

Polypropylene Film Foil Capacitors

KP Axial Epoxy Lacquered Type

APPLICATIONS

In circuits where close tolerance, reliability and low losses are of prime importance, for example: tuned circuits, filter and timing networks

MARKING

C-value; tolerance; rated voltage; code for dielectric material; production date code in accordance with "IEC 60062; clause 5"; manufacturer

Letter codes for year and numbers for month of production

| YEAR | LETTER CODE | MONTH | CODE |
|------|-------------|-----------|------|
| 2003 | R | June | 6 |
| 2004 | S | July | 7 |
| 2005 | T | August | 8 |
| 2006 | U | September | 9 |
| 2007 | V | October | O |
| 2008 | W | November | N |
| 2009 | X | December | D |

DIELECTRIC

Polypropylene film

ELECTRODES

Metal foils

COATING

Flame retardant epoxy material (UL-class 94 V-0)

CONSTRUCTION

Film/foil mono construction

LEADS

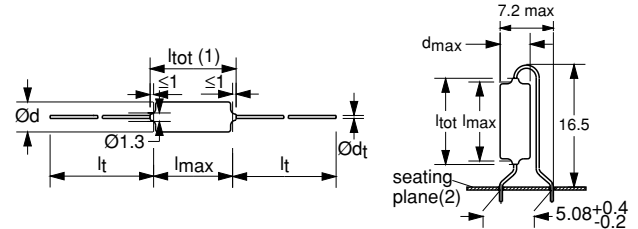
Tinned wire

CAPACITANCE RANGE (E12 SERIES)

47 to 62000 pF

CAPACITANCE TOLERANCE

±5%; ±2%; ±1%



Dimensions in mm.

- (1) $l_{tot} \leq 13 \text{ mm}$ for $l_{max} = 11 \text{ mm}$
 $l_{tot} \leq 16 \text{ mm}$ for $l_{max} = 15 \text{ mm}$.
 (2) Hole $\varnothing 1.0$.

RATED (DC) VOLTAGE

63 V; 160 V; 250 V; 400 V; 630 V

RATED (AC) VOLTAGE

40 V; 63 V; 125 V; 160 V; 200 V

CLIMATIC CATEGORY

40/100/56

RATED TEMPERATURE

85 °C

MAXIMUM APPLICATION TEMPERATURE

100 °C

REFERENCE SPECIFICATIONS

IEC 60384-13

FEATURES

Supplied loose in box, taped on reel or unidirectional

STABILITY CLASS

63; 160; 250 V versions: class 1;
 400; 630 V versions: class 2

DETAIL SPECIFICATION

For more detailed data and test requirements see "Type detail specification HQN-384-13/101"

KP 460 to 464

Vishay BCcomponents

Polypropylene Film Foil Capacitors
KP Axial Epoxy Lacquered Type



COMPOSITION OF CATALOG NUMBER

| TYPE AND VOLTAGES | |
|-------------------|-------|
| 460 | 63 V |
| 461 | 160 V |
| 462 | 250 V |
| 463 | 400 V |
| 464 | 630 V |

CAPACITANCE
(numerically)

