



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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※ Trimmed (Cut) or Formed Leads ※ Please refer to page26 about the FPCAP product spec.

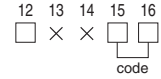
● Radial lead type

In order to identify correct part number for the processed lead product, cut/formed lead code must be added to bulk part number.

● If the bulk part number is up to 11th digit, processed lead coding shall be as follows:



● In case 12th digit is alphabet, it shall be:



● In case 12th digit is numeral, it shall be:



| Configurations | Cut / Formed lead code | | Dimensions (mm) | | | | Lead configurations | |
|---------------------|------------------------|---------------------------|-----------------|-------|-----|-----|---|---|
| | Code | Case length | φD | F | L | ℓ | | |
| Forming and cutting | [B][A] [F][A] | 5mmL,7mmL | 4 | 5 | 5.0 | — | <p>(Code [B][A], [B][B]) 1.5MAX. (Code [F][A], [F][V]) 2.5MAX.</p> | |
| | | Other length | 5 | | | — | | |
| | | | 6.3 | | | — | | |
| | [B][B] [F][V] | 5mmL,7mmL | 4 | 5 | 3.5 | — | | |
| | | Other length | 5 | | | — | | |
| | | | 6.3 | | | — | | |
| | [F][V] | Other length | 8 | — | — | — | | |
| | | | 8 | — | — | — | | |
| 8 | | | — | — | — | | | |
| 8 | | | — | — | — | | | |
| Forming and cutting | [S][Z] | All Series | 10 | 5 | 3.2 | — | <p>※ Please contact your local Nichicon sales office for the following sizes. — 10mm Diameter parts with 9mm length or less, and 25mm length or larger — 12.5 to 18mm Diameter parts with 12.5mm length or less, and 46mm or larger ※ This operation is available on product made in Japan.</p> | |
| | | | 12.5 | | | — | | |
| | | | 16 | 7.5 | — | | | |
| | | | 18 | | — | | | |
| Cutting | [C][A] | All length | 3 | 1.0 | 5.0 | — | <p>※ φ 8 × 5 = F: 2.5 ※ Please contact us for the φ 16 to φ 25 × 12.5L products.</p> | |
| | | | 4 | 1.5 | | — | | |
| | | | 5 | 2.0 | | — | | |
| | | | 6.3 | 2.5 | | — | | |
| | | | 8 | ※ 3.5 | | — | | |
| | | | 10 | 5 | | — | | |
| | | | 12.5 | — | | — | | |
| | | | 16 | 7.5 | | — | | |
| | | | 18 | — | | — | | |
| | | | 20 | 10 | | — | | |
| | 22 | — | — | | | | | |
| | 25 | 12.5 | — | | | | | |
| | [C][P] | All length | Same as above. | 4.5 | — | | | |
| | [C][C] | All length | Same as above. | 4.0 | — | | | |
| | [C][V] | All length | Same as above. | 3.5 | — | | | |
| [C][T] | All length | Same as above. | 3.2 | — | | | | |
| [C][M] | All length | Same as above. | 3.0 | — | | | | |
| Snap-in | [A][E] [A][A] | 5mmL,7mmL Other length | 4 | 5 | 4.5 | 1.1 | <p>(φ 4, 5, 6.3, 8) (Code [A][E]) 1.5 MAX. (Code [A][A]) 2.5 MAX.</p> | |
| | | | 5 | | | 1.3 | | |
| | | | 6.3 | | | — | | |
| | | | 8 | | | — | | |
| | [A][A] | All length | 10 | 5 | 4.5 | 1.3 | | |
| | | | 12.5 | | | | | — |
| | | | 16 | | | | | — |
| | | | 18 | 7.5 | 4.5 | 1.3 | | |
| | | | 20 | | | | | — |
| | | | 22 | 10 | 5.0 | 1.8 | | |
| 25 | 12.5 | — | | | | | | |

● Conductive polymer aluminum solid electrolytic capacitors : Cutting configurations only

+Lead diameter (φd) and lead pitch (P) are subject to capacitor specifications.

