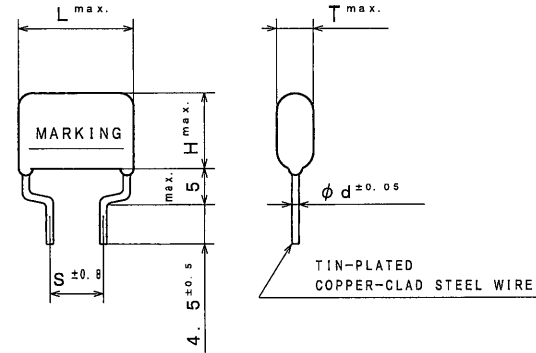


THIRD ANGLE PROJECTION

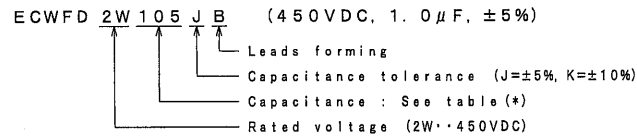
| ITEM CODE | CAPACITANCE | | DIMENSIONS | | | | | VOLUME (mm ³) |
|-----------------|-------------|-------|------------|------|------|------|-----|---------------------------|
| | μF | (*) | L | T | H | S | d | |
| ECWFD2W104 () B | 0.1 | (104) | 12.6 | 4.5 | 8.9 | 7.5 | 0.6 | 458 |
| " 2W124 () B | 0.12 | (124) | " | 4.6 | 9.0 | " | " | 463 |
| " 2W154 () B | 0.15 | (154) | " | 4.6 | 9.1 | " | " | 471 |
| " 2W184 () B | 0.18 | (184) | " | 4.8 | 9.3 | " | " | 502 |
| " 2W224 () B | 0.22 | (224) | " | 5.0 | 9.6 | " | " | 542 |
| " 2W274 () B | 0.27 | (274) | " | 5.3 | 10.0 | " | " | 593 |
| " 2W334 () B | 0.33 | (334) | " | 5.6 | 10.4 | " | " | 654 |
| " 2W394 () B | 0.39 | (394) | " | 6.0 | 10.7 | " | " | 715 |
| " 2W474 () B | 0.47 | (474) | 17.5 | 5.8 | 9.0 | " | 0.8 | 787 |
| " 2W564 () B | 0.56 | (564) | " | 6.2 | 9.4 | " | " | 874 |
| " 2W684 () B | 0.68 | (684) | " | 6.7 | 9.9 | " | " | 987 |
| " 2W824 () B | 0.82 | (824) | " | 7.2 | 10.4 | " | " | 1116 |
| " 2W105 () B | 1.0 | (105) | " | 7.8 | 11.0 | " | " | 1279 |
| " 2W125 () B | 1.2 | (125) | " | 8.5 | 11.6 | " | " | 1457 |
| " 2W155 () B | 1.5 | (155) | " | 9.3 | 12.5 | " | " | 1718 |
| " 2W185 () B | 1.8 | (185) | " | 10.1 | 13.3 | " | " | 1975 |
| " 2W225 () B | 2.2 | (225) | " | 11.1 | 14.3 | " | " | 2313 |
| " 2W275 () B | 2.7 | (275) | 25.3 | 9.0 | 13.7 | 15.0 | " | 2674 |
| " 2W335 () B | 3.3 | (335) | " | 9.8 | 14.6 | " | " | 3113 |
| " 2W395 () B | 3.9 | (395) | " | 10.7 | 15.4 | " | " | 3546 |
| " 2W475 () B | 4.7 | (475) | " | 11.7 | 16.4 | " | " | 4116 |



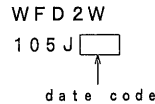
| ALTERATION | | |
|------------|--|-----------------|
| ISSUE | DESCRIPTION | DATE |
| △1 | Company name changed Correction | Apr. 1 2012 |
| △2 | Change category temperature range (+105°C~+110°C) Derating of rated voltage (1.25%/°C=0.62%/°C) | Jul. 9 2012 |
| △3 | Addition Capacitance(104~394, 275~475) | Nov. 22 2012 |
| △4 | Company name changed | Apr. 1 2013 |
| △5 | Company name changed | Apr. 1 2015 |

SPECIFICATIONS No.