| MULTIPLIER (nF) | |
|--------------------|---|
| 0.0001 | 9 |
| 0.001 | 1 |
| 0.01 | 2 |
| 0.1 | 3 |

Example:
1003 = 100 x 0.1 = 10 nF

2222 46. X XXX X

| TYPE | PACKAGING | LEAD CONFIGURATION AND TAPE DISTANCE | PREFERRED TYPES | | | | | |
|----------------|---------------|--------------------------------------|-----------------|------|-------|-------|-------|-------|
| | | | C-TOL | 63 V | 160 V | 250 V | 400 V | 630 V |
| 460 | Taped on reel | tape distance 63.5 mm | ±1% | 8 | | | | |
| | | | ±2% | 7 | | | | |
| 461 | Taped on reel | tape distance 63.5 mm | ±1% | | 8 | | | |
| | | | ±2% | | 7 | | | |
| 462 | Taped on reel | tape distance 63.5 mm | ±1% | | | 8 | | |
| | | | ±2% | | | 7 | | |
| 463 | Taped on reel | tape distance 63.5 mm | ±1% | | | | 8 | |
| | | | ±2% | | | | 7 | |
| 464 | Taped on reel | tape distance 63.5 mm | ±1% | | | | | 8 |
| | | | ±2% | | | | | 7 |
| | | | ON REQUEST | | | | | |
| 460 | Taped on reel | tape distance 63.5 mm | ±5% | 6 | | | | |
| | | | ±1% | 4 | | | | |
| | Loose in box | lead length 30.0 or 28.0 mm | ±2% | 3 | | | | |
| | | | ±5% | 2 | | | | |
| | | | ±1% | 1 | | | | |
| Unidirectional | | ±2% | 0 | | | | | |
| 461 | Taped on reel | tape distance 63.5 mm | ±5% | | 6 | | | |
| | | | ±1% | | 4 | | | |
| | Loose in box | lead length 30.0 or 28.0 mm | ±2% | | 3 | | | |
| | | | ±5% | | 2 | | | |
| | | | ±1% | | 1 | | | |
| Unidirectional | | ±2% | | 0 | | | | |
| 462 | Taped on reel | tape distance 63.5 mm | ±5% | | | 6 | | |
| | | | ±1% | | | 4 | | |
| | Loose in box | lead length 30.0 or 28.0 mm | ±2% | | | 3 | | |
| | | | ±5% | | | 2 | | |
| | | | ±1% | | | 1 | | |
| Unidirectional | | ±2% | | | 0 | | | |
| 463 | Taped on reel | tape distance 63.5 mm | ±5% | | | | 6 | |
| | | | ±1% | | | | 4 | |
| | Loose in box | lead length 30.0 or 28.0 mm | ±2% | | | | 3 | |
| | | | ±5% | | | | 2 | |
| | | | ±1% | | | | 1 | |
| Unidirectional | | ±2% | | | | 0 | | |
| 464 | Taped on reel | tape distance 63.5 mm | ±5% | | | | | 6 |
| | | | ±1% | | | | | 4 |
| | Loose in box | lead length 30.0 or 28.0 mm | ±2% | | | | | 3 |
| | | | ±5% | | | | | 2 |
| | | | ±1% | | | | | 1 |
| Unidirectional | | ±2% | | | | | 0 | |

**SPECIFIC REFERENCE DATA**

| DESCRIPTION | VALUE | | | | |
|-------------------------------------------------------------------------|-----------------------|------------------------|-----------------|------------------------|------------------------|
| | at 10 kHz | at 100 kHz | at 100 kHz | at 1MHz ⁽¹⁾ | |
| Tangent of loss angle: | | | | | |
| C ≤ 1000 pF | ≤5 × 10 ⁻⁴ | – | – | – | ≤10 × 10 ⁻⁴ |
| 1000 pF < C ≤ 5000 pF | ≤5 × 10 ⁻⁴ | ≤10 × 10 ⁻⁴ | – | – | – |
| 5000 pF < C ≤ 20000 pF | ≤5 × 10 ⁻⁴ | ≤15 × 10 ⁻⁴ | – | – | – |
| 20000 pF < C ≤ 47000 pF | ≤5 × 10 ⁻⁴ | ≤25 × 10 ⁻⁴ | – | – | – |
| C > 47000 pF | ≤5 × 10 ⁻⁴ | ≤40 × 10 ⁻⁴ | – | – | – |
| Rated voltage pulse slope (dU/dt) _R | at 63 V (DC) | at 160 V (DC) | at 250 V (DC) | at 400 V (DC) | at 630 V (DC) |
| | 10000 V/μs | 10000 V/μs | 10000 V/μs | 10000 V/μs | 10000 V/μs |
| R between leads: | | | | | |
| at 10 V; 1 minute | >100000 MΩ | | | | |
| at 100 V; 1 minute | | >100000 MΩ | >100000 MΩ | >100000 MΩ | >100000 MΩ |
| R between interconnecting leads and case; | | | | | |
| at 10 V; 1 minute | >100000 MΩ | | | | |
| at 100 V; 1 minute | | >100000 MΩ | >100000 MΩ | >100000 MΩ | |
| at 100 V; 1 minute | | | | | >100000 MΩ |
| Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s | 126 V; 1 minute | 320 V; 1 minute | 500 V; 1 minute | 800 V; 1 minute | 1260 V; 1 minute |
| Withstanding (DC) voltage between leads and case | 400 V; 1 minute | 400 V; 1 minute | 500 V; 1 minute | 800 V; 1 minute | 1260 V; 1 minute |