※ End seal Configuration ※ Please contact us about the FPCAP.

| Configuration | ※2 | ※1 | ※1 | ※1 | ※1 |
|---------------|----|---------|------------|----------------|--------------|
| φ(mm) | 3 | 5 · 6.3 | 4 · 8 · 10 | 12.5 · 16 · 18 | 20 · 22 · 25 |

Exception : φ5, φ6.3 case size of UMA, UMR, UMF, UMP, UMT, UMW, USA, USF, USP, USR, UST, USW, UPW (7mmL), UTT (7mmL) : configuration ※1
φ6.3 × 6mmL, φ6.3 × 9mmL, φ8 × 7mmL, φ8 × 9mmL, φ10 × 8mmL, φ10 × 10mmL size of PLF※, PLE※, PLG※, PLS※, PLV※, PLX※, UMV, USV, UPV
[9] will be put at 12th digit of type numbering system of UCS, UPZ : configuration ※2

※ Conductive polymer aluminum solid electrolytic capacitors

※Taped Leads for Automatic Insertion Systems

※ Please refer to page 26 about the FPCAP product spec.

● Radial lead type (Applicable standard JIS C0806-2)

In order to identify correct part number for the taped product, taping code must be added.

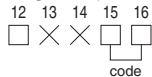
● If the bulk part number is up to 11th digit, taping code shall be as follows:



● In case 12th digit is numeral, it shall be



● In case 12th digit is alphabet, it shall be



(mm)

| Packaging | Specifications | | | | Capacitor diameter (φ) | Taping code | |
|-----------|----------------|------------|-------------|----------------|------------------------|-------------|---|
| | Lead style | ⊕ ⊖ Leader | F | P ₀ | | Code | Applicable size |
| Ammo-pack | Formed lead | — | See Table 1 | 12.7 | 3 to 8 | T E | φ 4 to 8 Case length (5mmL, 7mmL) (φ 3 × 5, φ 4 × 11) (φ 5 × 9 to φ 8 × 9, φ 4 × 11 to φ 8 × 20) |
| | | | | | | T P | |
| | Straight lead | — | See Table 2 | 12.7 | 4 to 10 | T P | φ 4 to 8 Case length (5mmL), φ 6.3 × 6 ※ φ 4 to 6.3 Case length (7mmL), φ 4 φ 5 × 9 or more, φ 6.3 × 9 or more, φ 8 × 7 or more, φ 10 × 8 to 25) |
| | | | | | | T D | |
| | | — | See Table 2 | 15.0 | 12.5 | T O | (φ 12.5 × 12.5 to 25) |
| | | — | See Table 2 | 15.0 | 16, 18 | T N | (φ 16 × 15 to 25, φ 18 × 15 to 25) |

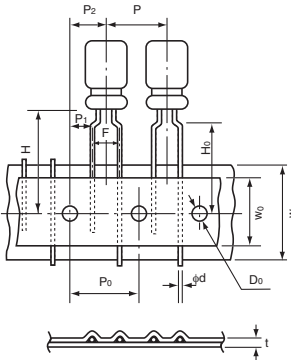
Notes:

※ Conductive polymer aluminum solid electrolytic capacitors

Table 1

(mm)

(Formed lead type)

