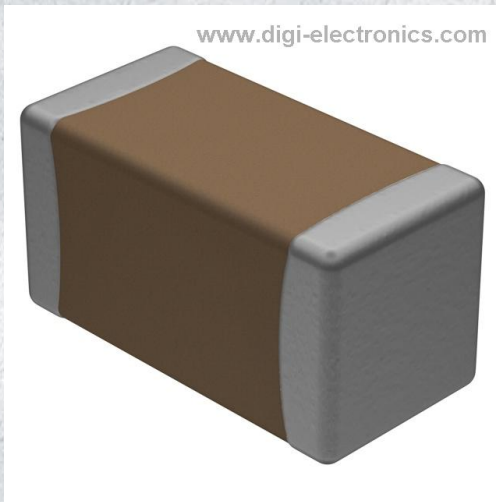


VJ1206V154MXACW1BC Datasheet



<https://www.DiGi-Electronics.com>

| | |
|------------------------------|---|
| DiGi Electronics Part Number | VJ1206V154MXACW1BC-DG |
| Manufacturer | Vishay Vitramon |
| Manufacturer Product Number | VJ1206V154MXACW1BC |
| Description | CAP CER 0.15UF 50V Y5V 1206 |
| Detailed Description | 0.15 μ F \pm 20% 50V Ceramic Capacitor Y5V (F) 1206 (3216 Metric) |

This model VJ1206V154MXACW1BC is available at DiGi Electronics.

DiGi Electronics offers a global database of semiconductor and electronic component datasheets.

We welcome your inquiries regarding pricing, lead time, or other product-related questions.

 [Request a Quote](#)

 [Datasheet Search](#)



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

VJ1206V154MXACW1BC

Series:

VJ W1BC

Capacitance:

0.15 μ F

Voltage - Rated:

50V

Operating Temperature:

-25°C ~ 85°C

Ratings:

-

Failure Rate:

-

Package / Case:

1206 (3216 Metric)

Height - Seated (Max):

-

Lead Spacing:

-

Base Product Number:

VJ1206

Manufacturer:

Vishay Vitramon

Product Status:

Obsolete

Tolerance:

\pm 20%

Temperature Coefficient:

Y5V (F)

Features:

-

Applications:

General Purpose

Mounting Type:

Surface Mount, MLCC

Size / Dimension:

0.126" L x 0.063" W (3.20mm x 1.60mm)

Thickness (Max):

0.035" (0.90mm)

Lead Style:

-

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

ECCN:

EAR99

Moisture Sensitivity Level (MSL):

1 (Unlimited)

HTSUS:

8532.24.0020



Surface Mount Multilayer Ceramic Chip Capacitors for Commodity Applications



FEATURES

- Available from 0402 to 1210 body sizes
- Ultra stable C0G (NP0) dielectric
- High capacitance in X5R, X7R
- Ni-barrier with 100 % tin terminations
- Dry sheet technology process
- Base Metal Electrode system (BME)
- Material categorization:
for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

APPLICATIONS

- Consumer electronics
- Telecommunications
- Data processing
- Mobile applications

ELECTRICAL SPECIFICATIONS

Operating Temperature:

C0G (NP0): -55 °C to +125 °C
X5R: -55 °C to +85 °C
X7R: -55 °C to +125 °C

Capacitance Range:

C0G (NP0): 0.5 pF to 39 nF
X5R: 47 nF to 100 μF
X7R: 100 pF to 10 μF

Voltage Range:

C0G (NP0): 10 V_{DC} to 100 V_{DC}
X5R: 6.3 V_{DC} to 50 V_{DC}
X7R: 10 V_{DC} to 100 V_{DC}

Temperature Coefficient of Capacitance (TCC):

C0G (NP0): 0 ppm/°C ± 30 ppm/°C from -55 °C to +125 °C
X5R: ± 15 % from -55 °C to +85 °C without voltage applied
X7R: ± 15 % from -55 °C to +125 °C without voltage applied

Insulation Resistance (IR) at U_R:

≥ 10 GΩ or R x C ≥ 500 Ω x F whichever is less

Test Conditions for Capacitance Tolerance:

preconditioning for X5R, X7R MLCC: perform a heat treatment at +150 °C ± 10 °C for 1 h, then leave in ambient condition for 24 h ± 2 h before measurement

Test Conditions for Capacitance and DF Measurement:

measured at conditions of 30 % to 70 % related humidity.

C0G (NP0): Apply 1.0 V_{RMS} ± 0.2 V_{RMS}, 1.0 MHz ± 10 % for caps ≤ 1000 pF, at +25 °C ambient temperature
Apply 1.0 V_{RMS} ± 0.2 V_{RMS}, 1.0 kHz ± 10 % for caps > 1000 pF, at +25 °C ambient temperature

X5R / X7R: Caps ≤ 10 μF apply 1.0 V_{RMS} ± 0.2 V_{RMS}, 1.0 kHz ± 10 %, at +25 °C ambient temperature⁽¹⁾
Caps > 10 μF apply 0.5 V_{RMS} ± 0.2 V_{RMS}, 120 Hz ± 20 %, at +25 °C ambient temperature

Note

- ⁽¹⁾ Test conditions: 0.5 V_{RMS} ± 0.2 V_{RMS}, 1 kHz ± 10 %
X7R: 0603: ≥ 2.2 μF / 10 V
0805: 10 μF (6.3 V and 10 V)
X5R: 0402: ≥ 4.7 μF / 6.3 V and ≥ 2.2 μF / 10 V
0603: 10 μF (6.3 V and 10 V)

Aging Rate:

C0G (NP0): 0 % per decade
X5R: 6.3 V_{DC} / 10 V_{DC}: 3 % maximum per decade
16 V_{DC} / 25 V_{DC}: 2 % maximum per decade
X7R: ≤ 10 V_{DC}: 1.5 % maximum per decade
≥ 16 V_{DC}: 1 % maximum per decade

Dielectric Strength Test:

this is the maximum voltage the capacitors are tested 1 s to 5 s period and the charge / discharge current does not exceed 50 mA.