Note

1. For unidirectional capacitors ≤13 × 10⁻⁴.

KP 460 to 464

Vishay BCcomponents

Polypropylene Film Foil Capacitors
KP Axial Epoxy Lacquered Type



$U_{Rdc} = 63 V$; $U_{Rac} = 40 V$

| C (E 24) (pF) | DIMENSIONS $d_{max} \times l_{max}$ (mm) | MASS (g) | CATALOG NUMBER 2222 460 AND PACKAGING | | | | | | | |
|----------------------------------------------------------------------------------------|------------------------------------------------|-------------|---------------------------------------------|-------|------|------------------------------------|----------------|-------|-------------------|-------------------|
| | | | TAPED ON REEL | | | LOOSE IN BOX | UNIDIRECTIONAL | | | |
| | | | TAPE DISTANCE 63.5 mm | | | | SPQ | SPQ | C-tol = $\pm 2\%$ | C-tol = $\pm 1\%$ |
| | | | last 5 digits of catalog number | | SPQ | last 5 digits of catalog number | | | SPQ | |
| $l_t = 30.0 \text{ mm}$; $d_t = 0.60 \pm 0.06 \text{ mm}$ | | | | | | | | | | |
| 6800 | 5.0 × 11.0 | 0.5 | 76802 | 86802 | 2500 | 250 | 06802 | 16802 | 1000 | |
| 7500 | | 0.5 | 77502 | 87502 | | | 07502 | 17502 | | |
| 8200 | | 0.6 | 78202 | 88202 | | | 08202 | 18202 | | |
| 9100 | | 0.6 | 79102 | 89102 | | | 09102 | 19102 | | |
| $l_t = 28.0 \text{ mm}$; $d_t = 0.60 \pm 0.06 \text{ mm}$ | | | | | | | | | | |
| 10000 | 6.0 × 15.0 | 0.6 | 71003 | 81003 | 1500 | 250 | | | | |
| 11000 | | 0.6 | 71103 | 81103 | | | | | | |
| 12000 | | 0.7 | 71203 | 81203 | | | | | | |
| 13000 | | 0.8 | 71303 | 81303 | | | | | | |
| 15000 | | 0.7 | 71503 | 81503 | | | | | | |
| 16000 | | 0.7 | 71603 | 81603 | | | | | | |
| 18000 | | 0.8 | 71803 | 81803 | | | | | | |
| 20000 | | 0.8 | 72003 | 82003 | | | | | | |
| 22000 | | 0.9 | 72203 | 82203 | | | | | | |
| 24000 | 6.5 × 15.0 | 0.9 | 72403 | 82403 | 1500 | 250 | | | | |
| 27000 | | 1.0 | 72703 | 82703 | | | | | | |
| 30000 | 7.0 × 15.0 | 1.1 | 73003 | 83003 | 1000 | 200 | | | | |
| 33000 | | 1.2 | 73303 | 83303 | | | | | | |
| 36000 | | 1.2 | 73603 | 83603 | | | | | | |
| 39000 | 7.5 × 15.0 | 1.3 | 73903 | 83903 | 1000 | 150 | | | | |
| 43000 | | 1.4 | 74303 | 84303 | | | | | | |
| 47000 | 8.0 × 15.0 | 1.5 | 74703 | 84703 | 1000 | 150 | | | | |
| 51000 | | 1.6 | 75103 | 85103 | | | | | | |
| 56000 | 8.5 × 15.0 | 1.7 | 75603 | 85603 | 1000 | 125 | | | | |
| 62000 | | 1.8 | 76203 | 86203 | | | | | | |

