

Metallized Polypropylene Film Capacitor

Type PS



Specific features

- Special design for downsizing shape.
- Low loss, low self heating, perform for frequency characteristic.
- Reduced hum noise from capacitor.

Application

- Coupling(power, inverter circuit)

Parts code

Type Code

7Y

Rated Voltage

□ □

①

Capacitance

□ □ □

②

Tolerance

□

③

Special Designation

□ □ □

④ ⑤ ⑥

ex)

| Code ① | Rated Voltage |
|-----------|---------------|
| 2G | 400VDC |
| 2L | 450VDC |
| 2J | 630VDC |

| Code ② | Capacitance |
|-----------|--------------|
| 104 | 0.10 μ F |
| 154 | 0.15 μ F |
| 105 | 1.0 μ F |
| 225 | 2.2 μ F |

| Code ③ | Tolerance |
|-----------|-----------|
| J | \pm 5% |
| K | \pm 10% |

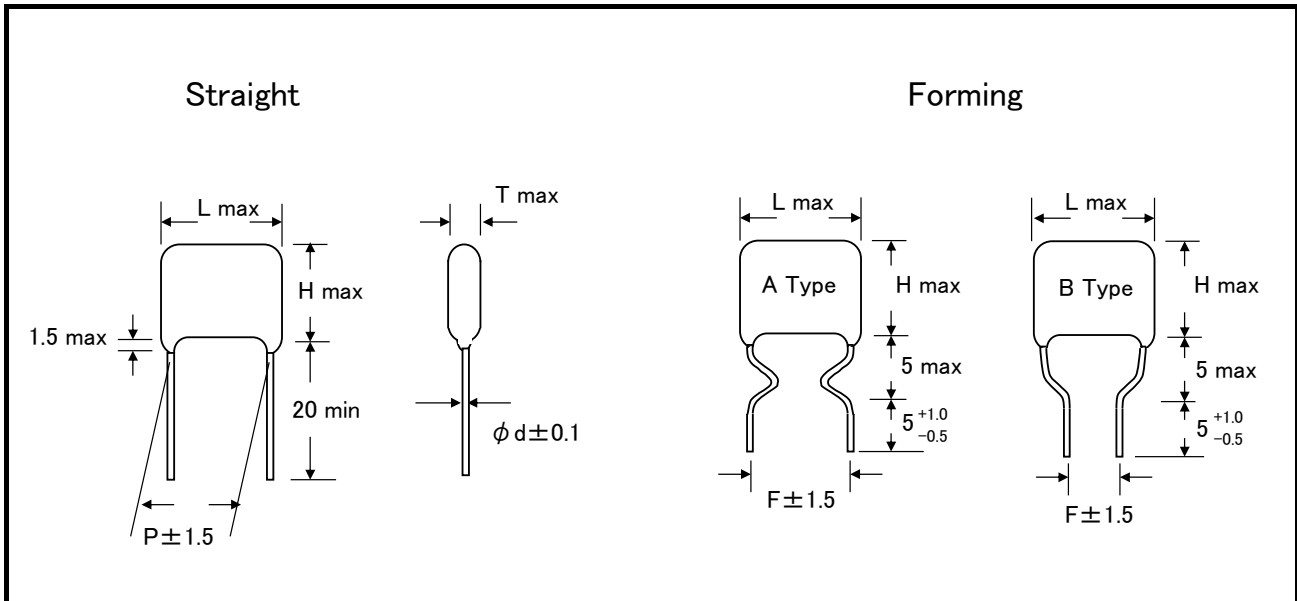
| Code ④ | Lead wire material |
|-----------|--------------------|
| - | Cp |
| U | Cu |

| Code ⑤ | Lead wire length |
|-----------|--|
| A | 20.0mm min |
| S | 5.0 ^{+1.0} _{-0.5} mm |

| Code ⑥ | Lead wire Type |
|-----------|----------------|
| 0 | Straight |
| other | Forming |

In addition to the standard specifications listed above, customization is also possible.
For details, please contact our sales representative.