≤ 100 V_{DC}: 250 % of rated voltage


www.vishay.com

VJ....W1BC Basic Commodity Series

Vishay

Dissipation Factor (DF):

C0G (NP0): Cap. < 30 pF: Q ≥ 400 + 20C
 Cap. ≥ 30 pF: Q ≥ 1000

X5R, X7R:

| RATED VOLTAGE | D.F. ≤ | EXCEPTION OF D.F. ≤ | |
|---------------|--------|---------------------|---|
| | | | |
| ≥ 100 V | 2.5 % | 3 % | 1206 ≥ 0.47 μF |
| | | 5 % | 0603 ≥ 0.068 μF; 0805 > 0.1 μF; 1206 > 1 μF |
| | | 10 % | 1210 ≥ 4.7 μF |
| ≥ 50 V | 2.5 % | 3 % | 0603 ≥ 0.047 μF; 0805 ≥ 0.18 μF; 1206 ≥ 0.47 μF |
| | | 5 % | 1210 ≥ 4.7 μF |
| | | 10 % | 0402 ≥ 0.1 μF; 0603 ≥ 1 μF; 0805 ≥ 1 μF; 1206 ≥ 2.2 μF; 1210 ≥ 10 μF |
| 25 V | 3.5 % | 5 % | 0805 ≥ 1 μF; 1210 ≥ 10 μF |
| | | 7 % | 0603 ≥ 0.33 μF; 1206 ≥ 4.7 μF |
| | | 10 % | 0402 ≥ 0.10 μF; 0603 ≥ 0.47 μF; 0805 ≥ 2.2 μF; 1206 ≥ 6.8 μF; 1210 ≥ 22 μF |
| 16 V | 3.5 % | 5 % | 0402 ≥ 0.033 μF; 0603 ≥ 0.15 μF; 0805 ≥ 0.68 μF; 1206 ≥ 2.2 μF; 1210 ≥ 4.7 μF |
| | | 10 % | 0402 ≥ 0.22 μF; 0603 ≥ 0.68 μF; 0805 ≥ 2.2 μF; 1206 ≥ 4.7 μF; 1210 ≥ 22 μF |
| 10 V | 5 % | 10 % | 0402 ≥ 0.33 μF; 0402/X7R ≥ 0.22 μF 0603 ≥ 0.33 μF; 0805 ≥ 2.2 μF; 1206 ≥ 2.2 μF; 1210 ≥ 22 μF |
| | | 15 % | 0402 ≥ 1 μF |
| 6.3 V | 10 % | 15 % | 0402 ≥ 1 μF; 0603 ≥ 10 μF; 0805 ≥ 4.7 μF; 1206 ≥ 47 μF; 1210 ≥ 100 μF |
| | | 20 % | 0402 ≥ 2.2 μF |
| 4 V | 15 % | - | - |

| QUICK REFERENCE DATA | | | | |
|----------------------|------|---------------------|-------------|---------|
| DIELECTRIC | CASE | MAXIMUM VOLTAGE (V) | CAPACITANCE | |
| | | | MINIMUM | MAXIMUM |
| C0G (NP0) | 0402 | 100 | 0.5 pF | 1.0 nF |
| | 0603 | 100 | 0.5 pF | 10 nF |
| | 0805 | 100 | 0.5 pF | 18 nF |
| | 1206 | 100 | 1.5 pF | 39 nF |
| X5R | 0402 | 50 | 47 nF | 4.7 μF |
| | 0603 | 50 | 220 nF | 22 μF |
| | 0805 | 50 | 1.5 μF | 10 μF |
| | 1206 | 50 | 1.5 μF | 47 μF |
| | 1210 | 50 | 1.5 μF | 100 μF |
| X7R | 0402 | 50 | 100 pF | 1.0 μF |
| | 0603 | 100 | 100 pF | 2.2 μF |
| | 0805 | 100 | 100 pF | 10 μF |
| | 1206 | 100 | 150 pF | 10 μF |
| | 1210 | 100 | 1.0 nF | 10 μF |

Note

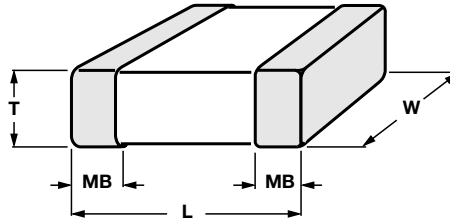
- Detail ratings see "Selection Chart"



| ORDERING INFORMATION | | | | | | | |
|--------------------------------------|-------------------------------------|--|--|-----------------------------------|---|--|----------------------------------|
| VJ0402 | Y | 101 | J | X | Q | C | W1BC |
| SIZE CODE | DIELECTRIC | CAPACITANCE | TOLERANCE | TERMINATION | VOLTAGE ⁽¹⁾ | PACKAGING | PROCESS CODE FOR BASIC COMMODITY |
| 0402 0603 0805 1206 1210 | A = C0G (NP0) G = X5R Y = X7R | Two significant digits followed by the number of zeros: 1R0 = 1.0 pF 101 = 100 pF 102 = 1000 pF 152 = 1500 pF 103 = 10 000 pF 104 = 100 000 pF | C0G (NP0) ⁽²⁾ Cap. < 10 pF: B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF Cap. ≥ 10 pF: F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % X5R / X7R ⁽²⁾⁽³⁾ J = ± 5 % K = ± 10 % M = ± 20 % | X = Ni barrier 100 % matte tin | S = 4 V Y = 6.3 V Q = 10 V J = 16 V X = 25 V A = 50 V B = 100 V | C = 7" reel / paper tape P = 13" reel / paper tape T = 7" reel / plastic tape R = 13" reel / plastic tape | |

Notes

- Detail rating see "Selection Chart"
- ⁽¹⁾ DC voltage rating should not be exceeded in application. Other application factors may affect the MLCC performance. Consult for questions: mlcc@vishay.com
- ⁽²⁾ Not all values, see "Selection Chart"
- ⁽³⁾ No 5 % tolerance for X5R