Available on request

| PACKAGING | TAPE DISTANCE (mm) |
|-------------------|--------------------|
| Taped in ammopack | 52.5 |
| | 63.5 |
| Taped on reel | 52.5 |



$U_{Rdc} = 160\text{ V}$; $U_{Rac} = 63\text{ V}$

| C (E 24) (pF) | DIMENSIONS $d_{max} \times l_{max}$ (mm) | MASS (g) | CATALOG NUMBER 2222 461 AND PACKAGING | | | | | | |
|--------------------------------------------------------------------------------------|------------------------------------------------|-------------|---------------------------------------------|-------------|------|-----------------|----------------|-------------|------|
| | | | TAPED ON REEL | | | LOOSE IN BOX | UNIDIRECTIONAL | | |
| | | | TAPE DISTANCE 63.5 mm | | | | C-tol = ±2% | C-tol = ±1% | SPQ |
| | | | C-tol = ±2% | C-tol = ±1% | SPQ | C-tol = ±2% | | | |
| $l_t = 30.0\text{ mm}$; $d_t = 0.60 \pm 0.06\text{ mm}$ | | | | | | | | | |
| 3600 | 5.0 × 11.0 | 0.5 | 73602 | 83602 | 2500 | 250 | 03602 | 13602 | 1000 |
| 3900 | | 0.5 | 73902 | 83902 | | | 03902 | 13902 | |
| 4300 | | 0.5 | 74302 | 84302 | | | 04302 | 14302 | |
| 4700 | | 0.5 | 74702 | 84702 | | | 04702 | 14702 | |
| 5100 | | 0.5 | 75102 | 85102 | | | 05102 | 15102 | |
| 5600 | | 0.5 | 75602 | 85602 | | | 05602 | 15602 | |
| 6200 | | 0.6 | 76202 | 86202 | | | 06202 | 16202 | |
| $l_t = 28.0\text{ mm}$; $d_t = 0.60 \pm 0.06\text{ mm}$ | | | | | | | | | |
| 6800 | 6.0 × 15.0 | 0.4 | 76802 | 86802 | 1500 | 250 | | | |
| 7500 | | 0.7 | 77502 | 87502 | | | | | |
| 8200 | | 0.6 | 78202 | 88202 | | | | | |
| 9100 | | 0.6 | 79102 | 89102 | | | | | |
| 10000 | | 0.7 | 71003 | 81003 | | | | | |
| 11000 | | 0.7 | 71103 | 81103 | | | | | |
| 12000 | | 0.7 | 71203 | 81203 | | | | | |
| 13000 | 0.8 | 71303 | 81303 | | | | | | |
| 15000 | 0.8 | 71503 | 81503 | | | | | | |
| 16000 | 6.5 × 15.0 | 0.9 | 71603 | 81603 | 1500 | 250 | | | |
| 18000 | | 0.9 | 71803 | 81803 | | | | | |
| 20000 | | 1.0 | 72003 | 82003 | | | | | |
| 22000 | 7.0 × 15.0 | 1.1 | 72203 | 82203 | 1000 | 200 | | | |
| 24000 | | 1.1 | 72403 | 82403 | | | | | |
| 27000 | 7.5 × 15.0 | 1.2 | 72703 | 82703 | 1000 | 150 | | | |
| 30000 | 8.0 × 15.0 | 1.3 | 73003 | 83003 | 1000 | 150 | | | |
| 33000 | | 1.4 | 73303 | 83303 | | | | | |
| 36000 | 8.5 × 15.0 | 1.5 | 73603 | 83603 | 1000 | 125 | | | |
| 39000 | | 1.6 | 73903 | 83903 | | | | | |