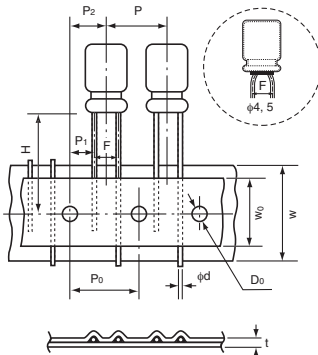


| Item | Case Size | Tolerance | Formed Lead Type Case dia (φ) × Length (L) | | | | | | | |
|------------------|--------------------------------------|--------------|--|----------|----------------------|---------|-----------|-----------------------|----------|------------|
| | | | φ 3 × 5 | φ 4 × 11 | φ 4 × 5 | φ 5 × 5 | φ 6.3 × 5 | φ 8 × 5 | φ 4 × 11 | φ 6.3 × 9 |
| φ d | Lead-wire diameter | ±0.05 | 0.40 | 0.45 | 0.45 (φ 8 × 7 : 0.5) | | | 0.5 (φ 4 × 11 : 0.45) | 0.6 | φ 8 × 11.5 |
| P | Pitch of component | ± 1.0 | 12.7 | 12.7 | 12.7 | | | 12.7 | 12.7 | φ 8 × 20 |
| P ₀ | Feed hole pitch | ± 0.2 | 12.7 | 12.7 | 12.7 | | | 12.7 | 12.7 | |
| P ₁ | Hole center to lead | ± 0.5 | 5.1 | 5.1 | 3.85 | | | 3.85 | 3.85 | |
| P ₂ | Feed hole center to component center | ± 1.0 | 6.35 | 6.35 | 6.35 | | | 6.35 | 6.35 | |
| F | Lead-to-lead distance | +0.8 -0.2 | 2.5 | 2.5 | 5.0 | | | 5.0 | 5.0 | |
| H | Height of component from tape center | ± 0.75 | 18.5 | 18.5 | 17.5 | | | 18.5 | 20.0 | |
| H ₀ | Lead-wire clinch height | ± 0.5 | 16.0 ※3 | 16.0 | 16.0 | | | 16.0 | 16.0 | |
| W | Tape Width | ± 0.5 | 18.0 | 18.0 | 18.0 | | | 18.0 | 18.0 | |
| W ₀ | Hold down tape width | MIN. | 7.0 | 7.0 | 7.0 | | | 7.0 | 7.0 | |
| φ D ₀ | Feed hole diameter | ± 0.2 | 4.0 | 4.0 | 4.0 | | | 4.0 | 4.0 | |
| t | Total tape thickness | ± 0.2 | 0.6 | 0.6 | 0.6 | | | 0.6 | 0.6 | |

Table 2

(mm)

(Straight lead type)



| Item | Case Size | Tolerance | Straight Lead Type Case dia (φ) × Length (L) | | | | | | | | |
|------------------|--------------------------------------|--------------|--|------------------|------------------|---------|---------|------|------|--------|--------------|
| | | | φ 4 × 5 φ 4 × 7 | φ 5 | φ 6.3 | φ 8 × 5 | φ 8 × 7 | φ 8 | φ 10 | φ 12.5 | φ 16 φ 18 |
| φ d | Lead-wire diameter | ± 0.05 | 0.45 | 0.45 0.5, 0.6 | 0.45 0.5, 0.6 | 0.45 | 0.5 | 0.6 | 0.6 | 0.6 | 0.8 |
| P | Pitch of component | ± 1.0 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 15.0 | 30.0 |
| P ₀ | Feed hole pitch | ± 0.2 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 15.0 | 15.0 |
| P ₁ | Hole center to lead | ± 0.5 | 5.1 (※1 5.35) | 5.1 (※1 5.35) | 5.1 | 5.1 | 4.6 | 4.6 | 3.85 | 5.0 | 3.75 |
| P ₂ | Feed hole center to component center | ± 1.0 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 7.5 | 7.5 |
| F | Lead-to-lead distance | +0.8 -0.2 | 2.5※1 | 2.5※1 | 2.5 | 2.5 | 3.5 | 3.5 | 5.0 | 5.0 | 7.5※2 |
| H | Height of component from tape center | ± 0.75 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 |
| W | Tape Width | ± 0.5 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 |
| W ₀ | Hold down tape width | MIN. | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 12.5 | 12.5 |
| φ D ₀ | Feed hole diameter | ± 0.2 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| t | Total tape thickness | ± 0.2 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |

Notes:

※ 1 F = 2.0mm is also available, provided Taping code to be T|C.

※ 2 Tolerance on F for φ16 and φ18 units shall be ±0.8mm.

※ 3 Tolerance on H₀ for φ3 units shall be 16.0 MIN.