DIMENSIONS in inches (millimeters)


| SIZE CODE | THICKNESS SYMBOL | SOLDERING METHOD (1) | L | W | T | MB |
|----------------|------------------|----------------------|---|---|---|---|
| 0402 (1005) | N | R | 0.040 ± 0.002 (1.00 ± 0.05) | 0.020 ± 0.002 (0.50 ± 0.05) | 0.020 ± 0.002 (0.50 ± 0.05) | 0.010 + 0.002 / - 0.004 (0.25 + 0.05 / - 0.10) |
| | E | R | 0.040 ± 0.008 (1.00 ± 0.20) | 0.020 ± 0.008 (0.50 ± 0.20) | 0.020 ± 0.008 (0.50 ± 0.20) | |
| 0603 (1608) | S | R / W | 0.063 ± 0.004 (1.60 ± 0.10) | 0.030 ± 0.004 (0.80 ± 0.10) | 0.030 ± 0.0028 (0.80 ± 0.07) | 0.016 ± 0.006 (0.40 ± 0.15) |
| | X | R / W | 0.063 + 0.006 / - 0.004 (1.60 + 0.15 / - 0.10) | 0.030 + 0.006 / - 0.004 (0.80 + 0.15 / - 0.10) | 0.030 + 0.006 / - 0.004 (0.80 + 0.15 / - 0.10) | |
| | X' | R / W | 0.063 ± 0.008 (1.60 ± 0.20) | 0.030 ± 0.008 (0.80 ± 0.20) | 0.030 ± 0.008 (0.80 ± 0.20) | |
| 0805 (2012) | A | R / W | 0.080 ± 0.006 (2.00 ± 0.15) | 0.050 ± 0.004 (1.25 ± 0.10) | 0.024 ± 0.004 (0.60 ± 0.10) | 0.020 ± 0.008 (0.50 ± 0.20) |
| | B | R / W | | | 0.030 ± 0.004 (0.80 ± 0.10) | |
| | D | R | 0.049 ± 0.004 (1.25 ± 0.10) | | | |
| | T | R / W | 0.080 ± 0.008 (2.00 ± 0.20) | 0.050 ± 0.008 (1.25 ± 0.20) | 0.033 ± 0.004 (0.85 ± 0.10) | |
| | I | R | 0.049 ± 0.008 (1.25 ± 0.20) | | | |
| 1206 (3216) | B | R / W | 0.126 ± 0.006 (3.20 ± 0.15) | 0.063 ± 0.006 (1.60 ± 0.15) | 0.030 ± 0.004 (0.80 ± 0.10) | 0.024 ± 0.008 (0.60 ± 0.20) |
| | C | R | | | 0.037 ± 0.004 (0.95 ± 0.10) | |
| | D | R | | | 0.049 ± 0.004 (1.25 ± 0.10) | |
| | J | R | 0.126 ± 0.008 (3.20 ± 0.20) | 0.045 ± 0.006 (1.15 ± 0.15) | | |
| | G | R | 0.063 ± 0.008 (1.60 ± 0.20) | 0.063 ± 0.008 (1.60 ± 0.20) | | |
| | P | R | 0.126 + 0.012 / - 0.004 (3.20 + 0.30 / - 0.10) | 0.063 + 0.012 / - 0.004 (1.60 + 0.30 / - 0.10) | 0.063 + 0.012 / - 0.004 (1.60 + 0.30 / - 0.10) | |
| 1210 (3225) | C | R | 0.126 ± 0.012 (3.20 ± 0.30) | 0.098 ± 0.008 (2.50 ± 0.20) | 0.037 ± 0.004 (0.95 ± 0.10) | 0.030 ± 0.010 (0.75 ± 0.25) |
| | D | R | | | 0.049 ± 0.004 (1.25 ± 0.10) | |
| | G | R | 0.126 ± 0.016 (3.20 ± 0.40) | 0.098 ± 0.012 (2.50 ± 0.30) | 0.063 ± 0.008 (1.60 ± 0.20) | |
| | K | R | | | 0.078 ± 0.008 (2.00 ± 0.20) | |
| | M | R | | | 0.098 ± 0.012 (2.50 ± 0.30) | |

Note

(1) "R" = Reflow soldering process; "W" = Wave soldering process



www.vishay.com

VJ....W1BC Basic Commodity Series

Vishay

| SELECTION CHART | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|--------|-----------|----|----|----|-----|--------|----|----|----|-----|--------|----|----|----|-----|--------|----|----|----|-----|
| DIELECTRIC | | COG (NP0) | | | | | | | | | | | | | | | | | | | |
| STYLE | | VJ0402 | | | | | VJ0603 | | | | | VJ0805 | | | | | VJ1206 | | | | |
| SIZE CODE | | 0402 | | | | | 0603 | | | | | 0805 | | | | | 1206 | | | | |
| VOLTAGE (V _{DC}) | | 10 | 16 | 25 | 50 | 100 | 10 | 16 | 25 | 50 | 100 | 10 | 16 | 25 | 50 | 100 | 10 | 16 | 25 | 50 | 100 |
| VOLTAGE CODE | | Q | J | X | A | B | Q | J | X | A | B | Q | J | X | A | B | Q | J | X | A | B |
| CAP. CODE | CAP. | | | | | | | | | | | | | | | | | | | | |
| 0R5 | 0.5 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | | | | | |
| 1R0 | 1.0 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | | | | | |
| 1R2 | 1.2 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | | | | | |
| 1R5 | 1.5 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 1R8 | 1.8 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 2R2 | 2.2 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 2R7 | 2.7 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 3R3 | 3.3 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 3R9 | 3.9 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 4R7 | 4.7 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 5R6 | 5.6 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 6R8 | 6.8 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 8R2 | 8.2 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 100 | 10 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 120 | 12 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 150 | 15 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 180 | 18 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 220 | 22 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 270 | 27 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 330 | 33 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 390 | 39 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 470 | 47 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 560 | 56 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 680 | 68 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 820 | 82 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 101 | 100 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 121 | 120 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 151 | 150 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 181 | 180 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 221 | 220 pF | N | N | N | N | N | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 271 | 270 pF | N | N | N | N | | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 331 | 330 pF | N | N | N | N | | S | S | S | S | S | A | A | A | A | A | B | B | B | B | B |
| 391 | 390 pF | N | N | N | N | | S | S | S | S | S | B | B | B | B | B | B | B | B | B | B |
| 471 | 470 pF | N | N | N | N | | S | S | S | S | S | B | B | B | B | B | B | B | B | B | B |
| 561 | 560 pF | N | N | N | N | | S | S | S | S | S | B | B | B | B | B | B | B | B | B | B |
| 681 | 680 pF | N | N | N | N | | S | S | S | S | S | B | B | B | B | B | B | B | B | B | B |
| 821 | 820 pF | N | N | N | N | | S | S | S | S | S | B | B | B | B | B | B | B | B | B | B |

