ECY-29RA105KV Datasheet

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DiGi Electronics Part Number	ECY-29RA105KV-DG
Manufacturer	Panasonic Electronic Components
Manufacturer Product Number	ECY-29RA105KV
Description	CAP CER 1UF 10V X5R 0508
Detailed Description	1 µF ±10% 10V Ceramic Capacitor X5R 0508 (1220 Metric)

This model ECY-29RA105KV is available at DiGi Electronics.

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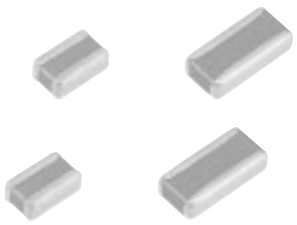
Manufacturer Product Number:	Manufacturer:
ECY-29RA105KV	Panasonic Electronic Components
Series:	Product Status:
ECY	Obsolete
Capacitance:	Tolerance:
1 µF	±10%
Voltage - Rated:	Temperature Coefficient:
10V	X5R
Operating Temperature:	Features:
-55°C ~ 85°C	Low ESL (Reverse Geometry)
Ratings:	Applications:
-	Bypass, Decoupling
Failure Rate:	Mounting Type:
-	Surface Mount, MLCC
Package / Case:	Size / Dimension:
0508 (1220 Metric)	0.049" L x 0.079" W (1.25mm x 2.00mm)
Height - Seated (Max):	Thickness (Max):
-	0.037" (0.95mm)
Lead Spacing:	Lead Style:
-	-
Base Product Number:	
ECY-29	

Environmental & Export classification

Moisture Sensitivity Level (MSL):	ECCN:
1 (Unlimited)	EAR99
HTSUS:	
8532.24.0020	

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

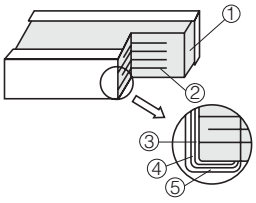
See Page 45, 46, 56

■ Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	12	
E	C	Y	2	9	R	A	1	0	5	K	V	(Example)

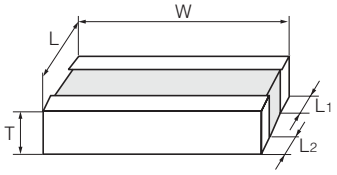
- 1 2 3: Product Code (ECY:Multilayer Ceramic Chip Capacitors)
- 4: Size Code
- 5: Thickness Code
- 6: Temperature Characteristic Code
- 7: Rated Voltage Code
- 8 9 10: Nominal Capacitance
- 11: Capacitance Tolerance Code
- 12: Packaging Style Code

■ 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_1, L_2
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		0508	0612
V	180 reel	Paper taping (Pitch : 4 mm)	4,000	

■ 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

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 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
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.	

*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) or ±20 %(M)	ECY29RH103□V	0.85	○						
0.1					ECY29RE104□V	0.85	○			
1								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

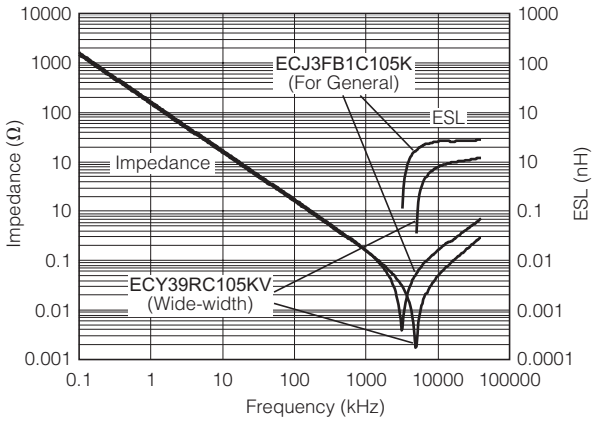
● Class 2

◆ 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) or ±20 %(M)	ECY39RH104□V	0.85	○						
1					ECY39RC105□V	0.85	○			
10								ECY39RJ106MV	0.85*	○

□: Capacitance tolerance code : "□" for "K" or "M"
Dimensional tolerance of L, W, T: L, W: ± 0.15 mm / T: ± 0.1 m 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



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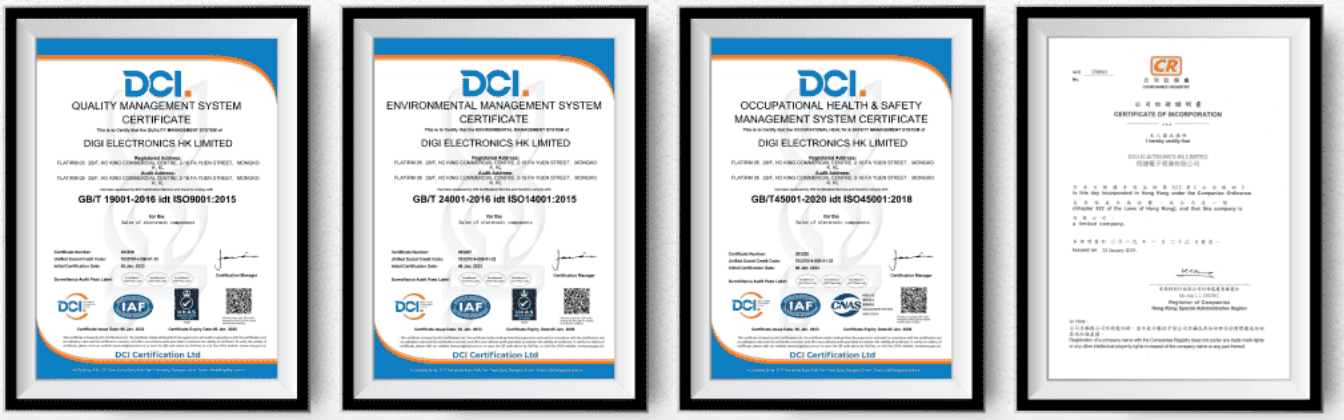

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