



**THE DATASHEET OF
CKCA43X7R1H471M100AA**





MULTILAYER CERAMIC CHIP CAPACITORS



CKC Series Commercial Grade 4 in 1 Array

Type:

CKCL44 [EIA CC0805]
CKCA43 [EIA CC1206]

Issue date:
Dec 2014

REMINDERS

Please read before using this product

SAFETY REMINDERS



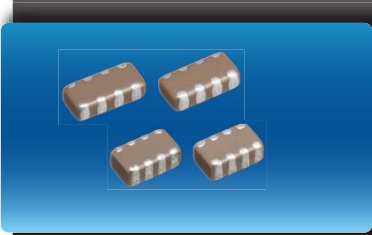
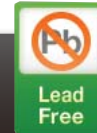
REMINDERS

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.

Notice: Effective January 2013, TDK will use a new catalog number which adds product thickness and packaging specification detail. This new catalog number should be referenced on all catalog orders going forward, and is not applicable for OEM part number orders. Please be aware the last five digits of the catalog number will differ from the item description (internal control number) on the product label. Contact your local TDK Sales representative for more information.

(Example)

| Catalog Issued date | Catalog Number | Item Description (On Delivery Label) |
|------------------------|---------------------|--------------------------------------|
| Prior to January 2013 | C1608C0G1E103J | C1608C0G1E103JT000N |
| January 2013 and Later | C1608C0G1E103J080AA | C1608C0G1E103JT000N |



CKC Series 4in1 Array Capacitors

Type: CKCL44 [EIA CC0805], CKCA43 [EIA CC1206]

Features



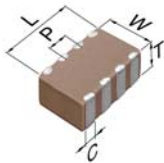
- Multiple capacitors are fitted in a single product, contributing to reduced installation costs.
- The electrostatic capacity range and shape are designed to meet the demands of the cellular phone market.
- Unique electrode construction reduces crosstalk.

Applications



- Cellular telephone interface
- Interface cable circuit
- PC and peripherals
- CPU bus line
- High frequency circuit
- Noise bypass circuit

Shape & Dimensions



| | |
|---|------------------|
| L | Body Length |
| W | Body Width |
| T | Body Height |
| C | Terminal Width |
| P | Terminal Spacing |

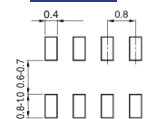
PC Board Pattern



CKCL44



CKCA43



Dimensions in mm



Catalog Number Construction

CKC • A43 • X5R • 0J • 105 • M • 100 • A • A

Series Name

Dimensions L x W (mm)

| Code | Length | Width |
|------|-------------|-------------|
| L44 | 2.00 ± 0.15 | 1.25 ± 0.15 |
| A43 | 3.20 ± 0.20 | 1.60 ± 0.15 |

Temperature Characteristics

| Temperature Characteristics | Temperature Coefficient or Capacitance Change | Temperature Range |
|-----------------------------|---|-------------------|
| C0G | 0±30 ppm/°C | -55 to +125°C |
| CH | 0±60 ppm/°C | -25 to +85°C |
| JB | ±10% | -25 to +85°C |
| X5R | ±15% | -55 to +85°C |
| X7R | ±15% | -55 to +125°C |

Rated Voltage (DC)

| Code | Voltage (DC) |
|------|--------------|
| 0J | 6.3V |
| 1A | 10V |
| 1C | 16V |
| 1E | 25V |
| 1H | 50V |

Nominal Capacitance (pF)

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.

