

TDK CKC Series 2-Element Multilayer Ceramic Chip Capacitor Array Instructions

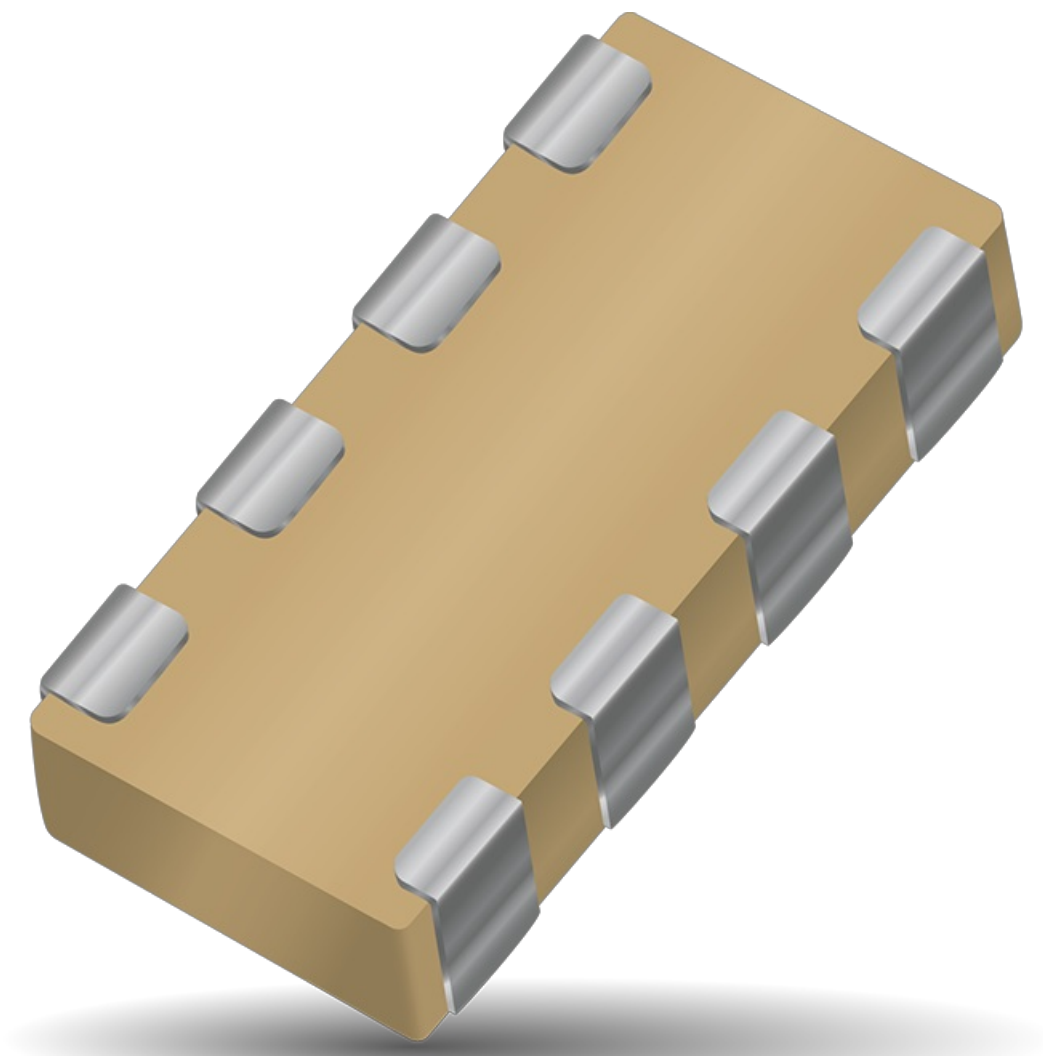
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TDK CKC Series 2-Element Multilayer Ceramic Chip Capacitor Array



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.