Note

- Letters indicate product thickness, see packaging quantities



www.vishay.com

VJ....W1BC Basic Commodity Series

Vishay

| SELECTION CHART | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|--------|-----------|----|----|----|-----|--------|----|------------------|----|-----|------------------|------------------|------------------|------------------|-----|--------|----|------------------|------------------|-----|
| DIELECTRIC | | COG (NP0) | | | | | | | | | | | | | | | | | | | |
| STYLE | | VJ0402 | | | | | VJ0603 | | | | | VJ0805 | | | | | VJ1206 | | | | |
| SIZE CODE | | 0402 | | | | | 0603 | | | | | 0805 | | | | | 1206 | | | | |
| VOLTAGE (V _{DC}) | | 10 | 16 | 25 | 50 | 100 | 10 | 16 | 25 | 50 | 100 | 10 | 16 | 25 | 50 | 100 | 10 | 16 | 25 | 50 | 100 |
| VOLTAGE CODE | | Q | J | X | A | B | Q | J | X | A | B | Q | J | X | A | B | Q | J | X | A | B |
| CAP. CODE | CAP. | | | | | | | | | | | | | | | | | | | | |
| 102 | 1.0 nF | N | N | N | N | | S | S | S | S | S | B | B | B | B | B | B | B | B | B | B |
| 122 | 1.2 nF | | | | | | X | X | X | X | X | B | B | B | B | B | B | B | B | B | B |
| 152 | 1.5 nF | | | | | | X | X | X | X | X | B | B | B | B | B | B | B | B | B | B |
| 182 | 1.8 nF | | | | | | X | X | X | X | | B | B | B | B | B | B | B | B | B | B |
| 222 | 2.2 nF | | | | | | X | X | X | X | | B | B | B | B | B | B | B | B | B | B |
| 272 | 2.7 nF | | | | | | X | X | X | X | | D | D | D | D | D | B | B | B | B | B |
| 332 | 3.3 nF | | | | | | X | X | X | X | | D | D | D | D | D | B | B | B | B | B |
| 392 | 3.9 nF | | | | | | | | | | | D | D | D | D | D | B | B | B | B | B |
| 472 | 4.7 nF | | | | | | | | | | | D | D | D | D | D | B | B | B | B | B |
| 562 | 5.6 nF | | | | | | | | | | | D | D | D | D | | B | B | B | B | B |
| 682 | 6.8 nF | | | | | | | | | | | D | D | D | D | | C | C | C | C | C |
| 822 | 8.2 nF | | | | | | | | | | | D | D | D | D | | D | D | D | D | D |
| 103 | 10 nF | | | | | | | | X ⁽¹⁾ | | | D | D | D | D | | D | D | D | D | D |
| 123 | 12 nF | | | | | | | | | | | T ⁽¹⁾ | T ⁽¹⁾ | T ⁽¹⁾ | T ⁽¹⁾ | | P | P | P ⁽¹⁾ | P ⁽¹⁾ | |
| 153 | 15 nF | | | | | | | | | | | | | T ⁽¹⁾ | T ⁽¹⁾ | | P | P | P ⁽¹⁾ | P ⁽¹⁾ | |
| 183 | 18 nF | | | | | | | | | | | | | T ⁽¹⁾ | T ⁽¹⁾ | | P | P | P ⁽¹⁾ | P ⁽¹⁾ | |
| 223 | 22 nF | | | | | | | | | | | | | | | | P | P | P ⁽¹⁾ | P ⁽¹⁾ | |
| 273 | 27 nF | | | | | | | | | | | | | | | | P | P | P ⁽¹⁾ | P ⁽¹⁾ | |
| 333 | 33 nF | | | | | | | | | | | | | | | | P | P | P ⁽¹⁾ | P ⁽¹⁾ | |
| 393 | 39 nF | | | | | | | | | | | | | | | | P | P | P ⁽¹⁾ | P ⁽¹⁾ | |
| 473 | 47 nF | | | | | | | | | | | | | | | | | | | | |
| 563 | 56 nF | | | | | | | | | | | | | | | | | | | | |
| 683 | 68 nF | | | | | | | | | | | | | | | | | | | | |
| 823 | 82 nF | | | | | | | | | | | | | | | | | | | | |
| 104 | 100 nF | | | | | | | | | | | | | | | | | | | | |

Notes

- Letters indicate product thickness, see packaging quantities
- (1) Only in 5 % (code "J") tolerance