Dimensions (Standard specifications)



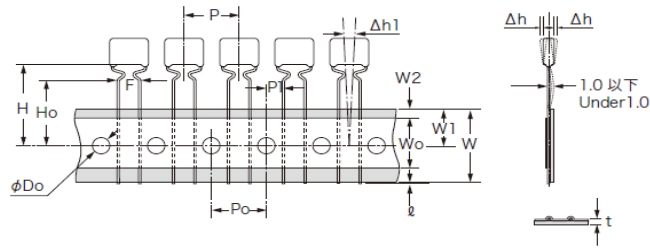
Specifications

| | | | |
|-----------------------------|---------------------------|--|---|
| Operating Temperature Range | | -40°C ~ +105°C | |
| Rated Voltage | | 450VDC, 500VDC, 630VDC | |
| Voltage Proof | Between Terminals | Rated Voltage × 150% 60 s | |
| | Between Terminal and Case | Rated Voltage × 200% 2~5 s | |
| Insulation Resistance | | 100VDC 60 s | $C \leq 1.0\mu F$: More than 30,000MΩ $C > 1.0\mu F$: More than 30,000ΩF |
| Capacitance | | 0.1μF~2.2μF | |
| Tolerance | | ±5% (J) , ±10% (K) | |
| tanδ | | $C \leq 1.0\mu F$: 0.001 or less $C > 1.0\mu F$: 0.0015 or less | |

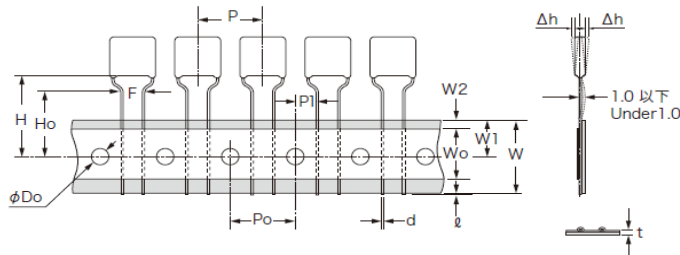
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Taping Specifications