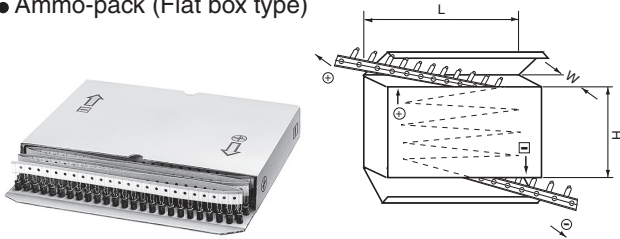
● Special taping specifications on H, F, and K, dimensions other than the above figures are available upon request.

● Conductive polymer aluminum solid electrolytic capacitors : Straight lead type only

● Only the above mentioned dimensions are specified.

Packaging

- Ammo-pack (Flat box type)



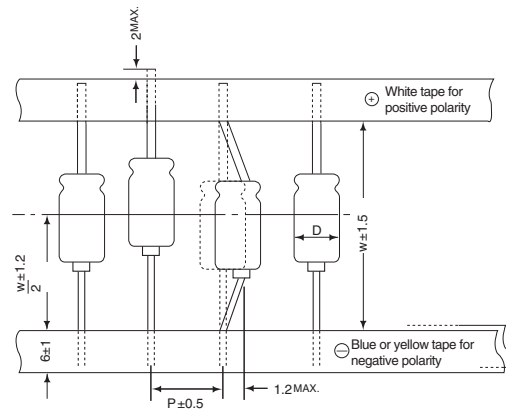
| (mm) | | | | |
|------|-----|----|---|------------|
| L | H | W | Case Size ($\phi D \times L$) | Q'ty / Box |
| 340 | 150 | 50 | 3 × 5 | 2,000 |
| 340 | 200 | 50 | 4 × 5, 4 × 7 | 2,000 |
| 340 | 250 | 50 | 5 × 5, 5 × 7 | 2,000 |
| | | | 8 × 5, 8 × 7, 8 × 8 | 1,000 |
| 340 | 300 | 50 | 6.3 × 5, 6.3 × 6, 6.3 × 7 | 2,000 |
| 340 | 260 | 54 | 4 × 11, 5 × 9, 5 × 11, 5 × 15 | 2,000 |
| | | | 8 × 9, 8 × 10, 8 × 11.5, 8 × 12, 8 × 15 | 1,000 |
| 340 | 200 | 54 | 10 × 8, 10 × 9, 10 × 10, 10 × 12.5, 10 × 13, 10 × 15, 10 × 16 | 500 |
| 340 | 300 | 54 | 6.3 × 9, 6.3 × 10.5, 6.3 × 11, 6.3 × 15 | 2,000 |
| 340 | 260 | 62 | 8 × 20 | 1,000 |
| 340 | 200 | 62 | 10 × 20 | 500 |
| 340 | 200 | 65 | 10 × 25 | 500 |
| 330 | 290 | 65 | 12.5 × 12.5, 12.5 × 15, 12.5 × 20 | 500 |
| | | | 12.5 × 25 | |
| | | | 18 × 15, 18 × 20, 18 × 25 | 250 |
| 320 | 230 | 65 | 16 × 15, 16 × 20, 16 × 25 | 250 |

- Axial lead type (Applicable standard JIS C0805)

The following code shall be put at 12th to 14th digit of the corresponding type number of capacitors.

(mm)

| Taping Specifications | | Case dia (ϕ) | Taping code | Q'ty / Reel (pcs.) |
|------------------------|--------------------------|---------------------|-------------|--------------------|
| Dim. W (Tape distance) | Dim. P (Component Pitch) | | | |
| 52.4 | 10 | 5 | 1LS | 1,600 |
| | | 6.3 | | 1,300 |
| | | 8 | | 1,000 |
| 63.5 | 10 | 5 | 1LV | 1,600 |
| | | 6.3 | | 1,300 |
| | | 8 | | 1,000 |
| 73.0 | 10 | 5 | 1LY | 1,600 |
| | | 6.3 | | 1,300 |
| | | 8 | | 1,000 |
| 52.4 | 15 | 10 | 1LT | 500 |
| | | 13 (except 31.5L) | | 350 |
| 63.5 | 15 | 10 | 1LW | 500 |
| | | 13 | | 350 |
| 73.0 | 15 | 10 | 1LZ | 500 |
| | | 13 | | 350 |



Please contact us for complete information on the package dimensions for tapes axial lead capacitors.

