### ■ Packaging Specifications

See Page 45, 46, 56

#### ■ Explanation of Part Numbers

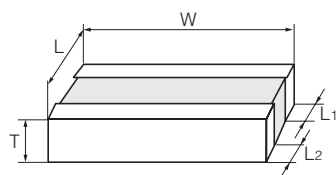


#### ■ Construction



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)



Size Code	Size (EIA)	L	W	T	L <sub>1</sub> , L <sub>2</sub>
2	0508	1.25±0.10	2.0±0.1	0.85±0.10	0.3±0.2
3	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		

#### ■ Packaging Styles and standard Packaging Quantity

Quantity : pcs. / reel

Packaging Style Code	Packaging Styles	Size	Quantity
V	180 reel Paper taping (Pitch : 4 mm)	0508	4,000
			0612

#### ■ Temperature Characteristics

- Class 2

Temperature Characteristic Code	Temperature Characteristics	Capacitance Change	Measurement Temperature Range	Reference Temperature
R	X5R	±15 %	-55 to 85 °C	25 °C

#### ■ Rated Voltage

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.

01 Dec. 2008

### ■ 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	Temperature Characteristics	Capacitance Tolerance Code	Capacitance Tolerance
2	X5R	K	±10 %
		M	±20 %

### ■ Specifications and Testing Methods

Item	Specification	Test Method
Operating Temperature Range	-55 to 85 °C	—
Dielectric Withstanding Voltage	No dielectric breakdown and/or damage	Test voltage: Rated voltage × 250 % Duration: 1 to 5 s. Charge/discharge current: 50 mA max.
Insulation Resistance (IR)	10000 MΩ or 500/C(MΩ) whichever is less. Note:100/C (MΩ) min. for DC 10 V max. C:Nominal Cap. in μF	Measuring voltage: Rated voltage Duration: 60 ± 5 s Charge/discharge current: 50 mA max.
Capacitance	Within the specified tolerance	Measuring temperature: 20±2 °C
Dissipation Factor (tan δ)	DC 50 V, DC 25 V, and DC 16 V: 0.025 max. DC 10 V: 0.05 max. DC 6.3 V: 0.15 max.	Preconditioning: The capacitors shall be kept in temperature of 150 +0/-10 °C for 1 hour and subjected to standard condition* 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 %  
For further information, see the technical specifications.

### ■ Standard Products for EIA Size "0508", Taped Version

- Class 2
- ◆ Temperature Characteristic Code : R (Temperature Characteristics : X5R)

Rated Voltage		DC 50 V			DC 25 V			DC 10 V		
Capacitance (μF)	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"  
Standard packaging quantity of Packaging Style Code "V" (T = 0.85 mm): 4,000 pcs./reel  
Avoid flow soldering.

### ■ Standard Products for EIA Size "0612", Taped Version

- Class 2
- ◆ Temperature Characteristic Code : R (Temperature Characteristics : X5R)

Rated Voltage		DC 50 V			DC 16 V			DC 6.3 V		
Capacitance (μF)	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"  
Dimensional tolerance of L, W, T: L, W: ± 0.15 mm / T: ± 0.1 mm for no mark, L, W: ± 0.2 mm / T: ± 0.1 mm for "\*" mark  
Standard packaging quantity of Packaging Style Code "V" (T = 0.85 mm): 4,000 pcs./reel  
Avoid flow soldering.

### ■ Impedance/ESL-Frequency [Ex.]

Size 0612, Temperature Characteristics X5R, 1 μF