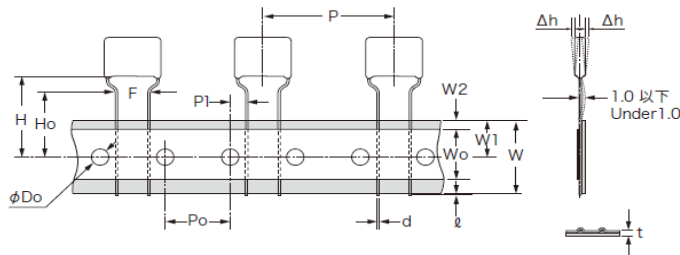
< Style : A、 B >



< Style : C >



< Style : D、 E >



| Taping type | | Value and tolerance | | | | |
|----------------------------|--------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Item | Symbol | Style : A | Style : B | Style : C | Style : D | Style : E |
| Pitch of body | P | 12.7 ± 1.0 | 15.0 ± 1.0 | 15.0 ± 1.0 | 25.4 ± 1.0 | 30.0 ± 1.0 |
| Feed hole pitch | Po | 12.7 ± 0.2 | 15.0 ± 0.2 | 15.0 ± 0.3 | 12.7 ± 0.3 | 15.0 ± 0.3 |
| Feed hole diameter | φDo | 4.0 ± 0.1 | 4.0 ± 0.1 | 4.0 ± 0.2 | 4.0 ± 0.1 | 4.0 ± 0.2 |
| Fed hole position | P1 | 3.85 ± 0.5 | 3.8 ± 0.5 | 5.0 ± 0.7 | 3.85 ± 0.7 | 3.8 ± 0.7 |
| Hole center to body center | W1 | 9.0 ± 0.5 | 9.0 ± 0.5 | 9.0 ± 0.5 | 9.0 ± 0.5 | 9.0 ± 0.5 |
| Distance, lead to lead | F | 5.0 ^{+0.8} _{-0.2} | 7.5 ^{+0.8} _{-0.2} | 5.0 ± 0.8 | 5.0 ^{+0.8} _{-0.2} | 7.5 ^{+0.8} _{-0.2} |
| Component inclination | Δh | 2.0 max | 2.0 max | 2.0 max | 2.0 max | 2.0 max |
| Tape width | 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} |
| Holding tape position | W2 | 3.0 max | 3.0 max | 3.0 max | 3.0 max | 3.0 max |
| Adhesive tape width | W0 | 12.5 min | 12.5 min | 12.5 min | 12.0 min | 12.0 min |
| Height of body form tape | H | 20.2 ± 0.5 | 20.2 ± 0.5 | 20.2 ± 0.5 | 20.0 ± 0.7 | 20.0 ± 0.7 |
| Lead wire clinch height | Ho | 16.0 ± 0.5 | 16.0 ± 0.5 | 16.0 ± 0.5 | 16.0 ± 0.5 | 16.0 ± 0.5 |
| Lead wire protrusion | ℓ | 0.5 max | 0.5 max | 0.5 max | 0.5 max | 0.5 max |
| Total tape thickness | t | 0.6 ± 0.3 | 0.6 ± 0.3 | 0.6 ± 0.3 | 0.6 ± 0.3 | 0.6 ± 0.3 |

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Ratings, Dimensions

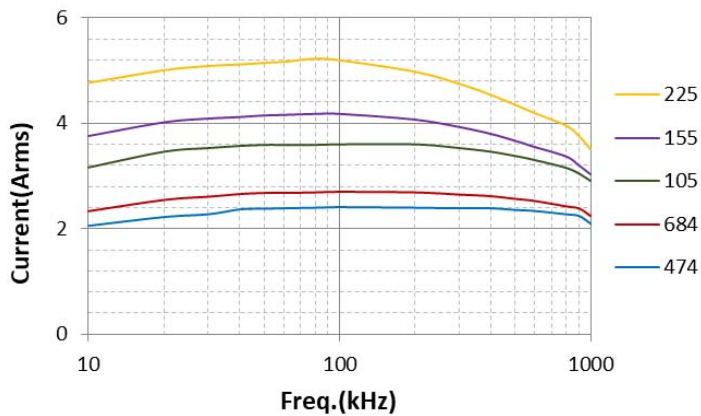
- Rated Voltage : 450VDC Tolerance : $\pm 5\%$ (J) , $\pm 10\%$ (K)

| Product number | Cap. (μF) | Tol. (%) | Dimensions(mm) | | | | | | | |
|----------------|------------------------|---------------------|----------------|-------|-------|-------------|------|-------------|------------------|-----------|
| | | | L max | T max | H max | Straight | | Forming | | Lead wire |
| | | | | | | P ± 1.5 | Type | F ± 1.5 | $\phi d \pm 0.1$ | |
| 7Y2L474□ () | 0.47 | ± 5 or ± 10 | 18.5 | 7.0 | 7.0 | 15.0 | B | 10.0 | 0.8 | |
| 7Y2L684□ () | 0.68 | ± 5 or ± 10 | 18.5 | 8.0 | 8.0 | 15.0 | B | 10.0 | 0.8 | |
| 7Y2L105□ () | 1.0 | ± 5 or ± 10 | 18.5 | 9.0 | 9.0 | 15.0 | B | 10.0 | 0.8 | |
| 7Y2L155□ () | 1.5 | ± 5 or ± 10 | 18.5 | 11.5 | 11.5 | 15.0 | B | 10.0 | 0.8 | |
| 7Y2L225□ () | 2.2 | ± 5 or ± 10 | 18.5 | 13.5 | 13.5 | 15.0 | B | 10.0 | 0.8 | |

※ □ : Capacitance tolerance code

() : Lead wire type

- Permissible ripple current frequency - current (sine wave)



In addition to the standard specifications listed above, customization is also possible. For details, please contact our sales representative.