FPCAP Lead forming (Radial lead type)

RNS, RR7, RR5, RL8, RE5, RS8, RF8, RNU, RNE, RNL, RS6, RHT

Components are packaged as per following packing unit.

● Packing Quantity (Bulk)

| Case Size φD × L (mm) | Long Lead | | Cut Lead | |
|-----------------------------|-----------------------------|--|-----------------------------|--|
| | Quantity vinyl bag (PCS) | Minimum quantity (PCS / Carton Box) | Quantity vinyl bag (PCS) | Minimum quantity (PCS / Carton Box) |
| φ4×5 | 200 | 8,000 | 200 | 8,000 |
| φ5×8, φ5×10 | 200 | 3,200 | 200 | 4,000 |
| φ6.3×5, φ6.3×6, φ6.3×7 | 200 | 4,000 | 200 | 4,000 |
| φ6.3×8, φ6.3×10 | 200 | 3,200 | 200 | 4,000 |
| φ8×6, φ8×8, φ8×9 | 200 | 3,200 | 200 | 4,000 |
| φ8×11.5 | 100 | 2,000 | 200 | 2,400 |
| φ8×20 | 100 | 1,200 | 100 | 1,600 |
| φ10×12.5 | 100 | 1,600 | 100 | 2,000 |
| φ10×20 | 100 | 800 | 100 | 1,200 |

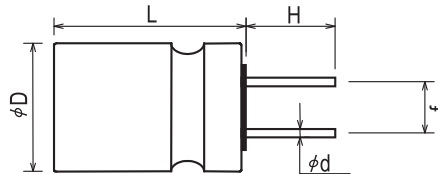
Please note the order quantity must be in multiples of the minimum quantity.

● Cut Lead (Bulk) Dimensions

Lead Forming (Symbol:CG)

Nichicon P/N : R□□□□□□□ M□□□ CG

FPCAP P/N : FP- □□□RE□□□M- □□ CG



[Unit : mm]

| φD×L | φ4×5 | φ5×8, φ5×10 | φ6.3×5, φ6.3×6, φ6.3×7, φ6.3×8, φ6.3×10 | φ8×6, φ8×8, φ8×9, φ8×11.5, φ8×20 | φ10×12.5, φ10×20 |
|-----------------------|-----------|---------------|---|----------------------------------|------------------|
| Item | | | | | |
| Lead Forming Symbol | CG | CG | CG | CG | CG |
| Lead Wire Diameter φd | 0.45±0.05 | 0.5, 0.6±0.05 | 0.45, 0.5, 0.6±0.05 | 0.6±0.05 | 0.6±0.05 |
| Lead Wire Length H | 3.1±0.3 | 3.1±0.3 | 3.1±0.3 | 3.1±0.3 | 3.1±0.3 |
| Lead Wire Interval f | 1.5±0.5 | 2.0±0.5 | 2.5±0.5 | 3.5±0.5 | 5.0±0.5 |

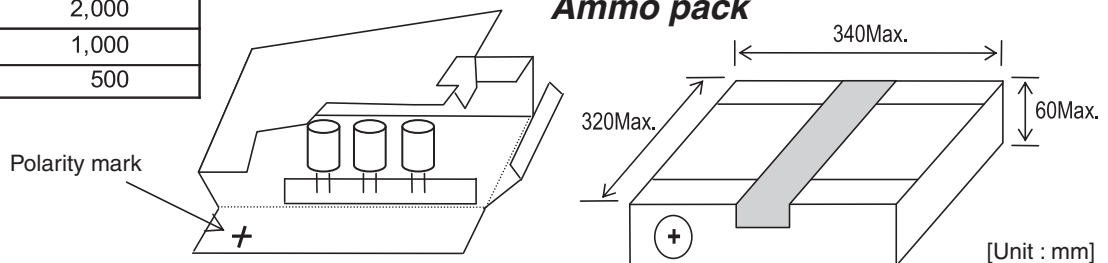
Note : Please inquire for FPCAP by Packing Unit as above.