Available on request

| PACKAGING | TAPE DISTANCE (mm) |
|-------------------|--------------------|
| Taped in ammopack | 52.5 |
| | 63.5 |
| Taped on reel | 52.5 |

KP 460 to 464

Vishay BCcomponents

Polypropylene Film Foil Capacitors
KP Axial Epoxy Lacquered Type



$U_{Rdc} = 250 \text{ V}$; $U_{Rac} = 125 \text{ V}$

| C (E 24) (pF) | DIMENSIONS $d_{max} \times l_{max}$ (mm) | MASS (g) | CATALOG NUMBER 2222 462 AND PACKAGING | | | | | | | | | |
|----------------------------------------------------------------------------------------|------------------------------------------------|-------------|---------------------------------------------|-------|-------|------------------------------------|----------------|-------|-------------------|-------------------|-----|--|
| | | | TAPED ON REEL | | | LOOSE IN BOX | UNIDIRECTIONAL | | | | | |
| | | | TAPE DISTANCE 63.5 mm | | | | SPQ | SPQ | C-tol = $\pm 2\%$ | C-tol = $\pm 1\%$ | SPQ | |
| | | | last 5 digits of catalog number | | SPQ | last 5 digits of catalog number | | | SPQ | | | |
| $l_t = 30.0 \text{ mm}$; $d_t = 0.60 \pm 0.06 \text{ mm}$ | | | | | | | | | | | | |
| 1200 | 5.0 × 11.0 | 0.5 | 71202 | 81202 | 2500 | 250 | 01202 | 11202 | 1000 | | | |
| 1300 | | 0.5 | 71302 | 81302 | | | 01302 | 11302 | | | | |
| 1500 | | 0.4 | 71502 | 81502 | | | 01502 | 11502 | | | | |
| 1600 | | 0.5 | 71602 | 81602 | | | 01602 | 11602 | | | | |
| 1800 | | 0.6 | 71802 | 81802 | | | 01802 | 11802 | | | | |
| 2000 | | 0.6 | 72002 | 82002 | | | 02002 | 12002 | | | | |
| 2200 | | 0.5 | 72202 | 82202 | | | 02202 | 12202 | | | | |
| 2400 | | 0.5 | 72402 | 82402 | | | 02402 | 12402 | | | | |
| 2700 | | 0.5 | 72702 | 82702 | | | 02702 | 12702 | | | | |
| 3000 | | 0.5 | 73002 | 83002 | | | 03002 | 13002 | | | | |
| 3300 | | 0.5 | 73302 | 83302 | | | 03302 | 13302 | | | | |
| $l_t = 28.0 \text{ mm}$; $d_t = 0.60 \pm 0.06 \text{ mm}$ | | | | | | | | | | | | |
| 3600 | | 6.0 × 15.0 | 0.5 | 73602 | | | 83602 | 1500 | | 250 | | |
| 3900 | 0.5 | | 73902 | 83902 | | | | | | | | |
| 4300 | 0.6 | | 74302 | 84302 | | | | | | | | |
| 4700 | 0.6 | | 74702 | 84702 | | | | | | | | |
| 5100 | 0.6 | | 75102 | 85102 | | | | | | | | |
| 5600 | 0.6 | | 75602 | 85602 | | | | | | | | |
| 6200 | 0.7 | | 76202 | 86202 | | | | | | | | |
| 6800 | 0.7 | | 76802 | 86802 | | | | | | | | |
| 7500 | 0.7 | | 77502 | 87502 | | | | | | | | |
| 8200 | 6.5 × 15.0 | | 0.8 | 78202 | 88202 | 1500 | 250 | | | | | |
| 9100 | | 0.8 | 79102 | 89102 | | | | | | | | |
| 10000 | | 0.9 | 71003 | 81003 | | | | | | | | |
| 11000 | 7.0 × 15.0 | 0.9 | 71103 | 81103 | 1000 | 200 | | | | | | |
| 12000 | | 1.0 | 71203 | 81203 | | | | | | | | |
| 13000 | | 1.0 | 71303 | 81303 | | | | | | | | |
| 15000 | 7.5 × 15.0 | 1.1 | 71503 | 81503 | 1000 | 150 | | | | | | |
| 16000 | | 1.2 | 71603 | 81603 | | | | | | | | |
| 18000 | 8.0 × 15.0 | 1.3 | 71803 | 81803 | 1000 | 150 | | | | | | |
| 20000 | 8.5 × 15.0 | 1.4 | 72003 | 82003 | 1000 | 125 | | | | | | |
| 22000 | | 1.5 | 72203 | 82203 | | | | | | | | |