Ratings, Dimensions

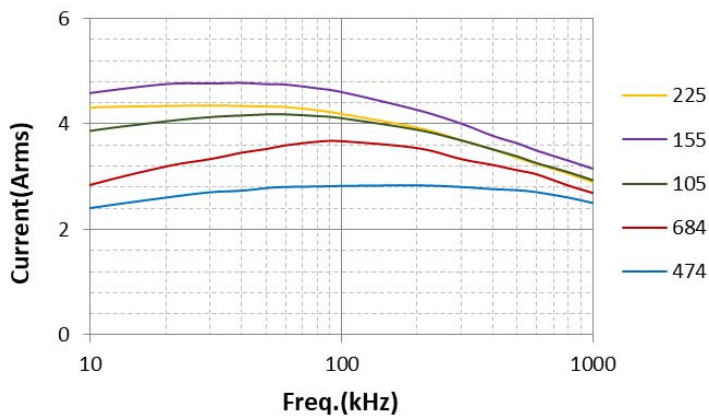
- Rated Voltage : 500VDC Tolerance : $\pm 5\%$ (J) 、 $\pm 10\%$ (K)

| Product number | Cap. (μF) | Tol. (%) | Dimensions(mm) | | | | | | | |
|----------------|------------------------|---------------------|----------------|-------|-------|-------------|------|-------------|------------------|-----------|
| | | | L max | T max | H max | Straight | | Forming | | Lead wire |
| | | | | | | P ± 1.5 | Type | F ± 1.5 | $\phi d \pm 0.1$ | |
| 7Y2H474□ () | 0.47 | ± 5 or ± 10 | 18.5 | 8.0 | 15.0 | 15.0 | B | 10.0 | 0.8 | |
| 7Y2H684□ () | 0.68 | ± 5 or ± 10 | 18.5 | 9.0 | 16.5 | 15.0 | B | 10.0 | 0.8 | |
| 7Y2H105□ () | 1.0 | ± 5 or ± 10 | 18.5 | 10.0 | 18.5 | 15.0 | B | 10.0 | 0.8 | |
| 7Y2H155□ () | 1.5 | ± 5 or ± 10 | 18.5 | 12.5 | 20.5 | 15.0 | B | 10.0 | 0.8 | |
| 7Y2H225□ () | 2.2 | ± 5 or ± 10 | 25.0 | 13.0 | 20.5 | 20.0 | B | 15.0 | 0.8 | |

※ □ : Capacitance tolerance code

() : Lead wire type

- Permissible ripple current frequency - current (sine wave)



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Ratings, Dimensions

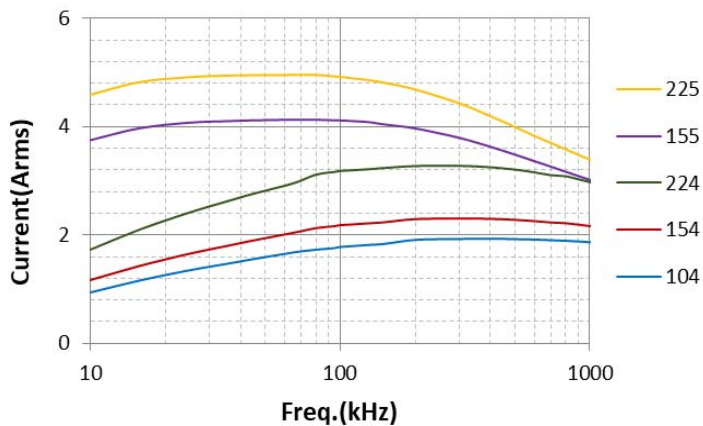
- Rated Voltage : 630VDC Tolerance : $\pm 5\%$ (J) , $\pm 10\%$ (K)