FPCAP Taped Leads for Automatic Insertion Systems (Radial lead type)

RNS, RR7, RR5, RL8, RE5, RS8, RF8, RNU, RNE, RNL, RS6, RHT

● Packing Quantity(Ammo Pack)

| Size (dia) | Minimum quantity (pcs / Ammo Pack) |
|------------|------------------------------------|
| φ5 | 2,000 |
| φ6.3 | 2,000 |
| φ8 | 1,000 |
| φ10 | 500 |



[Unit : mm]

The lid of feeding side of the taping box shall be torn off at the perforation line.

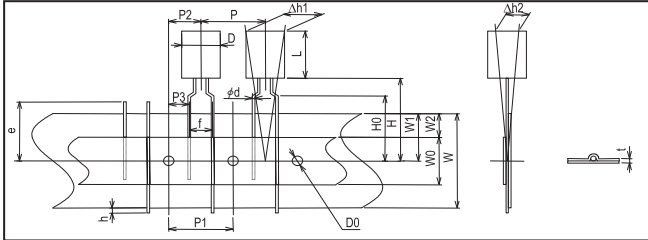
● Taping Dimensions

Lead Forming (Symbol:Ex. PX) Nichicon P/N Symbol : R□□□□□□ M□□□PX
 FPCAP P/N Symbol : FP-□□□RE□□□M-□□ P

■ 2.5mm pitch taping

Taping Dimensions for $\phi 5$

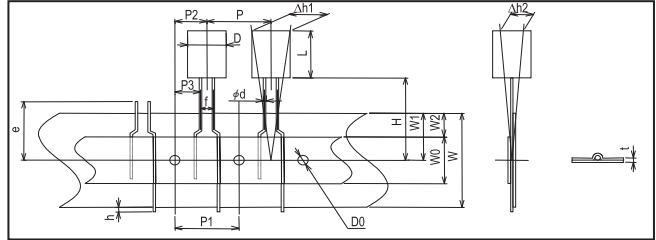
Nichicon P/N Symbol : JT ($\phi 5 \times 8$) , JX ($\phi 5 \times 10$)
 FPCAP P/N Symbol : JT ($\phi 5 \times 8$) , J ($\phi 5 \times 10$)



■ 2.5mm pitch taping

Taping Dimensions for $\phi 6.3$

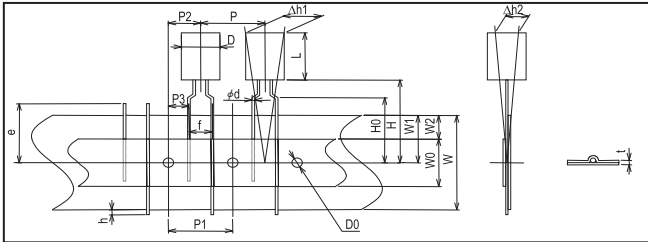
Nichicon P/N Symbol : JT ($\phi 6.3 \times 5$ to 8) , JX ($\phi 6.3 \times 10$)
 FPCAP P/N Symbol : JT ($\phi 6.3 \times 5$ to 8) , J ($\phi 6.3 \times 10$)



■ 5.0mm pitch taping

Taping Dimensions for $\phi 5$, $\phi 6.3$, $\phi 8$

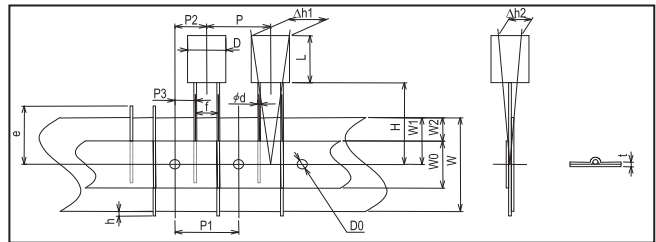
Nichicon P/N Symbol : PX
 FPCAP P/N Symbol : P



■ 3.5mm ($\phi 8$) or 5.0mm ($\phi 10$) pitch taping

Taping Dimensions for $\phi 8$, $\phi 10$

Nichicon P/N Symbol : KX ($\phi 8$) , PH ($\phi 10$)
 FPCAP P/N Symbol : K ($\phi 8$) , PH ($\phi 10$)