Ex. 0R2 = 0.2pF; 103 = 10,000pF; 105 = 1,000,000pF = 1,000nF = 1μF

Capacitance Tolerance

| Code | Tolerance |
|------|-----------|
| F | ± 1pF |
| K | ± 10% |
| M | ± 20% |

Nominal Thickness

| Code | Thickness |
|------|-----------|
| 085 | 0.85 mm |
| 100 | 1.00 mm |

Packaging Style

| Code | Style |
|------|-------------------------|
| A | 178 mm Reel, 4 mm Pitch |

Special Reserved Code

| Code | Description |
|------|-------------------|
| A | TDK Internal Code |



Capacitance Range Chart

CKCL44(C2012) [EIA CC0805]

Capacitance Range Chart

Temperature Characteristics: C0G ($0 \pm 30\text{ppm}/^\circ\text{C}$), CH ($0 \pm 60\text{ppm}/^\circ\text{C}$), JB ($\pm 10\%$), X5R ($\pm 15\%$), X7R ($\pm 15\%$)
 Rated Voltage: 50V (1H), 25V (1E), 16V (1C), 10V (1A), 6.3V (0J)

| Capacitance (pF) | Code | Tolerance | C0G | | JB | | | | | |
|------------------|------|--------------------------------------|----------|----------|----------|----------|----------|----------|-----------|--|
| | | | 1H (50V) | 1H (50V) | 1H (50V) | 1E (25V) | 1C (16V) | 1A (10V) | 0J (6.3V) | |
| 10 | 100 | F: $\pm 1\text{pF}$ K: $\pm 10\%$ | ■ | ■ | | | | | | |
| 15 | 150 | | | | | | | | | |
| 22 | 220 | | | | | | | | | |
| 33 | 330 | | | | | | | | | |
| 47 | 470 | | | | | | | | | |
| 68 | 680 | | | | | | | | | |
| 100 | 101 | | | | | | | | | |
| 150 | 151 | | | | | | | | | |
| 220 | 221 | | | | | ■ | | | | |
| 470 | 471 | | | | | | | | | |
| 1,000 | 102 | | | | | | | | | |
| 2,200 | 222 | | | | | | | | | |
| 4,700 | 472 | | | | | | | | | |
| 10,000 | 103 | | | | | | ■ | | | |
| 22,000 | 223 | | | | | | | ■ | | |
| 47,000 | 473 | | | | | | | | ■ | |
| 100,000 | 104 | | | | | | | | ■ | |

| Capacitance (pF) | Code | Tolerance | X5R | | | | | X7R | | |
|------------------|------|---------------|----------|----------|----------|----------|-----------|----------|----------|----------|
| | | | 1H (50V) | 1E (25V) | 1C (16V) | 1A (10V) | 0J (6.3V) | 1H (50V) | 1E (25V) | 1C (16V) |
| 220 | 221 | M: $\pm 20\%$ | ■ | | | | | ■ | | |
| 470 | 471 | | | | | | | | | |
| 1,000 | 102 | | | | | | | | | |
| 2,200 | 222 | | | | | | | | | |
| 4,700 | 472 | | | | | | | | | |
| 10,000 | 103 | | | | ■ | | | | ■ | |
| 22,000 | 223 | | | | | ■ | | | | ■ |
| 47,000 | 473 | | | | | | ■ | | | |
| 100,000 | 104 | | | | | | ■ | | | |

Standard Thickness

■ 0.85 mm



Capacitance Range Chart

CKCA43(C3216) [EIA CC1206]

Capacitance Range Chart

Temperature Characteristics: C0G ($0 \pm 30\text{ppm}/^\circ\text{C}$), CH ($0 \pm 60\text{ppm}/^\circ\text{C}$), JB ($\pm 10\%$), X5R ($\pm 15\%$), X7R ($\pm 15\%$)
 Rated Voltage: 50V (1H), 25V (1E), 16V (1C), 10V (1A), 6.3V (0J)

| Capacitance (pF) | Code | Tolerance | C0G | CH |
|------------------|------|--------------------------------------|----------|----------|
| | | | 1H (50V) | 1H (50V) |
| 10 | 100 | F: $\pm 1\text{pF}$ K: $\pm 10\%$ | | |
| 15 | 150 | | | |
| 22 | 220 | | | |
| 33 | 330 | | | |
| 47 | 470 | | | |
| 68 | 680 | | | |
| 100 | 101 | | | |
| 150 | 151 | | | |
| 220 | 221 | | | |
| 330 | 331 | | | |
| 470 | 471 | | | |
| 680 | 681 | | | |
| 1,000 | 102 | | | |

