

# REMINDERS

Please read this before using the product.

## SAFETY REMINDERS

### REMINDERS

1. If you intend to use a product listed in this catalog for a purpose that may cause loss of life or other damage, you must contact our company's sales window.
2. We may modify products or discontinue production of a product listed in this catalog without prior notification.
3. We provide "Delivery Specification" that explain precautions for the specifications and safety of each product listed in this catalog. We strongly recommend that you exchange these delivery specifications with customers that use one of these products.
4. If you plan to export a product listed in this catalog, keep in mind that it may be a restricted item according to the "Foreign Exchange and Foreign Trade Control Law". In such cases, it is necessary to acquire export permission in harmony with this law.
5. Any reproduction or transferring of the contents of this catalog is prohibited without prior permission from our company.
6. We are not responsible for problems that occur related to the intellectual property rights or other rights of our company or a third party when you use a product listed in this catalog. We do not grant license of these rights.
7. This catalog only applies to products purchased through our company or one of our company's official agencies. This catalog does not apply to products that are purchased through other third parties.
8. The descriptions in this catalog apply as of April 2007.

# Ultra Low Inductance Multilayer Ceramic Chip Capacitors

Conformity to RoHS Directive

## CLL Series CLLC1A Type

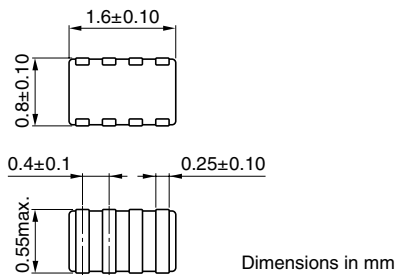
### FEATURES

- Features a unique internal structure that cancels magnetic fields to reduce inductance.
- Compact and lightweight
- This product contains no lead and supports lead-free soldering.

### APPLICATIONS

Power supply circuits for CPUs and high-speed digital ICs.

### SHAPES AND DIMENSIONS



### PRODUCT IDENTIFICATION

CLL	C1A	X7S	0G	334	M	□
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Series name

(2) Dimension code

C1A	1.6×0.8mm
-----	-----------

(3) Capacitance temperature characteristics

Class 2 (Temperature stable and general purpose)

Temperature characteristics	Capacitance change	Temperature range
X7S	±22%	-55 to +125°C

(4) Rated voltage E<sub>dc</sub>

0G	4V
----	----

(5) Nominal capacitance

The capacitance is expressed in three digit codes and in units of pico farads (pF).

The first and second digits identify the first and second significant figures of the capacitance.

The third digit identifies the multiplier.

R designates a decimal point.

334	330,000pF
-----	-----------

(6) Capacitance tolerance

Symbol	Tolerance
M	±20%

(7) Packaging style

T	Taping (reel)
B	Bulk

### CAPACITANCE RANGES: CLASS 2

#### TEMPERATURE CHARACTERISTICS: X7S(±22%)

RATED VOLTAGE E<sub>dc</sub>: 4V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.
330,000	±20%	0.55max.	CLLC1AX7S0G334M
470,000	±20%	0.55max.	CLLC1AX7S0G474M
680,000	±20%	0.55max.	CLLC1AX7S0G684M
1,000,000	±20%	0.55max.	CLLC1AX7S0G105M

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

# CLL Series CLLE1A Type

Conformity to RoHS Directive

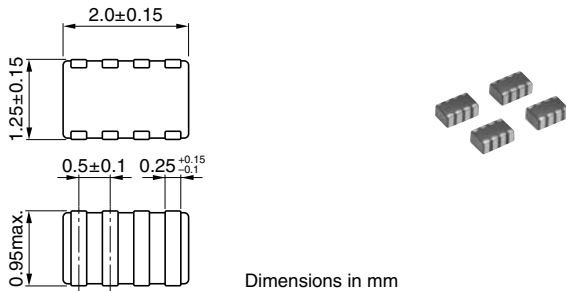
## FEATURES

- Features a unique internal structure that cancels magnetic fields to reduce inductance.
- Compact and lightweight
- This product contains no lead and supports lead-free soldering.

## APPLICATIONS

Power supply circuits for CPUs and high-speed digital ICs.

## SHAPES AND DIMENSIONS



Dimensions in mm

## PRODUCT IDENTIFICATION

CLL E1A X7R 1A 104 M □  
(1) (2) (3) (4) (5) (6) (7)

(1) Series name

(2) Dimension code

E1A	2.0×1.25mm
-----	------------

(3) Capacitance temperature characteristics

Class 2 (Temperature stable and general purpose)

Temperature characteristics	Capacitance change	Temperature range
X7R	±15%	-55 to +125°C
X7S	±22%	-55 to +125°C

(4) Rated voltage E<sub>dc</sub>

1A	10V
0J	6.3V
0G	4V

(5) Nominal capacitance

The capacitance is expressed in three digit codes and in units of pico farads (pF).

The first and second digits identify the first and second significant figures of the capacitance.

The third digit identifies the multiplier.

R designates a decimal point.

104	100,000pF
-----	-----------

(6) Capacitance tolerance

Symbol	Tolerance
M	±20%

(7) Packaging style

T	Taping (reel)
B	Bulk

## CAPACITANCE RANGES: CLASS 2

### TEMPERATURE CHARACTERISTICS: X7R(±15%)

RATED VOLTAGE E<sub>dc</sub>: 10V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.
100,000	±20%	0.55max.	CLLE1AX7R1A104M
150,000	±20%	0.55max.	CLLE1AX7R1A154M
220,000	±20%	0.55max.	CLLE1AX7R1A224M
330,000	±20%	0.55max.	CLLE1AX7R1A334M

RATED VOLTAGE E<sub>dc</sub>: 6.3V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.
470,000	±20%	0.55max.	CLLE1AX7R0J474M
680,000	±20%	0.55max.	CLLE1AX7R0J684M
1,000,000	±20%	0.95max.	CLLE1AX7R0J105M
1,500,000	±20%	0.95max.	CLLE1AX7R0J155M

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

Please read the precautions before using this catalog.

**TEMPERATURE CHARACTERISTICS: X7S(±22%)**

 RATED VOLTAGE E<sub>dc</sub>: 4V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No. Temperature characteristics: X7S
1,000,000	±20%	0.55max.	CLLE1AX7S0G105M
1,500,000	±20%	0.55max.	CLLE1AX7S0G155M
2,200,000	±20%	0.55max./ 0.95max.	CLLE1AX7S0G225M
4,700,000	±20%	0.95max.	CLLE1AX7S0G475M

- For more information about the products of other capacitance or data, please contact us.

- All specifications are subject to change without notice.  
Please read the precautions before using this catalog.