Available on request

| PACKAGING | TAPE DISTANCE (mm) |
|-------------------|--------------------|
| Taped in ammopack | 52.5 |
| | 63.5 |
| Taped on reel | 52.5 |



$U_{Rdc} = 400\text{ V}$; $U_{Rac} = 160\text{ V}$

| C (E 24) (pF) | DIMENSIONS $d_{max} \times l_{max}$ (mm) | MASS (g) | CATALOG NUMBER 2222 463 AND PACKAGING | | | | | | |
|--------------------------------------------------------------------------------------|------------------------------------------------|-------------|---------------------------------------------|-------------|------|------------------------------------|----------------|-------------|------|
| | | | TAPED ON REEL | | | LOOSE IN BOX | UNIDIRECTIONAL | | |
| | | | TAPE DISTANCE 63.5 mm | | | | C-tol = ±2% | C-tol = ±1% | SPQ |
| | | | C-tol = ±2% | C-tol = ±1% | SPQ | C-tol = ±2% | | | |
| | | | last 5 digits of catalog number | | SPQ | last 5 digits of catalog number | | SPQ | |
| $l_t = 30.0\text{ mm}$; $d_t = 0.60 \pm 0.06\text{ mm}$ | | | | | | | | | |
| 620 | 5.0 × 11.0 | 0.5 | 76201 | 86201 | 2500 | 250 | 06201 | 16201 | 1000 |
| 680 | | 0.5 | 76801 | 86801 | | | 06801 | 16801 | |
| 750 | | 0.5 | 77501 | 87501 | | | 07501 | 17501 | |
| 820 | | 0.5 | 78201 | 88201 | | | 08201 | 18201 | |
| 910 | | 0.5 | 79101 | 89101 | | | 09101 | 19101 | |
| 1000 | | 0.5 | 71002 | 81002 | | | 01002 | 11002 | |
| 1100 | | 0.5 | 71102 | 81102 | | | 01102 | 11102 | |
| $l_t = 28.0\text{ mm}$; $d_t = 0.60 \pm 0.06\text{ mm}$ | | | | | | | | | |
| 1200 | 6.0 × 15.0 | 0.5 | 71202 | 81202 | 1500 | 250 | | | |
| 1300 | | 0.5 | 71302 | 81302 | | | | | |
| 1500 | | 0.5 | 71502 | 81502 | | | | | |
| 1600 | | 0.5 | 71602 | 81602 | | | | | |
| 1800 | | 0.5 | 71802 | 81802 | | | | | |
| 2000 | | 0.5 | 72002 | 82002 | | | | | |
| 2200 | 6.5 × 15.0 | 0.5 | 72202 | 82202 | 1500 | 250 | | | |
| 2400 | | 0.5 | 72402 | 82402 | | | | | |
| 2700 | | 0.6 | 72702 | 82702 | | | | | |
| 3000 | | 0.7 | 73002 | 83002 | | | | | |
| 3300 | 7.0 × 15.0 | 0.7 | 73302 | 83302 | 1000 | 200 | | | |
| 3600 | | 0.7 | 73602 | 83602 | | | | | |
| 3900 | | 0.8 | 73902 | 83902 | | | | | |
| 4300 | 7.5 × 15.0 | 0.8 | 74302 | 84302 | 1000 | 150 | | | |
| 4700 | | 0.9 | 74702 | 84702 | | | | | |
| 5100 | | 0.9 | 75102 | 85102 | | | | | |
| 5600 | 8.0 × 15.0 | 1.0 | 75602 | 85602 | 1000 | 150 | | | |
| 6200 | | 1.0 | 76202 | 86202 | | | | | |
| 6800 | 8.5 × 15.0 | 1.1 | 76802 | 86802 | 1000 | 125 | | | |
| 7500 | | 1.2 | 77502 | 87502 | | | | | |
| 8200 | | 1.3 | 78202 | 88202 | | | | | |

