

4-element Multilayer Ceramic Chip Capacitor Array CKC Series

FEATURES

- The CKC Series are integrated, single-chip, 4-element capacitors that are highly effective in EMC countermeasure applications.
- They are particularly effective when used as a bypass for digital signal line noise, thereby preventing EMC around connectors.

PRODUCT IDENTIFICATION

CKC A43 JF 1C 104 Z □
(1) (2) (3) (4) (5) (6) (7)

(1) Series name

(2) Dimensions L×W

| | |
|-----|------------|
| L44 | 2.0×1.25mm |
| A43 | 3.2×1.6mm |

(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 characteristics | Capacitance change | Temperature range |
|-----------------------------|--------------------|-------------------|
| B(JB*) | ±10% | -25 to +85°C |
| F(JF*) | +30, -80% | -25 to +85°C |
| X7R | ±15% | -55 to +125°C |
| X5R | ±15% | -55 to +85°C |
| Y5V | +22, -82% | -30 to +85°C |

*JB(JIS: BJ), JF(JIS: FJ)

(4) Rated voltage Edc

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

APPLICATIONS

For use as a bypass for digital and analog signal line noise generated by telecommunications equipment and other common electronic circuits.

(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

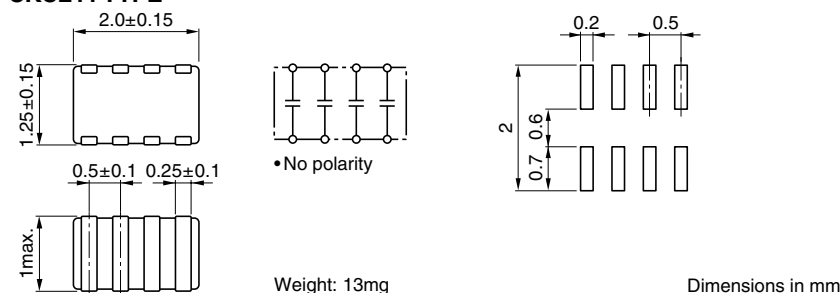
| | |
|---|-----------|
| F | ±1pF |
| K | ±10% |
| M | ±20% |
| Z | +80, -20% |

(7) Packaging style

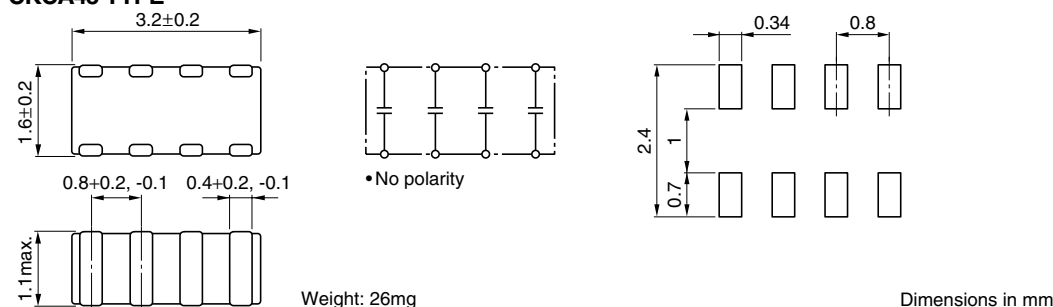
| | |
|---|---------------|
| T | Taping (reel) |
| B | Bulk |

SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM/RECOMMENDED PC BOARD PATTERN

CKCL44 TYPE



CKCA43 TYPE



• All specifications are subject to change without notice.

CKCL44 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 | CKCL44CH1H100F |
| 15 | ±10% | 1 | CKCL44CH1H150K |
| 22 | ±10% | 1 | CKCL44CH1H220K |
| 33 | ±10% | 1 | CKCL44CH1H330K |
| 39 | ±10% | 1 | CKCL44CH1H390K |
| 47 | ±10% | 1 | CKCL44CH1H470K |
| 68 | ±10% | 1 | CKCL44CH1H680K |
| 100 | ±10% | 1 | CKCL44CH1H101K |
| 150 | ±10% | 1 | CKCL44CH1H151K |

- 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 |
|------------------|-----------|----------------------|----------------|
| 220 | ±20% | 1 | CKCL44JB1H221M |
| 470 | ±20% | 1 | CKCL44JB1H471M |
| 1,000 | ±20% | 1 | CKCL44JB1H102M |
| 2,200 | ±20% | 1 | CKCL44JB1H222M |
| 4,700 | ±20% | 1 | CKCL44JB1H472M |

RATED VOLTAGE E_{dc}: 25V

| Capacitance (pF) | Tolerance | Thickness T (mm)max. | Part number |
|------------------|-----------|----------------------|----------------|
| 10,000 | ±20% | 1 | CKCL44JB1E103M |

RATED VOLTAGE E_{dc}: 16V

| Capacitance (pF) | Tolerance | Thickness T (mm)max. | Part number |
|------------------|-----------|----------------------|----------------|
| 22,000 | ±20% | 1 | CKCL44JB1C223M |

- 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 |
|------------------|-----------|----------------------|----------------|
| 47,000 | ±20% | 1 | CKCL44JB1A473M |

RATED VOLTAGE E_{dc}: 6.3V

| Capacitance (pF) | Tolerance | Thickness T (mm)max. | Part number |
|------------------|-----------|----------------------|----------------|
| 100,000 | ±20% | 1 | CKCL44JB0J104M |