ITEM CODE NUMBER STRUCTURE



MARKING EXAMPLE



PACKING QUANTITY

| Capacitance range (μF) | Quantity (pcs.) |
|------------------------|-----------------|
| △1 0.1 ~ 0.39 | 5000 |
| 0.47 ~ 0.56 | 3000 |
| 0.68 | 2800 |
| 0.82 | 2600 |
| 1.0 ~ 1.2 | 2000 |
| 1.5 | 1600 |
| 1.8 | 1400 |
| △2 2.2 ~ 2.7 | 1200 |
| △3 3.3 ~ 3.9 | 1000 |
| 4.7 | 600 |

Reference

| | |
|--|--------------------|
| DESIGN | <i>M. Yamamoto</i> |
| CHECKED | <i>M. Yamamoto</i> |
| APPROVAL | <i>S. Takata</i> |
| ESTABLISHMENT | Mar. 19, 2012 |
| TYPE NAME | |
| ECWFD2W*** () B | |
| NAME Metallized Polypropylene Film Capacitor | |
| DRAWING NAME | |
| PRODUCT DRAWING | |
| DRAWING No. | |
| B021J-J-E (1/1) | |

CONSTRUCTION

The capacitor is of non-inductive construction, wound with metallized polypropylene film dielectric.
The capacitor is enclosed in non-combustible epoxy resin and has two leads.

MARKING

Marking comprises capacitance, capacitance tolerance, rated voltage and date code.

PROPERTIES

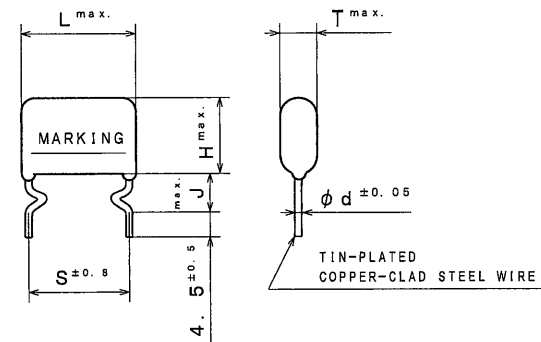
- *Capacitance : See table at 1kHz.
- *Capacitance tolerance : ±5% (J), ±10% (K) at 1kHz.
- *Rated voltage : 450VDC
- △ (Derating of rated voltage by 0.62%/°C at more than 85°C)
- *Withstand voltage (terminal-terminal) : 450VDC×150% for 60s
- *Insulation resistance : △ ≥30000MΩ (C≤0.33μF) at 100VDC, 20°C for 60s
: ≥10000MΩ·μF (C>0.33μF) at 100VDC, 20°C for 60s
- *Dissipation factor : ≤0.1% at 1kHz, 20°C
- *Category temperature range : △ From -40°C to +110°C (including temperature rise on unit surface)

QUANTITY of MINIMUM ORDER

| Capacitance range (μF) | Quantity (pcs.) |
|------------------------|-----------------|
| △ 0.47 ~ 3.9 | 1000 |
| △ 4.7 | 600 |

THIRD ANGLE PROJECTION

| ITEM CODE | CAPACITANCE μF (*) | DIMENSIONS | | | | | VOLUME (mm ³) |
|-------------------|-----------------------|------------|-------|-------|-------|------|------------------------------|
| | | L | T | H | S | d | |
| △ ECWFD2W104 () Q | 0. 1 (104) | 12. 6 | 4. 5 | 8. 9 | 10. 0 | 0. 6 | 458 |
| " 2W124 () Q | 0. 12 (124) | " | 4. 6 | 9. 0 | " | " | 463 |
| " 2W154 () Q | 0. 15 (154) | " | 4. 6 | 9. 1 | " | " | 471 |
| " 2W184 () Q | 0. 18 (184) | " | 4. 8 | 9. 3 | " | " | 502 |
| " 2W224 () Q | 0. 22 (224) | " | 5. 0 | 9. 6 | " | " | 542 |
| " 2W274 () Q | 0. 27 (274) | " | 5. 3 | 10. 0 | " | " | 593 |
| " 2W334 () Q | 0. 33 (334) | " | 5. 6 | 10. 4 | " | " | 654 |
| " 2W394 () Q | 0. 39 (394) | " | 6. 0 | 10. 7 | " | " | 715 |
| " 2W474 () Q | 0. 47 (474) | 17. 5 | 5. 8 | 9. 0 | 15. 0 | 0. 8 | 787 |
| " 2W564 () Q | 0. 56 (564) | " | 6. 2 | 9. 4 | " | " | 874 |
| " 2W684 () Q | 0. 68 (684) | " | 6. 7 | 9. 9 | " | " | 987 |
| " 2W824 () Q | 0. 82 (824) | " | 7. 2 | 10. 4 | " | " | 1116 |
| " 2W105 () Q | 1. 0 (105) | " | 7. 8 | 11. 0 | " | " | 1279 |
| " 2W125 () Q | 1. 2 (125) | " | 8. 5 | 11. 6 | " | " | 1457 |
| " 2W155 () Q | 1. 5 (155) | " | 9. 3 | 12. 5 | " | " | 1718 |
| " 2W185 () Q | 1. 8 (185) | " | 10. 1 | 13. 3 | " | " | 1975 |
| " 2W225 () Q | 2. 2 (225) | " | 11. 1 | 14. 3 | " | " | 2313 |
| △ " 2W275 () Q | 2. 7 (275) | 25. 3 | 9. 0 | 13. 7 | 22. 5 | " | 2674 |
| " 2W335 () Q | 3. 3 (335) | " | 9. 8 | 14. 6 | " | " | 3113 |
| " 2W395 () Q | 3. 9 (395) | " | 10. 7 | 15. 4 | " | " | 3546 |
| △ " 2W475 () Q | 4. 7 (475) | " | 11. 7 | 16. 4 | " | " | 4116 |