| SELECTION CHART | | | | | | | | | | | | | | | | |
|----------------------------|--------|------------------|------|------|------|------|-------------------|-------------------|------|------|------------------|--------|------|------|------|------|
| DIELECTRIC | | X5R | | | | | | | | | | | | | | |
| STYLE | | VJ0402 | | | | | VJ0603 | | | | | VJ0805 | | | | |
| SIZE CODE | | 0402 | | | | | 0603 | | | | | 0805 | | | | |
| VOLTAGE (V _{DC}) | | 6.3 V | 10 V | 16 V | 25 V | 50 V | 6.3 V | 10 V | 16 V | 25 V | 50 V | 6.3 V | 10 V | 16 V | 25 V | 50 V |
| VOLTAGE CODE | | Y | Q | J | X | A | Y | Q | J | X | A | Y | Q | J | X | A |
| CAP. CODE | CAP. | | | | | | | | | | | | | | | |
| 473 | 47 nF | | | N | | | | | | | | | | | | |
| 563 | 56 nF | | N | | | | | | | | | | | | | |
| 683 | 68 nF | | N | N | | | | | | | | | | | | |
| 823 | 82 nF | N | N | N | | | | | | | | | | | | |
| 104 | 100 nF | N | N | N | N | N | | | | | | | | | | |
| 124 | 120 nF | | | | | | | | | | | | | | | |
| 154 | 150 nF | | N | | N | | | | | | | | | | | |
| 184 | 180 nF | | | | | | | | | | | | | | | |
| 224 | 220 nF | N | N | N | N | N | | | X | X | | | | | | |
| 274 | 270 nF | | | | | | | X | X | | | | | | | |
| 334 | 330 nF | N | N | | | | | X | X | X | | | | | | |
| 394 | 390 nF | | | | | | | X | X | | | | | | | |
| 474 | 470 nF | N | N | E | E | | | X | X | X | X ⁽²⁾ | | | | | |
| 564 | 560 nF | | | | | | | | | | | | | | | |
| 684 | 680 nF | N | N | | | | | X | X | X | | | | | | |
| 824 | 820 nF | | | | | | X | X | X | | | | | | | |
| 105 | 1.0 μF | N | N | N | N | | X | X | X | X | X | | | | | |
| 155 | 1.5 μF | | | | | | X | | | | | I | I | I | I | |
| 225 | 2.2 μF | N | | | | | X | X | X' | X' | | I | I | I | I | |
| 335 | 3.3 μF | | | | | | | | | | | I | I | I | I | |
| 475 | 4.7 μF | E ⁽¹⁾ | | | | | X | X | X' | | | I | I | I | I | |
| 106 | 10 μF | | | | | | X' | X' ⁽¹⁾ | | | | I | I | I | I | |
| 226 | 22 μF | | | | | | X' ⁽¹⁾ | | | | | | | | | |

Notes

- Letters indicate product thickness, see packaging quantities
- (1) Only in 20 % (code "M") tolerance
- (2) Only in 10 % (code "K") tolerance

| SELECTION CHART | | | | | | | | | | | |
|----------------------------|--------|------------------|------|------|------|------------------|--------|------------------|------|------|------|
| DIELECTRIC | | X5R | | | | | | | | | |
| STYLE | | VJ1206 | | | | | VJ1210 | | | | |
| SIZE CODE | | 1206 | | | | | 1210 | | | | |
| VOLTAGE (V _{DC}) | | 6.3 V | 10 V | 16 V | 25 V | 50 V | 6.3 V | 10 V | 16 V | 25 V | 50 V |
| VOLTAGE CODE | | Y | Q | J | X | A | Y | Q | J | X | A |
| CAP. CODE | CAP. | | | | | | | | | | |
| 105 | 1.0 μF | | | | | | | | | | |
| 155 | 1.5 μF | | J | J | | | | K | K | | |
| 225 | 2.2 μF | | J | J | P | P ⁽²⁾ | | K | K | | |
| 335 | 3.3 μF | | P | P | P | | | | | | |
| 475 | 4.7 μF | P | P | P | P | P | | K | K | K | |
| 685 | 6.8 μF | P | P | | | | | | | | |
| 106 | 10 μF | P | P | P | P | P | | K | K | K | M |
| 226 | 22 μF | P | P | P | | | | M | M | M | M |
| 476 | 47 μF | P ⁽¹⁾ | | | | | | M | M | M | |
| 107 | 100 μF | | | | | | | M ⁽¹⁾ | | | |

Notes

- Letters indicate product thickness, see packaging quantities
- (1) Only in 20 % (code "M") tolerance
- (2) Only in 10 % (code "K") tolerance



VJ....W1BC Basic Commodity Series

| SELECTION CHART | | | | | | | | | | | | | | | | | |
|----------------------------|--------|------------------|------------------|------------------|------|------------------|--------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| DIELECTRIC | | X7R | | | | | | | | | | | | | | | |
| STYLE | | VJ0402 | | | | | VJ0603 | | | | | VJ0805 | | | | | |
| SIZE CODE | | 0402 | | | | | 0603 | | | | | 0805 | | | | | |
| VOLTAGE (V _{DC}) | | 6.3 V | 10 V | 16 V | 25 V | 50 V | 100 V | 10 V | 16 V | 25 V | 50 V | 100 V | 10 V | 16 V | 25 V | 50 V | 100 V |
| VOLTAGE CODE | | Y | Q | J | X | A | B | Q | J | X | A | B | Q | J | X | A | B |
| CAP. CODE | | CAP. | | | | | | | | | | | | | | | |
| 101 | 100 pF | | N | N | N | N | | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ |
| 121 | 120 pF | | N | N | N | N | | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ |
| 151 | 150 pF | | N | N | N | N | | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ |
| 181 | 180 pF | | N | N | N | N | | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ |
| 221 | 220 pF | | N | N | N | N | | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ |
| 271 | 270 pF | | N | N | N | N | | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ |
| 331 | 330 pF | | N | N | N | N | | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ |
| 391 | 390 pF | | N | N | N | N | | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | S ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ |
| 471 | 470 pF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 561 | 560 pF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 681 | 680 pF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 821 | 820 pF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 102 | 1.0 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 122 | 1.2 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 152 | 1.5 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 182 | 1.8 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 222 | 2.2 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 272 | 2.7 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 332 | 3.3 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 392 | 3.9 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 472 | 4.7 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 562 | 5.6 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 682 | 6.8 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 822 | 8.2 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 103 | 10 nF | | N | N | N | N | | S | S | S | S | S | B | B | B | B | B |
| 123 | 12 nF | | N | N | N | | | S | S | S | S | | B | B | B | B | B |
| 153 | 15 nF | | N | N | N | | | S | S | S | S | | B | B | B | B | B |
| 183 | 18 nF | | N | N | N | | | S | S | S | S | | B | B | B | B | B |
| 223 | 22 nF | | N | N | N | N ⁽²⁾ | | S | S | S | S | X ⁽²⁾ | B | B | B | B | B |
| 273 | 27 nF | | N | N | N | | | S | S | S | S | | B | B | B | B | D |
| 333 | 33 nF | | N | N | N | N ⁽¹⁾ | | S | S | S | X | | B | B | B | B | D |
| 393 | 39 nF | | N | N | N | | | S | S | S | X | | B | B | B | B | D |
| 473 | 47 nF | | N | N | N | N ⁽²⁾ | | S | S | S | X | X ⁽²⁾ | B | B | B | B | D |
| 563 | 56 nF | | N | N | | | | S | S | S | X | | B | B | B | B | D |
| 683 | 68 nF | | N | N | | | | S | S | S | X | | B | B | B | B | D |
| 823 | 82 nF | | N | N | | | | S | S | S | X | | B | B | B | B | D |
| 104 | 100 nF | | N | N | N | E ⁽²⁾ | | S | S | S | X | X ⁽²⁾ | B | B | B | B/D | D |
| 124 | 120 nF | | | | | | | S | S | X | | | B | B | B | D | |
| 154 | 150 nF | | | | | | | S | S | X | | | D | D | D | D | |
| 184 | 180 nF | | | | | | | S | S | X | | | D | D | D | D | |
| 224 | 220 nF | | | N ⁽¹⁾ | | | | S | S | X | X ⁽²⁾ | | D | D | D | D | I ⁽²⁾ |
| 274 | 270 nF | | | | | | | X | X | X | | | D | D | D | | |
| 334 | 330 nF | | | | | | | X | X | X | | | D | D | D | | I |
| 394 | 390 nF | | | | | | | X | X | X | | | D | D | D | | |
| 474 | 470 nF | | N ⁽²⁾ | | | | | X | X | X | X ⁽²⁾ | | D | D | D | | I ⁽²⁾ |
| 564 | 560 nF | | | | | | | X | X | | | | D | D | D | | |
| 684 | 680 nF | | | | | | | X | X | | | | D | D | D | | |
| 824 | 820 nF | | | | | | | X | X | | | | D | D | D | | |
| 105 | 1.0 μF | N ⁽¹⁾ | | | | | | X | X | X ⁽¹⁾ | | | D | D | D | | I ⁽¹⁾ |
| 155 | 1.5 μF | | | | | | | | | | | | I | I ⁽¹⁾ | I ⁽¹⁾ | | |
| 225 | 2.2 μF | | | | | | | X ⁽¹⁾ | X ⁽¹⁾ | | | | I | I | I | | |
| 335 | 3.3 μF | | | | | | | | | | | | | | | | |
| 475 | 4.7 μF | | | | | | | | | | | | I ⁽¹⁾ | I ⁽¹⁾ | I ⁽¹⁾ | | |
| 685 | 6.8 μF | | | | | | | | | | | | | | | | |
| 106 | 10 μF | | | | | | | | | | | | I ⁽¹⁾ | | | | |