| Capacitance (pF) | Code | Tolerance | JB | | | | X5R | | | | X7R | | |
|------------------|------|---------------|----------|----------|----------|-----------|----------|----------|----------|-----------|----------|----------|----------|
| | | | 1H (50V) | 1E (25V) | 1C (16V) | 0J (6.3V) | 1H (50V) | 1E (25V) | 1C (16V) | 0J (6.3V) | 1H (50V) | 1E (25V) | 1C (16V) |
| 470 | 471 | M: $\pm 20\%$ | | | | | | | | | | | |
| 1,000 | 102 | | | | | | | | | | | | |
| 2,200 | 222 | | | | | | | | | | | | |
| 4,700 | 472 | | | | | | | | | | | | |
| 10,000 | 103 | | | | | | | | | | | | |
| 22,000 | 223 | | | | | | | | | | | | |
| 47,000 | 473 | | | | | | | | | | | | |
| 100,000 | 104 | | | | | | | | | | | | |
| 1,000,000 | 105 | | | | | | | | | | | | |

Standard Thickness

1.00 mm



Capacitance Range Table

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to +125°C, 0±30 ppm/°C)

| Capacitance | Size | Thickness (mm) | Capacitance Tolerance | Catalog Number | | | |
|-------------|------|----------------|-----------------------|------------------------|------------------------|------------------------|------------------------|
| | | | | Rated Voltage Edc: 50V | Rated Voltage Edc: 25V | Rated Voltage Edc: 16V | Rated Voltage Edc: 10V |
| 10 pF | 2012 | 0.85 ± 0.15 | ± 1% | CKCL44C0G1H100F085AA | | | |
| | 3216 | 1.00 ± 0.15 | ± 1% | CKCA43C0G1H100F100AA | | | |
| 15 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44C0G1H150K085AA | | | |
| | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43C0G1H150K100AA | | | |
| 22 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44C0G1H220K085AA | | | |
| | 3216 | 1.00 ± 0.15 | ± 10% | CKCA43C0G1H220K100AA | | | |
| 33 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44C0G1H330K085AA | | | |
| | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43C0G1H330K100AA | | | |
| 47 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44C0G1H470K085AA | | | |
| | 3216 | 1.00 ± 0.15 | ± 10% | CKCA43C0G1H470K100AA | | | |
| 68 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44C0G1H680K085AA | | | |
| | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43C0G1H680K100AA | | | |
| 100 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44C0G1H101K085AA | | | |
| | 3216 | 1.00 ± 0.15 | ± 10% | CKCA43C0G1H101K100AA | | | |
| 150 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44C0G1H151K085AA | | | |
| | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43C0G1H151K100AA | | | |
| 220 pF | 3216 | 1.00 ± 0.15 | ± 10% | CKCA43C0G1H221K100AA | | | |
| 330 pF | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43C0G1H331K100AA | | | |
| 470 pF | 3216 | 1.00 ± 0.15 | ± 10% | CKCA43C0G1H471K100AA | | | |
| 680 pF | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43C0G1H681K100AA | | | |
| 1 nF | 3216 | 1.00 ± 0.15 | ± 10% | CKCA43C0G1H102K100AA | | | |

Class 1 (Temperature Compensating)