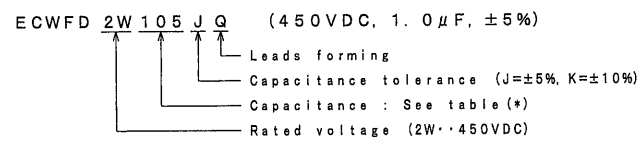


| φ d | J |
|------|------|
| 0. 6 | 5. 0 |
| 0. 8 | 7. 0 |

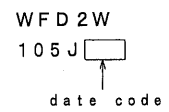
| ALTERATION | | |
|------------|---|-----------------|
| ISSUE | DESCRIPTION | DATE |
| △ | Company name changed Correction | Apr. 1 2012 |
| △ | Change: category temperature range (+105°C~+110°C) Derating of rated voltage (1. 25%/°C~0. 62%/°C) | Jul. 9 2012 |
| △ | Addition Capacitance (104~394, 275~475) | Nov. 22 2012 |
| △ | Company name changed | Apr. 1 2013 |
| △ | Company name changed | Apr. 1 2015 |

SPECIFICATIONS No.

ITEM CODE NUMBER STRUCTURE



MARKING EXAMPLE



PACKING QUANTITY

| Capacitance range (μF) | Quantity (pcs.) |
|---------------------------|--------------------|
| △ 0. 1 ~ 0. 39 | 5000 |
| 0. 47 ~ 0. 56 | 3000 |
| 0. 68 | 2800 |
| 0. 82 | 2600 |
| 1. 0 ~ 1. 2 | 2000 |
| 1. 5 | 1600 |
| 1. 8 | 1400 |
| △ 2. 2 ~ 2. 7 | 1200 |
| △ 3. 3 ~ 3. 9 | 1000 |
| △ 4. 7 | 600 |

Reference

| | |
|---|---------------|
| DESIGN | M. Michikata |
| CHECKED | M. Yamaguchi |
| APPROVAL | Y. Takata |
| ESTABLISHMENT | Mar. 19. 2012 |
| TYPE NAME | |
| ECWFD2W*** () Q | |
| NAME Metallized Polypropylene Film Capacitor | |
| DRAWING NAME | |
| PRODUCT DRAWING | |
| DRAWING No. | |
| B022J-J-E (1/1) | |

CONSTRUCTION

The capacitor is of non-inductive construction, wound with metallized polypropylene film dielectric.
The capacitor is enclosed in non-combustible epoxy resin and has two leads.

MARKING

Marking comprises capacitance, capacitance tolerance, rated voltage and date code.