Notes

• Letters indicate product thickness, see packaging quantities

(1) Not in 5 % (code “J”) tolerance

(2) Only in 10 % (code “K”) tolerance



www.vishay.com

VJ....W1BC Basic Commodity Series

Vishay

| SELECTION CHART | | | | | | | | | | | | |
|----------------------------|--------|------------------|------------------|------------------|------------------|------------------|--------|------|------------------|------------------|------------------|------------------|
| DIELECTRIC | | X7R | | | | | | | | | | |
| STYLE | | VJ1206 | | | | | VJ1210 | | | | | |
| SIZE CODE | | 1206 | | | | | 1210 | | | | | |
| VOLTAGE (V _{DC}) | | 10 V | 16 V | 25 V | 50 V | 100 V | 6.3 V | 10 V | 16 V | 25 V | 50 V | 100 V |
| VOLTAGE CODE | | Q | J | X | A | B | Y | Q | J | X | A | B |
| CAP. CODE | CAP. | | | | | | | | | | | |
| 101 | 100 pF | | | | | | | | | | | |
| 121 | 120 pF | | | | | | | | | | | |
| 151 | 150 pF | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | | | | | | |
| 181 | 180 pF | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | | | | | | |
| 221 | 220 pF | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | | | | | | |
| 271 | 270 pF | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | | | | | | |
| 331 | 330 pF | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | | | | | | |
| 391 | 390 pF | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | B ⁽¹⁾ | | | | | | |
| 471 | 470 pF | B | B | B | B | B | | | | | | |
| 561 | 560 pF | B | B | B | B | B | | | | | | |
| 681 | 680 pF | B | B | B | B | B | | | | | | |
| 821 | 820 pF | B | B | B | B | B | | | | | | |
| 102 | 1.0 nF | B | B | B | B | B | | C | C | C | C | C |
| 122 | 1.2 nF | B | B | B | B | B | | C | C | C | C | C |
| 152 | 1.5 nF | B | B | B | B | B | | C | C | C | C | C |
| 182 | 1.8 nF | B | B | B | B | B | | C | C | C | C | C |
| 222 | 2.2 nF | B | B | B | B | B | | C | C | C | C | C |
| 272 | 2.7 nF | B | B | B | B | B | | C | C | C | C | C |
| 332 | 3.3 nF | B | B | B | B | B | | C | C | C | C | C |
| 392 | 3.9 nF | B | B | B | B | B | | C | C | C | C | C |
| 472 | 4.7 nF | B | B | B | B | B | | C | C | C | C | C |
| 562 | 5.6 nF | B | B | B | B | B | | C | C | C | C | C |
| 682 | 6.8 nF | B | B | B | B | B | | C | C | C | C | C |
| 822 | 8.2 nF | B | B | B | B | B | | C | C | C | C | C |
| 103 | 10 nF | B | B | B | B | B | | C | C | C | C | C |
| 123 | 12 nF | B | B | B | B | B | | C | C | C | C | C |
| 153 | 15 nF | B | B | B | B | B | | C | C | C | C | C |
| 183 | 18 nF | B | B | B | B | B | | C | C | C | C | C |
| 223 | 22 nF | B | B | B | B | B | | C | C | C | C | C |
| 273 | 27 nF | B | B | B | B | B | | C | C | C | C | C |
| 333 | 33 nF | B | B | B | B | B | | C | C | C | C | C |
| 393 | 39 nF | B | B | B | B | B | | C | C | C | C | C |
| 473 | 47 nF | B | B | B | B | B | | C | C | C | C | C |
| 563 | 56 nF | B | B | B | B | B | | C | C | C | C | C |
| 683 | 68 nF | B | B | B | B | B | | C | C | C | C | C |
| 823 | 82 nF | B | B | B | B | D | | C | C | C | C | C |
| 104 | 100 nF | B | B | B | B | D | | C | C | C | C | C |
| 124 | 120 nF | B | B | B | B | D | | C | C | C | C | C |
| 154 | 150 nF | C | C | C | C | G | | C | C | C | C | D |
| 184 | 180 nF | C | C | C | C | G | | C | C | C | C | D |
| 224 | 220 nF | C | C | C | C | G | | C | C | C | C | D |
| 274 | 270 nF | C | C | C | D | G | | C | C | C | C | G |
| 334 | 330 nF | C | C | C | D | G | | C | C | C | D | G |
| 394 | 390 nF | C | C | J | P | G | | C | C | C | D | M |
| 474 | 470 nF | J | J | J | P | G | | C | C | C | D | M |
| 564 | 560 nF | J | J | J | P | P | | D | D | D | D | M |
| 684 | 680 nF | J | J | J | P | P | | D | D | D | D | K |
| 824 | 820 nF | J | J | J | P | P | | D | D | D | D | K |
| 105 | 1.0 μF | J | J | J | P | P | | D | D | D | D | K |
| 155 | 1.5 μF | J | J | P | | | | | | | | M |
| 225 | 2.2 μF | J | J | P | P ⁽¹⁾ | P ⁽¹⁾ | | | K | G | M ⁽¹⁾ | M |
| 335 | 3.3 μF | P | P | P | | | | | K ⁽²⁾ | G ⁽¹⁾ | | |
| 475 | 4.7 μF | P | P | P | P ⁽¹⁾ | | | K | K | K ⁽¹⁾ | M ⁽¹⁾ | M ⁽²⁾ |
| 685 | 6.8 μF | | | | | | | | | | | |
| 106 | 10 μF | P | P ⁽¹⁾ | P ⁽¹⁾ | | | | K | K | K ⁽¹⁾ | M ⁽¹⁾ | |

