



**THE DATASHEET OF
CKCA43JB1C104M100AA**





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



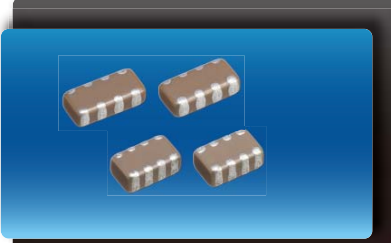
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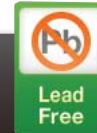
(Example)

| 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



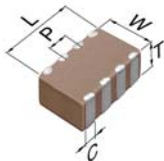
- Multiple capacitors are fitted in a single product, contributing to reduced installation costs.
- The electrostatic capacity range and shape are designed to meet the demands of the cellular phone market.
- Unique electrode construction reduces crosstalk.

Applications



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

Shape & Dimensions

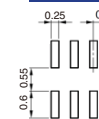


| | |
|---|------------------|
| L | Body Length |
| W | Body Width |
| T | Body Height |
| C | Terminal Width |
| P | Terminal Spacing |

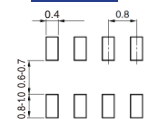
PC Board Pattern



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 | 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% | | | | |
| | 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 | |

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