Temperature Characteristics: CH (-25 to +85°C, 0±60 ppm/°C)

| Capacitance | Size | Thickness (mm) | Capacitance Tolerance | Catalog Number | | | |
|-------------|------|----------------|-----------------------|------------------------|------------------------|------------------------|------------------------|
| | | | | Rated Voltage Edc: 50V | Rated Voltage Edc: 25V | Rated Voltage Edc: 16V | Rated Voltage Edc: 10V |
| 10 pF | 2012 | 0.85 ± 0.15 | ± 1% | CKCL44CH1H100F085AA | | | |
| | 3216 | 1.00 ± 0.10 | ± 1% | CKCA43CH1H100F100AA | | | |
| 15 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44CH1H150K085AA | | | |
| | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43CH1H150K100AA | | | |
| 22 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44CH1H220K085AA | | | |
| | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43CH1H220K100AA | | | |
| 33 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44CH1H330K085AA | | | |
| | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43CH1H330K100AA | | | |
| 47 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44CH1H470K085AA | | | |
| | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43CH1H470K100AA | | | |
| 68 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44CH1H680K085AA | | | |
| | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43CH1H680K100AA | | | |
| 100 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44CH1H101K085AA | | | |
| | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43CH1H101K100AA | | | |
| 150 pF | 2012 | 0.85 ± 0.15 | ± 10% | CKCL44CH1H151K085AA | | | |
| | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43CH1H151K100AA | | | |
| 220 pF | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43CH1H221K100AA | | | |
| 330 pF | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43CH1H331K100AA | | | |
| 470 pF | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43CH1H471K100AA | | | |
| 680 pF | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43CH1H681K100AA | | | |
| 1 nF | 3216 | 1.00 ± 0.10 | ± 10% | CKCA43CH1H102K100AA | | | |



Capacitance Range Table

Class 2 (Temperature Stable)

Temperature Characteristics: JB (-25 to +85°C, ±10%)

| Capacitance | Size | Thickness (mm) | Capacitance Tolerance | Catalog Number | | | |
|-------------|------|----------------|-----------------------|------------------------|------------------------|------------------------|------------------------|
| | | | | Rated Voltage Edc: 50V | Rated Voltage Edc: 25V | Rated Voltage Edc: 16V | Rated Voltage Edc: 10V |
| 220 pF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44JB1H221M085AA | | | |
| 470 pF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44JB1H471M085AA | | | |
| | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43JB1H471M100AA | | | |
| 1 nF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44JB1H102M085AA | | | |
| | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43JB1H102M100AA | | | |
| 2.2 nF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44JB1H222M085AA | | | |
| | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43JB1H222M100AA | | | |
| 4.7 nF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44JB1H472M085AA | | | |
| | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43JB1H472M100AA | | | |
| 10 nF | 2012 | 0.85 ± 0.15 | ± 20% | | CKCL44JB1E103M085AA | | |
| | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43JB1H103M100AA | | | |
| 22 nF | 2012 | 0.85 ± 0.15 | ± 20% | | | CKCL44JB1C223M085AA | |
| | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43JB1H223M100AA | | | |
| 47 nF | 2012 | 0.85 ± 0.15 | ± 20% | | | | CKCL44JB1A473M085AA |
| | 3216 | 1.00 ± 0.15 | ± 20% | | CKCA43JB1E473M100AA | | |
| 100 nF | 2012 | 0.85 ± 0.15 | ± 20% | | | | CKCL44JB1C104M100AA |
| | 3216 | 1.00 ± 0.15 | ± 20% | | | CKCA43JB1C104M100AA | |

| Capacitance | Size | Thickness (mm) | Capacitance Tolerance | Catalog Number |
|-------------|------|----------------|-----------------------|-------------------------|
| | | | | Rated Voltage Edc: 6.3V |
| 100 nF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44JB0J104M085AA |
| 1 µF | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43JB0J105M100AA |

Class 2 (Temperature Stable)