Notes

- Letters indicate product thickness, see packaging quantities

(1) Not in 5 % (code "J") tolerance

(2) Only in 10 % (code "K") tolerance


www.vishay.com

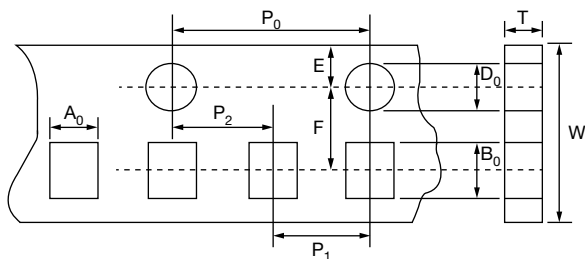
VJ....W1BC Basic Commodity Series

Vishay

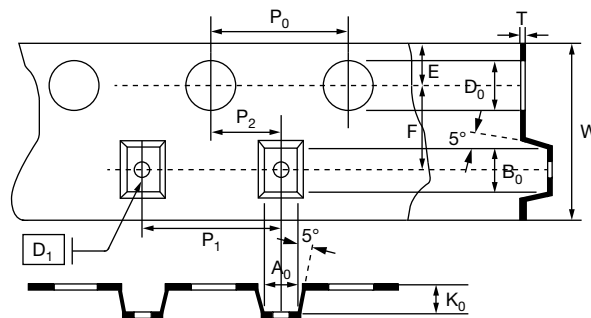
| PACKAGING QUANTITIES | | | | | | |
|--------------------------|------------------------|---------------------|-------------|--------------|--------------|--------------|
| SIZE CODE (inch / mm) | MAX. THICKNESS (mm) | THICKNESS SYMBOL | PAPER TAPE | | PLASTIC TAPE | |
| | | | 7" REEL (C) | 13" REEL (P) | 7" REEL (T) | 13" REEL (R) |
| 0402 (1002) | 0.55 | N | 10K | 50K | | |
| | 0.70 | E | 10K | | | |
| 0603 (1608) | 0.87 | S | 4K | 15K | | |
| | 0.95 | X | 4K | 15K | | |
| | 1.00 | X' | 4K | 15K | | |
| 0805 (2012) | 0.75 | A | 4K | 15K | | |
| | 0.95 | B, T | 4K | 15K | | |
| | 1.40 | D | | | 3K | 10K |
| | 1.45 | I | | | 3K | 10K |
| 1206 (3216) | 0.95 | B | 4K | 15K | | |
| | 1.05 | C | | | 3K | 10K |
| | 1.30 | J | | | 3K | 10K |
| | 1.35 | D | | | 3K | 10K |
| | 1.80 | G | | | 2K | |
| | 1.90 | P | | | 2K | |
| 1210 (3225) | 1.05 | C | | | 3K | 10K |
| | 1.35 | D | | | 3K | 10K |
| | 1.80 | G | | | 2K | |
| | 2.20 | K | | | 1K | |
| | 2.80 | M | | | 1K | |



