Multilayer Ceramic Chip Capacitors

2-element array type

CKC series

Type: **CKCL22**
CKCM25

Issue date: April 2007

- All specifications are subject to change without notice.
- 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.

REMINDERS

Please read this before using the product.

SAFETY REMINDERS

⚠ REMINDERS

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8. The descriptions in this catalog apply as of April 2007.

2-Element Multilayer Ceramic Chip Capacitor Array

Conformity to RoHS Directive

CKC Series CKCL22 Type

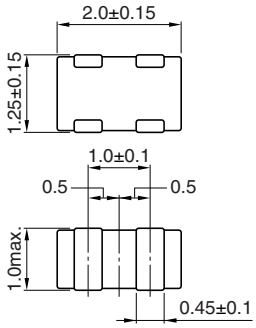
FEATURES

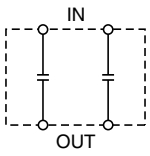
- Two capacitors are fitted in a single product, contributing to reduced installation costs.
- The electrostatic capacity range and shape are designed to meet the demands of the cellular phone market.
- Reduced crosstalk (signal interference) between the terminals.
- Available on tape or in bulk.

APPLICATIONS

They are suited for circuits that require multiple identical capacitors in a particular area of a board, such as interfaces and high-frequency noise bypass circuits on cellular phones, interfaces including I/O cables on PCs and peripherals, as well as CPU bus lines.

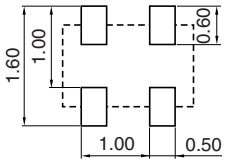
SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM





Dimensions in mm

RECOMMENDED PC BOARD PATTERN



Dimensions in mm

PRODUCT IDENTIFICATION

CKC	L22	C0G	1H	150	K	□
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Series name

(2) Dimensions L×W

L22	2.0×1.25mm

(3) Capacitance temperature characteristics

Class 1 (Temperature compensation)

Temperature characteristics	Capacitance change	Temperature range
CH	0±60ppm/°C	–25 to +85°C
C0G	0±30ppm/°C	–55 to +125°C

Class 2 (Temperature stable and general purpose)

Temperature characteristics	Capacitance change	Temperature range
JB	±10%	–25 to +85°C
X7R	±15%	–55 to +125°C
X5R	±15%	–55 to +85°C

(4) Rated voltage Edc

0J	6.3V
1A	10V
1C	16V
1E	25V
1H	50V

(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.

223	22,000pF

(6) Capacitance tolerance

F	±1pF
K	±10%
M	±20%

(7) Packaging style

T	Taping (reel)
B	Bulk

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CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)

TEMPERATURE CHARACTERISTICS: CH(0±60ppm/°C), C0G(0±30ppm/°C)

RATED VOLTAGE Edc: 50V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
10	±1pF	1.00max.	CKCL22CH1H100F	CKCL22C0G1H100F
15	±10%	1.00max.	CKCL22CH1H150K	CKCL22C0G1H150K
22	±10%	1.00max.	CKCL22CH1H220K	CKCL22C0G1H220K
33	±10%	1.00max.	CKCL22CH1H330K	CKCL22C0G1H330K
47	±10%	1.00max.	CKCL22CH1H470K	CKCL22C0G1H470K
68	±10%	1.00max.	CKCL22CH1H680K	CKCL22C0G1H680K
100	±10%	1.00max.	CKCL22CH1H101K	CKCL22C0G1H101K
150	±10%	1.00max.	CKCL22CH1H151K	CKCL22C0G1H151K
220	±10%	1.00max.	CKCL22CH1H221K	CKCL22C0G1H221K
330	±10%	1.00max.	CKCL22CH1H331K	CKCL22C0G1H331K
470	±10%	1.00max.	CKCL22CH1H471K	CKCL22C0G1H471K

CAPACITANCE RANGES: CLASS 2

TEMPERATURE CHARACTERISTICS: JB(±10%), X5R/X7R(±15%)

RATED VOLTAGE Edc: 50V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
1,000	±20%	1.00max.	CKCL22JB1H102M	CKCL22X5R1H102M	CKCL22X7R1H102M
2,200	±20%	1.00max.	CKCL22JB1H222M	CKCL22X5R1H222M	CKCL22X7R1H222M
4,700	±20%	1.00max.	CKCL22JB1H472M	CKCL22X5R1H472M	CKCL22X7R1H472M
10,000	±20%	1.00max.	CKCL22JB1H103M	CKCL22X5R1H103M	CKCL22X7R1H103M
22,000	±20%	1.00max.	CKCL22JB1H223M	CKCL22X5R1H223M	CKCL22X7R1H223M
47,000	±20%	1.00max.	CKCL22JB1H473M	CKCL22X5R1H473M	CKCL22X7R1H473M