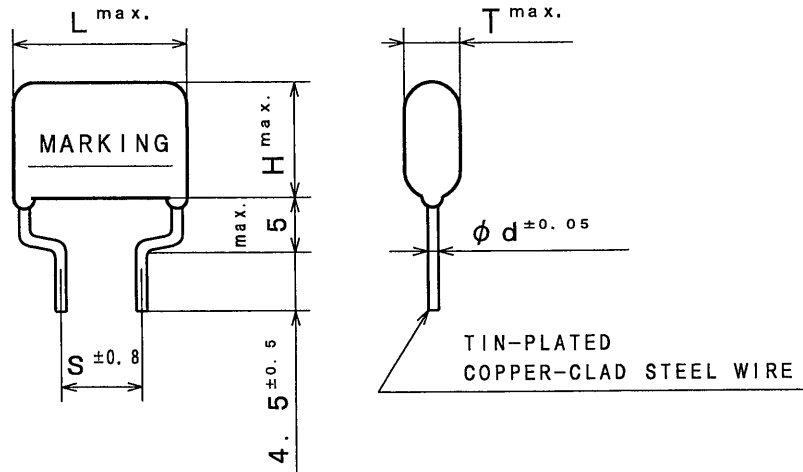
PROPERTIES

- *Capacitance : See table at 1kHz.
- *Capacitance tolerance : ±5% (J), ±10% (K) at 1kHz.
- *Rated voltage : 450VDC
- *Withstand voltage (terminal-terminal) : 450VDCx150% for 60s
- *Insulation resistance : ≥30000MΩ (C≤0. 33μF) at 100VDC, 20°C for 60s
- *Dissipation factor : ≤0. 1% at 1kHz, 20°C
- *Category temperature range : △ From -40°C to +110°C (including temperature rise on unit surface)

QUANTITY of MINIMUM ORDER

| Capacitance range (μF) | Quantity (pcs.) |
|---------------------------|--------------------|
| △ 0. 47 ~ 3. 9 | 1000 |
| △ 4. 7 | 600 |

THIRD ANGLE PROJECTION



PACKING QUANTITY

| Capacitance range (μF) | Quantity (pcs.) |
|------------------------|-----------------|
| 0.47 | 5000 |
| 0.68 | 2800 |
| 1.0 | 2000 |

QUANTITY of MINIMUM ORDER

| Capacitance range (μF) | Quantity (pcs.) |
|------------------------|-----------------|
| 0.47~1.0 | 1000 |

ALTERATION

| ISSUE | DESCRIPTION | DATE |
|-------|---|--------------|
| ① | Addition Capacitance (684, 105) | Oct. 10 2013 |
| ② | Company name changed | Apr. 1 2015 |
| ③ | Error correction (Delete Tol. in table) | Nov. 8 2016 |

SPECIFICATIONS No.

(example)

WFD 2W
474 J

date code

| ITEM CODE | RATED VOLTAGE | CAP. (μF) | DIMENSIONS | | | | | VOLUME (mm ³) |
|---------------|---------------|-----------|------------|-----|------|-----|-----|---------------------------|
| | | | L | T | H | S | d | |
| ECWFD 2W474** | 450VDC | 0.47 | 12.6 | 6.5 | 11.2 | 7.5 | 0.6 | 806 |
| " 2W684** | " | 0.68 | " | 7.7 | 12.4 | " | " | 1040 |
| " 2W105** | " | 1.0 | " | 9.2 | 13.9 | " | " | 1386 |

PB=±5% (J)
QB=±10% (K)

| | |
|---------------|-------------------|
| DESIGN | <i>M. Amakoda</i> |
| CHECKED | <i>Reference</i> |
| APPROVAL | <i>A. Kubo</i> |
| ESTABLISHMENT | Jun. 4. 2013 |

TYPE NAME
ECWFD 2W***PB
ECWFD 2W***QB

NAME Metallized Polypropylene Film Capacitor

DRAWING NAME
PRODUCT DRAWING

DRAWING No.
B090J-J-E (1/1)

Toyama·Matsue Plant
Device Solutions Business Division
Panasonic Corporation

CONSTRUCTION

The capacitor is of non-inductive construction, wound with metallized polypropylene film dielectric.
The capacitor is enclosed in non-combustible epoxy resin and has two leads.