TAPE AND REEL SPECIFICATION



Dimensions of paper tape



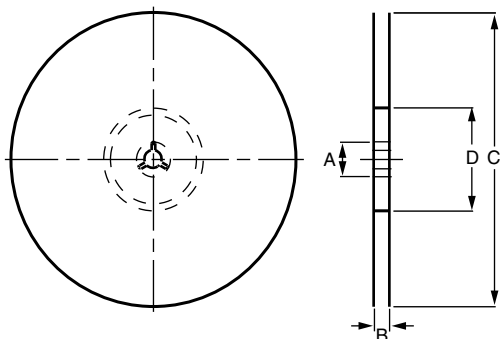
Dimensions of plastic tape

| DIMENSIONS PAPER TAPE in millimeters | | | | | | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| SIZE CODE | 0402 | | 0603 | 0805 | | 1206 |
| THICKNESS | N | E | S, X, X' | A | B, T | B |
| A ₀ | 0.62 ± 0.05 | 0.70 ± 0.10 | 1.02 ± 0.05 | 1.50 ± 0.10 | 1.50 ± 0.10 | 2.00 ± 0.10 |
| B ₀ | 1.12 ± 0.05 | 1.20 ± 0.10 | 1.80 ± 0.05 | 2.30 ± 0.10 | 2.30 ± 0.10 | 3.50 ± 0.10 |
| T | 0.60 ± 0.05 | 0.70 ± 0.10 | 0.95 ± 0.05 | 0.75 ± 0.05 | 0.95 ± 0.05 | 0.95 ± 0.05 |
| K ₀ | - | - | - | - | - | - |
| W | 8.00 ± 0.10 | 8.00 ± 0.10 | 8.00 ± 0.10 | 8.00 ± 0.10 | 8.00 ± 0.10 | 8.00 ± 0.10 |
| P ₀ | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 |
| 10 x P ₀ | 40.0 ± 0.10 | 40.0 ± 0.10 | 40.0 ± 0.10 | 40.0 ± 0.10 | 40.0 ± 0.10 | 40.0 ± 0.10 |
| P ₁ | 2.00 ± 0.05 | 2.00 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 |
| P ₂ | 2.00 ± 0.05 | 2.00 ± 0.05 | 2.00 ± 0.05 | 2.00 ± 0.05 | 2.00 ± 0.05 | 2.00 ± 0.05 |
| D ₀ | 1.55 ± 0.05 | 1.55 ± 0.05 | 1.55 ± 0.05 | 1.55 ± 0.05 | 1.55 ± 0.05 | 1.50 ± 0.05 |
| D ₁ | - | - | - | - | - | - |
| E | 1.75 ± 0.05 | 1.75 ± 0.05 | 1.75 ± 0.05 | 1.75 ± 0.05 | 1.75 ± 0.05 | 1.75 ± 0.10 |
| F | 3.50 ± 0.05 | 3.50 ± 0.05 | 3.50 ± 0.05 | 3.50 ± 0.05 | 3.50 ± 0.05 | 3.50 ± 0.05 |

| DIMENSIONS PLASTIC TAPE in millimeters | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| SIZE CODE | 0805 | 1206 | | 1210 | | |
| THICKNESS | D, I | C, J, D | G, P | C, D | G, K | M |
| A ₀ | < 1.57 | < 1.85 | < 1.95 | < 2.97 | < 2.97 | < 2.97 |
| B ₀ | < 2.40 | < 3.46 | < 3.67 | < 3.73 | < 3.73 | < 3.73 |
| T | 0.23 ± 0.05 | 0.23 ± 0.05 | 0.23 ± 0.05 | 0.23 ± 0.05 | 0.23 ± 0.05 | 0.23 ± 0.05 |
| K ₀ | < 2.50 | < 2.50 | < 2.50 | < 2.50 | < 2.50 | < 3.00 |
| W | 8.00 ± 0.10 | 8.00 ± 0.10 | 8.00 ± 0.10 | 8.00 ± 0.10 | 8.00 ± 0.10 | 8.00 ± 0.10 |
| P ₀ | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 |
| 10 x P ₀ | 40.0 ± 0.10 | 40.0 ± 0.10 | 40.0 ± 0.10 | 40.0 ± 0.10 | 40.0 ± 0.10 | 40.0 ± 0.10 |
| P ₁ | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 |
| P ₂ | 2.00 ± 0.05 | 2.00 ± 0.05 | 2.00 ± 0.05 | 2.00 ± 0.05 | 2.00 ± 0.05 | 2.00 ± 0.05 |
| D ₀ | 1.50 ± 0.05 | 1.50 ± 0.05 | 1.50 ± 0.05 | 1.50 ± 0.05 | 1.50 ± 0.05 | 1.50 ± 0.05 |
| D ₁ | 1.00 ± 0.10 | 1.00 ± 0.10 | 1.00 ± 0.10 | 1.00 ± 0.10 | 1.00 ± 0.10 | 1.00 ± 0.10 |
| E | 1.75 ± 0.10 | 1.75 ± 0.10 | 1.75 ± 0.10 | 1.75 ± 0.10 | 1.75 ± 0.10 | 1.75 ± 0.10 |
| F | 3.50 ± 0.05 | 3.50 ± 0.05 | 3.50 ± 0.05 | 3.50 ± 0.05 | 3.50 ± 0.05 | 3.50 ± 0.05 |



REEL SPECIFICATION

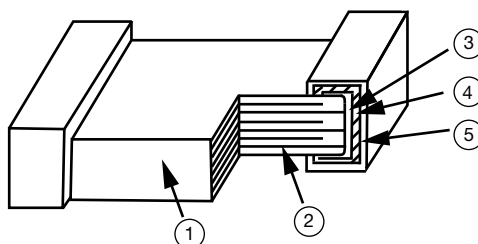


REEL DIMENSIONS in millimeters

| SYMBOL | 7" REEL | 13" REEL |
|--------|-------------|-------------|
| A | 13.0 ± 0.5 | 13.0 ± 0.5 |
| B | 9.0 ± 1.0 | 9.0 ± 1.0 |
| C | 178.0 ± 1.0 | 330.0 ± 1.0 |
| D | 60.0 ± 1.0 | 100.0 ± 1.0 |

CONSTRUCTION

| NO. | NAME | COG (NP0) | X5R / X7R |
|-----|------------------|--------------------------|--------------------------|
| 1 | Ceramic material | CaZrO ₃ based | BaTiO ₃ based |
| 2 | Inner electrode | Ni | |
| 3 | Termination | Inner layer | Cu |
| 4 | | Middle layer | Ni |
| 5 | | Outer layer | Sn (matt) |



STORAGE AND HANDLING CONDITIONS

- (1) To store products at 5 °C to 40 °C ambient temperature and 20 % to 70 % relative humidity conditions.
- (2) The product is recommended to be used within one year after shipment. Check solderability in case of shelf life extension is needed.

Cautions:

- a. The corrosive gas reacts on the terminal electrodes of capacitors, and results in the poor solderability.
Do not store the capacitors in the ambience of corrosive gas (e.g., hydrogen sulfide, sulfur dioxide, chlorine, ammonia gas etc.)
- b. In corrosive atmosphere, solderability might be degraded, and silver migration might occur to cause low reliability.
- c. Due to the dewing by rapid humidity change, or the photochemical change of the terminal electrode by direct sunlight, the solderability and electrical performance may deteriorate. Do not store capacitors under direct sunlight or dewing condition. To store products on the shelf and avoid exposure to moisture.



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we stricly control the quality of products and services. Welcome your RFQ to

Email: Info@DiGi-Electronics.com



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.