● Specification Table

[Unit : mm]

| Item | $\phi D \times L$ | $\phi 6.3 \times 6$, $\phi 6.3 \times 7$ | $\phi 5 \times 8$, $\phi 6.3 \times 8$ | $\phi 6.3 \times 5$ $\phi 5 \times 8$ | $\phi 5 \times 10$, $\phi 6.3 \times 10$ | $\phi 6.3 \times 6$, $\phi 6.3 \times 7$ | $\phi 5 \times 8$, $\phi 6.3 \times 8$ | $\phi 5 \times 10$, $\phi 6.3 \times 5$, $\phi 6.3 \times 10$ | $\phi 8 \times 6$, $\phi 8 \times 8$, $\phi 8 \times 9$, $\phi 8 \times 11.5$, $\phi 8 \times 20$ | $\phi 10 \times 12.5$ $\phi 10 \times 20$ | |
|------------------------------------|-------------------|--|--|--|--|--|--|---|--|--|----------------|
| Lead Forming Symbol (Nichicon P/N) | | JT | | JX | PX | | | PX | KX | PH | |
| Lead Forming Symbol (FPCAP P/N) | | JT | | J | P | | | P | K | PH | |
| Lead Wire Diameter ϕd | | 0.45 | 0.6 | 0.5 | 0.5 | 0.45 | 0.6 | 0.5 | 0.6 | 0.6 | |
| Tolerance | | ± 0.05 | ± 0.05 | ± 0.05 | ± 0.05 | ± 0.05 | ± 0.05 | ± 0.05 | ± 0.05 | ± 0.05 | |
| Lead Wire Interval f | | 2.5 +0.8/-0.2 ($\phi 6.3$: 2.5 ± 0.5) | | | | 5.0 +0.8/-0.2 | | | 5.0 +0.8/-0.2 | 3.5 +0.8/-0.2 | 5.0 +0.8/-0.2 |
| Pitch Between Components P | | 12.7 ± 1.0 | | | | 12.7 ± 1.0 | | | 12.7 ± 1.0 | 12.7 ± 1.0 | 12.7 ± 1.0 |
| Feed Holes Position Gap $P1$ | | 12.7 ± 0.3 | | | | 12.7 ± 0.3 | | | 12.7 ± 0.3 | 12.7 ± 0.3 | 12.7 ± 0.3 |
| Feed Holes Position Gap $P2$ | | 6.35 ± 1.0 | | | | 6.35 ± 1.0 | | | 6.35 ± 1.0 | 6.35 ± 0.5 | 6.35 ± 0.5 |
| Lead Wire Clinch Height $H0$ | | — | | | | 16.0 ± 0.5 | | | 16.0 ± 0.5 | — | — |
| Components Height H | | 18.5 ± 0.5 | | | | 17.5 ± 0.5 | | | 20.0 ± 0.75 | 20.0 ± 0.5 | 18.5 ± 0.5 |
| Base Tape W | | 18.0 +1.0/-0.5 | | | | 18.0 +1.0/-0.5 | | | 18.0 +1.0/-0.5 | 18.0 +1.0/-0.5 | 18.0 +1.0/-0.5 |
| Feed Holes Position Gap $W1$ | | 9.0 ± 0.5 | | | | 9.0 ± 0.5 | | | 9.0 ± 0.5 | 9.0 ± 0.5 | 9.0 ± 0.5 |
| Feed Holes Diameter $D0$ | | 4.0 ± 0.2 | | | | 4.0 ± 0.2 | | | 4.0 ± 0.2 | 4.0 ± 0.2 | 4.0 ± 0.2 |
| Components Alignment Δh | | 2.0 max. | | | | 2.0 max. | | | 2.0 max. | 2.0 max. | 2.0 max. |
| Tape Thickness t | | 0.7 ± 0.2 | | | | 0.7 ± 0.2 | | | 0.7 ± 0.2 | 0.7 ± 0.2 | 0.7 ± 0.2 |