RATED VOLTAGE Edc: 25V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
100,000	±20%	1.00max.	CKCL22JB1E104M	CKCL22X5R1E104M	CKCL22X7R1E104M

TEMPERATURE CHARACTERISTICS: JB(±10%), X5R(±15%)

RATED VOLTAGE Edc: 16V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: JB	Temperature characteristics: X5R
220,000	±20%	1.00max.	CKCL22JB1C224M	CKCL22X5R1C224M

RATED VOLTAGE Edc: 10V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: JB	Temperature characteristics: X5R
470,000	±20%	1.00max.	CKCL22JB1A474M	CKCL22X5R1A474M

RATED VOLTAGE Edc: 6.3V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: JB	Temperature characteristics: X5R
1,000,000	±20%	1.00max.	CKCL22JB0J105M	CKCL22X5R0J105M
2,200,000	±20%	1.00max.	CKCL22JB0J225M	CKCL22X5R0J225M

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

CKC Series CKCM25 Type

Conformity to RoHS Directive

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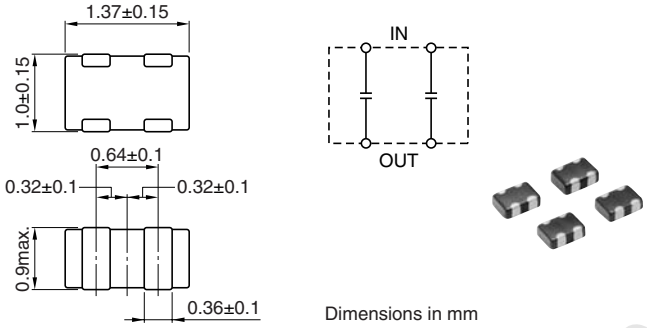
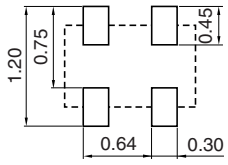


Dimensions in mm

RECOMMENDED PC BOARD PATTERN



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(1)	(2)	(3)	(4)	(5)	(6)	(7)

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(2) Dimensions L×W

M25	1.37×1.0mm

(3) Capacitance temperature characteristics

Class 1 (Temperature compensation)

Temperature characteristics	Capacitance change	Temperature range
CH	0±60ppm/°C	–25 to +85°C
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Class 2 (Temperature stable and general purpose)

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RATED VOLTAGE Edc: 50V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
10	±1pF	0.66max.	CKCM25CH1H100F	CKCM25C0G1H100F
15	±10%	0.66max.	CKCM25CH1H150K	CKCM25C0G1H150K
22	±10%	0.66max.	CKCM25CH1H220K	CKCM25C0G1H220K
33	±10%	0.66max.	CKCM25CH1H330K	CKCM25C0G1H330K
47	±10%	0.66max.	CKCM25CH1H470K	CKCM25C0G1H470K
68	±10%	0.66max.	CKCM25CH1H680K	CKCM25C0G1H680K
100	±10%	0.66max.	CKCM25CH1H101K	CKCM25C0G1H101K

CAPACITANCE RANGES: CLASS 2

TEMPERATURE CHARACTERISTICS: JB(±10%), X5R/X7R(±15%)

RATED VOLTAGE Edc: 50V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
1,000	±20%	0.66max.	CKCM25JB1H102M	CKCM25X5R1H102M	CKCM25X7R1H102M
2,200	±20%	0.66max.	CKCM25JB1H222M	CKCM25X5R1H222M	CKCM25X7R1H222M
4,700	±20%	0.66max.	CKCM25JB1H472M	CKCM25X5R1H472M	CKCM25X7R1H472M

RATED VOLTAGE Edc: 25V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
10,000	±20%	0.66max.	CKCM25JB1E103M	CKCM25X5R1E103M	CKCM25X7R1E103M

TEMPERATURE CHARACTERISTICS: JB(±10%), X5R(±15%)

RATED VOLTAGE Edc: 16V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: JB	Temperature characteristics: X5R
22,000	±20%	0.66max.	CKCM25JB1C223M	CKCM25X5R1C223M

RATED VOLTAGE Edc: 10V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: JB	Temperature characteristics: X5R
47,000	±20%	0.66max.	CKCM25JB1A473M	CKCM25X5R1A473M

RATED VOLTAGE Edc: 6.3V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: JB	Temperature characteristics: X5R
100,000	±20%	0.66max.	CKCM25JB0J104M	CKCM25X5R0J104M
220,000	±20%	0.66max.	CKCM25JB0J224M	CKCM25X5R0J224M
470,000	±20%	0.90max.	CKCM25JB0J474M	CKCM25X5R0J474M
1,000,000	±20%	0.90max.	CKCM25JB0J105M	CKCM25X5R0J105M

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