PRODUCT IDENTIFICATION

CKC	M25	JB	1A	223	M	□
(1)	(2)	(3)	(4)	(5)	(6)	(7)

1. Series name
2. Dimensions L×W

M25	1.37×1.0mm
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
B(JB*)	±10%	−25 to +85°C
X7R	±15%	−55 to +125°C
X5R	±15%	−55 to +85°C

*JB(JIS: BJ)

4. Rated voltage E_{dc}

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

5. Nominal capacitance

1. The capacitance is expressed in three digit codes and in units of pico farads (pF).
2. The first and second digits identify the first and second significant figures of the capacitance.
3. The third digit identifies the multiplier.
4. R designates a decimal point.

223	22,000pF
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6. Capacitance tolerance

F	±1pF
K	±10%
M	±20%

7. Packaging style

T

Taping (reel)

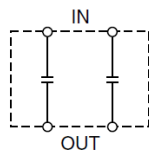
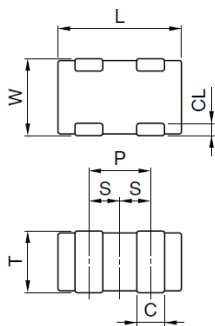
B

Bulk

APPLICATIONS

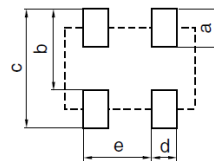
They are suited for circuits that require multiple identical capacitors in a particular area of a board, such as interfaces and high-frequency noise bypass circuits on cellular phones, interfaces including I/O cables on PCs and peripherals, as well as CPU bus lines

SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM/RECOMMENDED PC BOARD PATTERN



Dimensions in mm

Type	CKCM25	CKCL22
L	1.37±0.15	2.0±0.15
W	1.0±0.15	1.25±0.15
T	0.9max.	1.0max.
C	0.36±0.1	0.45±0.1
CL	0.20±0.1	0.20±0.2, -0.1
P	0.64±0.1	1.0±0.1
S	0.32±0.1	0.32±0.1



Dimensions in mm

Type	CKCM25	CKCL22
a	0.45	0.60
b	0.75	1.00
c	1.20	1.60
d	0.30	0.50
e	0.64	1.00



CKCM25 TYPE

- **CAPACITANCE RANGES:** CLASS 1

TEMPERATURE CHARACTERISTICS:

- JIS CH(0±60ppm/°C)
- EIA C0G(0±30ppm/°C)
- **RATED VOLTAGE Edc:** 50V

Capacitance (pF)	Tolerance	Thickness T (mm)max.	Part number
10	±1pF	0.66	CKCM25CH1H100F
15	±10%	0.66	CKCM25CH1H150K
22	±10%	0.66	CKCM25CH1H220K
33	±10%	0.66	CKCM25CH1H330K
47	±10%	0.66	CKCM25CH1H470K
68	±10%	0.66	CKCM25CH1H680K
100	±10%	0.66	CKCM25CH1H101K

- Part number for temperature characteristic C0G

- Please substitute “C0G” for “CH” in the part number when ordering

CAPACITANCE RANGES: CLASS 2

TEMPERATURE CHARACTERISTICS:

- JIS B(BJ)($\pm 10\%$)
- EIA X5R/X7R($\pm 15\%$)
- **RATED VOLTAGE E_{dc}**: 50V

Capacitance (pF)	Tolerance	Thickness T (mm)max.	Part number
1,000	$\pm 20\%$	0.66	CKCM25JB1H102M
2,200	$\pm 20\%$	0.66	CKCM25JB1H222M

- **RATED VOLTAGE E_{dc}**: 25V

Capacitance (pF)	Tolerance	Thickness T (mm)max.	Part number
4,700	$\pm 20\%$	0.66	CKCM25JB1E472M

- **RATED VOLTAGE E_{dc}**: 16V

Capacitance (pF)	Tolerance	Thickness T (mm)max.	Part number
10,000	$\pm 20\%$	0.66	CKCM25JB1C103M

Part number for temperature characteristic X5R or X7R

Please substitute “X5R” or “X7R” for “JB” in the part number when ordering

TEMPERATURE CHARACTERISTICS:

JIS B(BJ)($\pm 10\%$)
EIA X5R($\pm 15\%$)

- **RATED VOLTAGE E_{dc}**: 10V

Capacitance (pF)	Tolerance	Thickness T (mm)max.	Part number
22,000	$\pm 20\%$	0.66	CKCM25JB1A223M
47,000	$\pm 20\%$	0.66	CKCM25JB1A473M

- **RATED VOLTAGE E_{dc}**: 6.3V

Capacitance (pF)	Tolerance	Thickness T (mm)max.	Part number
100,000	±20%	0.66	CKCM25JB0J104M
220,000	±20%	0.66	CKCM25JB0J224M
470,000	±20%	0.9	CKCM25JB0J474M
1,000,000 [1μF]	±20%	0.9	CKCM25JB0J105M

CKCL22 TYPE

CAPACITANCE RANGES: CLASS 1

TEMPERATURE CHARACTERISTICS:

JIS CH(0±60ppm/°C)
EIA C0G(0±30ppm/°C)

- **RATED VOLTAGE E_{dc}:** 50V

Capacitance (pF)	Tolerance	Thickness T (mm)max.	Part number
10	±1pF	1	CKCL22CH1H100F
15	±10%	1	CKCL22CH1H150K
22	±10%	1	CKCL22CH1H220K
33	±10%	1	CKCL22CH1H330K
39	±10%	1	CKCL22CH1H390K
47	±10%	1	CKCL22CH1H470K
68	±10%	1	CKCL22CH1H680K
100	±10%	1	CKCL22CH1H101K
150	±10%	1	CKCL22CH1H151K
220	±10%	1	CKCL22CH1H221K
330	±10%	1	CKCL22CH1H331K
470	±10%	1	CKCL22CH1H471K

Part number for temperature characteristic C0G
Please substitute "C0G" for "CH" in the part number when ordering

CAPACITANCE RANGES: CLASS 2

TEMPERATURE CHARACTERISTICS:

JIS B(BJ)(±10%)
EIA X5R/X7R(±15%)

- **RATED VOLTAGE E_{dc}:** 50V

Capacitance (pF)	Tolerance	Thickness T (mm)max.	Part number
1,000	±20%	1	CKCL22JB1H102M
2,200	±20%	1	CKCL22JB1H222M
4,700	±20%	1	CKCL22JB1H472M
10,000	±20%	1	CKCL22JB1H103M

• **RATED VOLTAGE E_{dc}: 25V**

Capacitance (pF)	Tolerance	Thickness T (mm)max.	Part number
22,000	±20%	1	CKCL22JB1E223M
47,000	±20%	1	CKCL22JB1E473M

• **RATED VOLTAGE E_{dc}: 16V**

Capacitance (pF)	Tolerance	Thickness T (mm)max.	Part number
100,000	±20%	1	CKCL22JB1C104M

Part number for temperature characteristic X5R or X7R

Please substitute "X5R" or "X7R" for "JB" in the part number when ordering.

TEMPERATURE CHARACTERISTICS:

JIS B(BJ)(±10%)

EIA X5R(±15%)

• **RATED VOLTAGE E_{dc}: 10V**

Capacitance (pF)	Tolerance	Thickness T (mm)max.	Part number
220,000	+80, -20%	1	CKCL22JB1A224Z

• **RATED VOLTAGE E_{dc}: 6.3V**

Capacitance (pF)	Tolerance	Thickness T (mm)max.	Part number
470,000	+80, -20%	1	CKCL22JB0J474Z
1,000,000 [1μF]	+80, -20%	1	CKCL22JB0J105Z

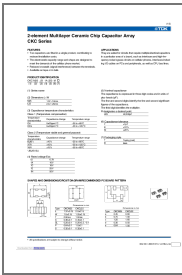
- Part number for temperature characteristic X5R
- Please substitute "X5R" for "JB" in the part number when ordering.

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

All specifications are subject to change without notice.

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