| Product number | Cap. (μ F) | Tol. (%) | Dimensions(mm) | | | | | | | |
|----------------|-----------------|----------|----------------|-------|-------|-------------|------|-------------|------------------|-----------|
| | | | L max | T max | H max | Straight | | Forming | | Lead wire |
| | | | | | | P ± 1.5 | Type | F ± 1.5 | $\phi d \pm 0.1$ | |
| 7Y2J104J□ () | 0.10 | ± 5 | 13.3 | 7.1 | 12.3 | 10.0 | B | 5.0 | 0.8 | |
| 7Y2J154J□ () | 0.15 | ± 5 | 13.3 | 8.4 | 13.6 | 10.0 | B | 5.0 | 0.8 | |
| 7Y2J224J□ () | 0.22 | ± 5 | 13.3 | 9.7 | 14.9 | 10.0 | B | 5.0 | 0.8 | |
| 7Y2J334J□ () | 0.33 | ± 5 | 15.8 | 9.6 | 14.8 | 12.5 | B | 7.5 | 0.8 | |
| 7Y2J474J□ () | 0.47 | ± 5 | 15.8 | 11.3 | 17.0 | 12.5 | B | 7.5 | 0.8 | |
| 7Y2J684J□ () | 0.68 | ± 5 | 15.8 | 13.3 | 19.0 | 12.5 | B | 7.5 | 0.8 | |
| 7Y2J105J□ () | 1.0 | ± 5 | 23.3 | 11.5 | 17.7 | 20.0 | B | 10.0 | 0.8 | |
| 7Y2J155J□ () | 1.5 | ± 5 | 23.3 | 13.6 | 20.9 | 20.0 | B | 10.0 | 0.8 | |
| 7Y2J225J□ () | 2.2 | ± 5 | 23.3 | 16.3 | 23.6 | 20.0 | B | 10.0 | 0.8 | |

※ □ : Capacitance tolerance code

() : Lead wire type

- Permissible ripple current frequency - current (sine wave)



In addition to the standard specifications listed above, customization is also possible. For details, please contact our sales representative.

Caution for proper use

Plastic film capacitors use organic films for their dielectrics, thus the capacitors may fume or flame, depending on the circuit conditions they are in, when they are damaged by applying over voltage or over current.

1. Circuit Design

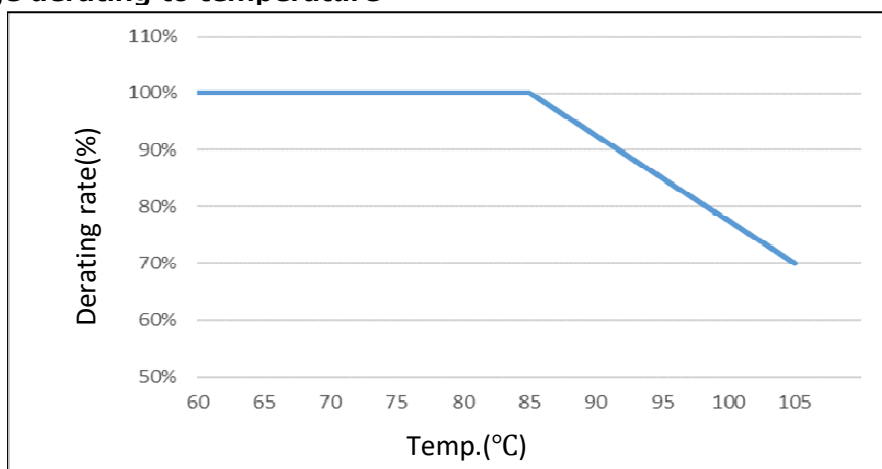
- ① Please use capacitors within the range of their characteristic ratings, only after confirming their operating and mounting environments.
- ② In case of selecting a capacitor, please select the most suitable one which fits to your operating conditions.
- ③ Capacitors used for Across-The-Line, Line-By-Pass and Antenna-Coupling to suppress noises in an equipment, the capacitors need to be approved by overseas Safety Standards or `Electric article security method` by Ministry of international Trade and Industry.
- ④ Do not conduct a rapid charge and discharge ahead of rating to a capacitor which may lead to characteristics degradations or breakdown of the capacitor.