Temperature Characteristics: X5R (-55 to +85°C, ±15%)

| Capacitance | Size | Thickness (mm) | Capacitance Tolerance | Catalog Number | | | |
|-------------|------|----------------|-----------------------|------------------------|------------------------|------------------------|------------------------|
| | | | | Rated Voltage Edc: 50V | Rated Voltage Edc: 25V | Rated Voltage Edc: 16V | Rated Voltage Edc: 10V |
| 220 pF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44X5R1H221M085AA | | | |
| 470 pF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44X5R1H471M085AA | | | |
| | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43X5R1H471M100AA | | | |
| 1 nF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44X5R1H102M085AA | | | |
| | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43X5R1H102M100AA | | | |
| 2.2 nF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44X5R1H222M085AA | | | |
| | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43X5R1H222M100AA | | | |
| 4.7 nF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44X5R1H472M085AA | | | |
| | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43X5R1H472M100AA | | | |
| 10 nF | 2012 | 0.85 ± 0.15 | ± 20% | | CKCL44X5R1E103M085AA | | |
| | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43X5R1H103M100AA | | | |
| 22 nF | 2012 | 0.85 ± 0.15 | ± 20% | | | CKCL44X5R1C223M085AA | |
| | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43X5R1H223M100AA | | | |
| 47 nF | 2012 | 0.85 ± 0.15 | ± 20% | | | | CKCL44X5R1A473M085AA |
| | 3216 | 1.00 ± 0.15 | ± 20% | | CKCA43X5R1E473M100AA | | |
| 100 nF | 2012 | 0.85 ± 0.15 | ± 20% | | | | CKCL44X5R1C104M100AA |
| | 3216 | 1.00 ± 0.15 | ± 20% | | | CKCA43X5R1C104M100AA | |
| 1 µF | 3216 | 1.00 ± 0.15 | ± 20% | | | | |

| Capacitance | Size | Thickness (mm) | Capacitance Tolerance | Catalog Number |
|-------------|------|----------------|-----------------------|-------------------------|
| | | | | Rated Voltage Edc: 6.3V |
| 100 nF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44X5R0J104M085AA |
| 1 µF | 3216 | 1.00 ± 0.15 | ± 20% | CKCA43X5R0J105M100AA |



Capacitance Range Table

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%)

| Capacitance | Size | Thickness (mm) | Capacitance Tolerance | Catalog Number | | | |
|-------------|------|----------------|-----------------------|------------------------|------------------------|------------------------|------------------------|
| | | | | Rated Voltage Edc: 50V | Rated Voltage Edc: 25V | Rated Voltage Edc: 16V | Rated Voltage Edc: 10V |
| 220 pF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44X7R1H221M085AA | | | |
| 470 pF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44X7R1H471M085AA | | | |
| | 3216 | 1.00 ± 0.30 | ± 20% | CKCA43X7R1H471M100AA | | | |
| 1 nF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44X7R1H102M085AA | | | |
| | 3216 | 1.00 ± 0.30 | ± 20% | CKCA43X7R1H102M100AA | | | |
| 2.2 nF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44X7R1H222M085AA | | | |
| | 3216 | 1.00 ± 0.30 | ± 20% | CKCA43X7R1H222M100AA | | | |
| 4.7 nF | 2012 | 0.85 ± 0.15 | ± 20% | CKCL44X7R1H472M085AA | | | |
| | 3216 | 1.00 ± 0.30 | ± 20% | CKCA43X7R1H472M100AA | | | |
| 10 nF | 2012 | 0.85 ± 0.15 | ± 20% | | CKCL44X7R1E103M085AA | | |
| | 3216 | 1.00 ± 0.30 | ± 20% | CKCA43X7R1H103M100AA | | | |
| 22 nF | 2012 | 0.85 ± 0.15 | ± 20% | | | CKCL44X7R1C223M085AA | |
| | 3216 | 1.00 ± 0.30 | ± 20% | CKCA43X7R1H223M100AA | | | |
| 47 nF | 3216 | 1.00 ± 0.30 | ± 20% | | CKCA43X7R1E473M100AA | | |
| 100 nF | 3216 | 1.00 ± 0.30 | ± 20% | | | CKCA43X7R1C104M100AA | |

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View CKCA43X7R1H471M100AA](#) on WIN SOURCE
- ⊖ [TDK Corporation](#) Information

Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management