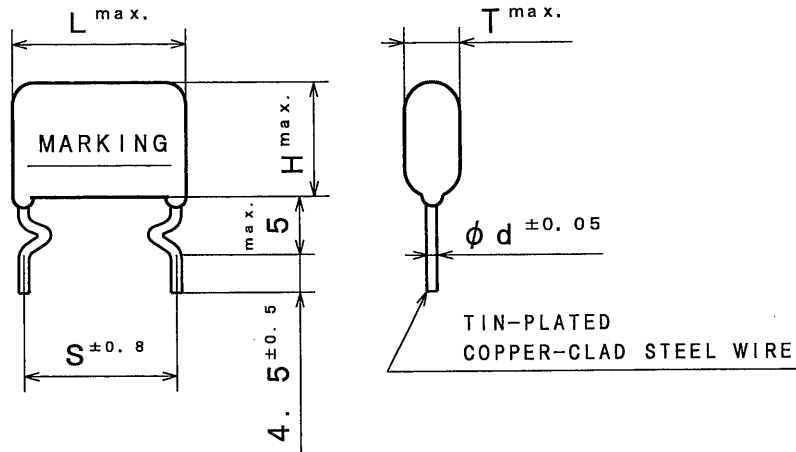
MARKING

Marking comprises capacitance, capacitance tolerance, rated voltage and date code.

PROPERTIES

- *Capacitance : See table at 1kHz.
- *Capacitance tolerance : ±5% (J), ±10% (K) at 1kHz.
- *Rated voltage : 450VDC
(Derating of rated voltage by 0.62%/°C at more than 85°C)
- *Withstand voltage (terminal-terminal) : 450VDC×150% for 60s
- *Insulation resistance : ≥10000MΩ·μF at 100VDC, 20°C for 60s
- *Dissipation factor : ≤0.1% at 1kHz, 20°C
- *Category temperature range : From -40°C to +110°C
(including temperature rise on unit surface)

THIRD ANGLE PROJECTION



PACKING QUANTITY

| Capacitance range (μF) | Quantity (pcs.) |
|------------------------|-----------------|
| 0.47 | 5000 |
| 0.68 | 2800 |
| 1.0 | 2000 |

QUANTITY of MINIMUM ORDER

| Capacitance range (μF) | Quantity (pcs.) |
|------------------------|-----------------|
| 0.47~1.0 | 1000 |

| ALTERATION | | |
|--------------------|--|-----------------|
| ISSUE | DESCRIPTION | DATE |
| ① | Addition Capacitance (684, 105) | Oct. 10 2013 |
| ② | Company name changed | Apr. 1 2015 |
| ③ | Error correction (Delete Tol. in table) | Nov. 8 2016 |
| SPECIFICATIONS No. | | |

| ITEM CODE | RATED VOLTAGE | CAP. (μF) | DIMENSIONS | | | | | VOLUME (mm ³) |
|---------------|---------------|-----------|------------|-----|------|------|-----|---------------------------|
| | | | L | T | H | S | d | |
| ECWFD 2W474** | 450VDC | 0.47 | 12.6 | 6.5 | 11.2 | 10.0 | 0.6 | 806 |
| " 2W684** | " | 0.68 | " | 7.7 | 12.4 | " | " | 1040 |
| " 2W105** | " | 1.0 | " | 9.2 | 13.9 | " | " | 1386 |

①
①

PQ=±5% (J)
QQ=±10% (K)

CONSTRUCTION

The capacitor is of non-inductive construction, wound with metallized polypropylene film dielectric.

The capacitor is enclosed in non-combustible epoxy resin and has two leads.

MARKING

Marking comprises capacitance, capacitance tolerance, rated voltage and date code.

PROPERTIES

- *Capacitance : See table at 1kHz.
- *Capacitance tolerance : ±5% (J), ±10% (K) at 1kHz.
- *Rated voltage : 450VDC
(Derating of rated voltage by 0.62%/°C at more than 85°C)
- *Withstand voltage (terminal-terminal) : 450VDC×150% for 60s
- *Insulation resistance : ≥10000MΩ·μF at 100VDC, 20°C for 60s
- *Dissipation factor : ≤0.1% at 1kHz, 20°C
- *Category temperature range : From -40°C to +110°C
(including temperature rise on unit surface)

(example)

WFD 2W

474 J

↑
date code

| | |
|---|------------------------|
| DESIGN | <i>An. Mchida</i> |
| CHECKED | Reference |
| APPROVAL | <i>No. J. K. M. M.</i> |
| ESTABLISHMENT | Jun. 4, 2013 |
| TYPE NAME | |
| ECWFD 2W***PQ ECWFD 2W***QQ | |
| NAME Metallized Polypropylene Film Capacitor | |
| DRAWING NAME | |
| PRODUCT DRAWING | |
| DRAWING No. | |
| B091J-J-E (1/1) | |

Toyama-Matsue Plant
Device Solutions Business Division
Panasonic Corporation