Pulse permissible current

In case of use other than sine wave, please use both of pulse current & effective current under permissible current

- ⑤ An applying voltage to a capacitor, including the peak of surge and ripple voltage (D.C.voltage + A.C.Peak), cannot be exceeded the rating voltage.
- ⑥ Do not apply a current over its permissible level. Also, make sure the atmosphere temperature and self heat rise of a capacitor since a permissible current can be restricted by those factors.
Use under atmosphere temperature + self heat rise (within specification),
Thus please confirm surface temperature of capacitor should be within usage range of temperature.

Rated voltage derating to temperature



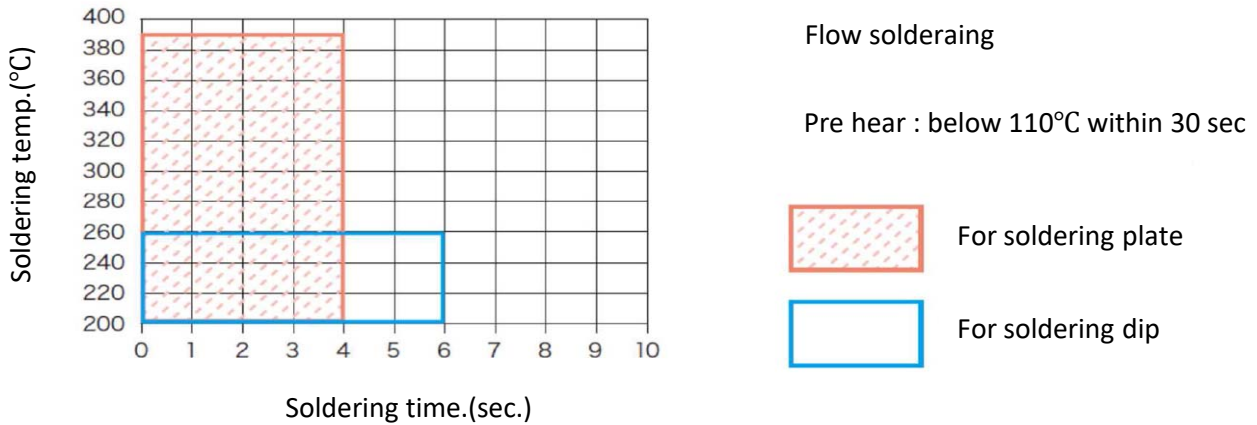
Self heat rise : Please refer below parameter in case of no wind / fan conditions

| Type | Code | Self heat rise |
|--|----------------------------|----------------|
| METALLIZED POLYESTER FILM CAPACITOR | 6C,6S | 10K max |
| METALLIZED POLYPROPYLEN FILM CAPACITOR | 4D,4F,4U,7E,7F,7H,7M,7U,G4 | 12K max |
| METALLIZED POLYPROPYLEN FILM CAPACITOR | 7Y,7Z,Z7 | 10K max |

- ⑦ Please contact us for further details, if mechanical resonance (hum) occurs from a capacitor.

2. Mouning

- ① Do not apply any exceeding tension or torsion to lead wires of a capacitor,during the mouning procces.
- ② Please mount a capacitor where it dose not contact any other heating parts,high voltage parts and other parts.
- ③ Please conduct soldering process by strictly following the specified conditions.



- ④ For the cleaning after the soldering,please use alcholic solvents and perform it quickly.

3. Case of an emergency

If a fuming,a flaming or an usual smell occurs from an equipment during its usage, please cut off the power supply by switching it off,pulling the plug out or other methods.

4. Storing and handling

- ① A storage needs to be kept indoors at -10 ~ 40°C and relative humidity of under 85% any sudden temperature changes,direct sunlights and corrosive gas around.

a)Guarantee period is six months after delivery with packing condition.

b)Guarantee period is three months after opening packing box.

※Delivery after six months(packing conditions),three months(after opening packing box), Please confirm solderbility before use it.

- ② Do not apply and exceeding vibration,shock(dropping)and pressure.

5. Abandon

In case of abandon capacitors,please seek for professionals who deal with the industrial wastes treatments.

6. Miscellaneous

For further details of caution for proper use, please refer to EIAJ RCR-2350 or contact Taitso.