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

CKCA43 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 | 1.1 | CKCA43CH1H100F |
| 15 | ±10% | 1.1 | CKCA43CH1H150K |
| 22 | ±10% | 1.1 | CKCA43CH1H220K |
| 33 | ±10% | 1.1 | CKCA43CH1H330K |
| 39 | ±10% | 1.1 | CKCA43CH1H390K |
| 47 | ±10% | 1.1 | CKCA43CH1H470K |
| 68 | ±10% | 1.1 | CKCA43CH1H680K |
| 100 | ±10% | 1.1 | CKCA43CH1H101K |
| 150 | ±10% | 1.1 | CKCA43CH1H151K |
| 220 | ±10% | 1.1 | CKCA43CH1H221K |
| 330 | ±10% | 1.1 | CKCA43CH1H331K |
| 470 | ±10% | 1.1 | CKCA43CH1H471K |

- 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 |
|------------------|-----------|----------------------|----------------|
| 470 | ±20% | 1.1 | CKCA43JB1H471M |
| 1,000 | ±20% | 1.1 | CKCA43JB1H102M |
| 2,200 | ±20% | 1.1 | CKCA43JB1H222M |
| 4,700 | ±20% | 1.1 | CKCA43JB1H472M |
| 10,000 | ±20% | 1.1 | CKCA43JB1H103M |
| 22,000 | ±20% | 1.1 | CKCA43JB1H223M |

RATED VOLTAGE E_{dc}: 25V

| Capacitance (pF) | Tolerance | Thickness T (mm)max. | Part number |
|------------------|-----------|----------------------|----------------|
| 47,000 | ±20% | 1.1 | CKCA43JB1E473M |

RATED VOLTAGE E_{dc}: 16V

| Capacitance (pF) | Tolerance | Thickness T (mm)max. | Part number |
|------------------|-----------|----------------------|----------------|
| 100,000 | ±20% | 1.1 | CKCA43JB1C104M |

- Part number for temperature characteristic X5R or X7R
Please substitute "X5R" or "X7R" for "JB" in the part number when ordering.

TEMPERATURE CHARACTERISTICS:**JIS F(FJ)(+30, -80%), EIA Y5V(+22, -82%)**RATED VOLTAGE E_{dc}: 16V

| Capacitance (pF) | Tolerance | Thickness T (mm)max. | Part number |
|------------------|-----------|----------------------|----------------|
| 100,000 | +80, -20% | 1.1 | CKCA43JF1C104Z |
| 220,000 | +80, -20% | 1.1 | CKCA43JF1C224Z |
| 470,000 | +80, -20% | 1.1 | CKCA43JF1C474Z |

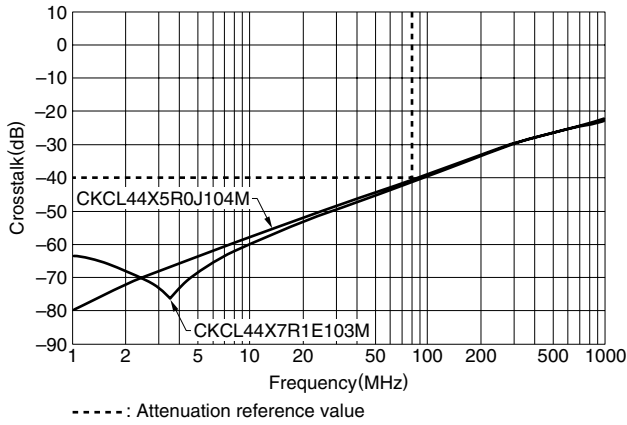
- Part number for temperature characteristic Y5V
Please substitute "Y5V" for "JF" in the part number when ordering.

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

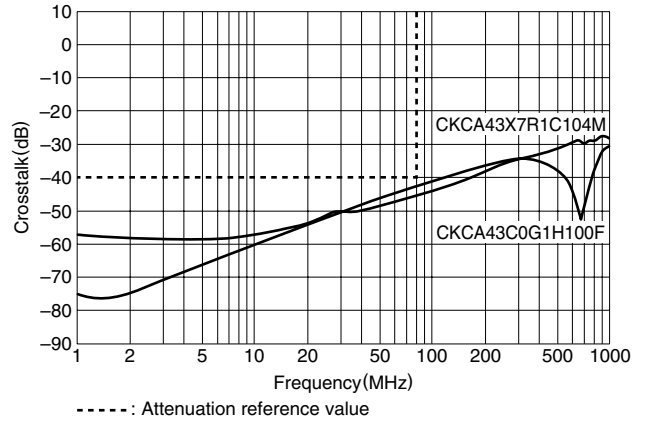
TYPICAL ELECTRICAL CHARACTERISTICS

CROSTALK CHARACTERISTICS

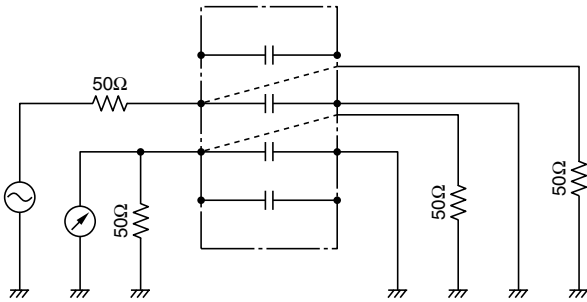
CKCL44 TYPE



CKCA43 TYPE



MEASURING CIRCUIT



- Measurement were performed by wiring this product onto a printed circuit board configured as in the diagram above.