Available on request

| PACKAGING | TAPE DISTANCE (mm) |
|------------------|--------------------|
| Taped in ammpack | 52.5 |
| | 63.5 |
| Taped on reel | 52.5 |

KP 460 to 464

Vishay BCcomponents

Polypropylene Film Foil Capacitors
KP Axial Epoxy Lacquered Type



$U_{Rdc} = 630\text{ V}$; $U_{Rac} = 200\text{ V}$

| C (E 24) (pF) | DIMENSIONS $d_{max} \times l_{max}$ (mm) | MASS (g) | CATALOG NUMBER 2222 464 AND PACKAGING | | | | | | |
|--------------------------------------------------------------------------------------|------------------------------------------------|-------------|---------------------------------------------|-------------------|------------------------------------|-------------------|----------------|-------|------|
| | | | TAPED ON REEL | | | LOOSE IN BOX | UNIDIRECTIONAL | | |
| | | | TAPE DISTANCE 63.5 mm | | | | SPQ | SPQ | SPQ |
| | | | C-tol = $\pm 2\%$ | C-tol = $\pm 1\%$ | last 5 digits of catalog number | C-tol = $\pm 2\%$ | | | |
| $l_t = 30.0\text{ mm}$; $d_t = 0.60 \pm 0.06\text{ mm}$ | | | | | | | | | |
| 47 | 5.0 × 11.0 | 0.4 | 74709 | 84709 | 2500 | 250 | 04709 | 14709 | 1000 |
| 51 | | 0.4 | 75109 | 85109 | | | 05109 | 15109 | |
| 56 | | 0.4 | 75609 | 85609 | | | 05609 | 15609 | |
| 62 | | 0.4 | 76209 | 86209 | | | 06209 | 16209 | |
| 68 | | 0.4 | 76809 | 86809 | | | 06809 | 16809 | |
| 75 | | 0.4 | 77509 | 87509 | | | 07509 | 17509 | |
| 82 | | 0.4 | 78209 | 88209 | | | 08209 | 18209 | |
| 91 | | 0.4 | 79109 | 89109 | | | 09109 | 19109 | |
| 100 | | 0.4 | 71001 | 81001 | | | 01001 | 11001 | |
| 110 | | 0.4 | 71101 | 81101 | | | 01101 | 11101 | |
| 120 | | 0.4 | 71201 | 81201 | | | 01201 | 11201 | |
| 130 | | 0.5 | 71301 | 81301 | | | 01301 | 11301 | |
| 150 | | 0.4 | 71501 | 81501 | | | 01501 | 11501 | |
| 160 | | 0.4 | 71601 | 81601 | | | 01601 | 11601 | |
| 180 | | 0.5 | 71801 | 81801 | | | 01801 | 11801 | |
| 200 | | 0.5 | 72001 | 82001 | | | 02001 | 12001 | |
| 220 | | 0.6 | 72201 | 82201 | | | 02201 | 12201 | |
| 240 | | 0.6 | 72401 | 82401 | | | 02401 | 12401 | |
| 270 | | 0.6 | 72701 | 82701 | | | 02701 | 12701 | |
| 300 | | 0.7 | 73001 | 83001 | | | 03001 | 13001 | |
| 330 | | 0.4 | 73301 | 83301 | | | 03301 | 13301 | |
| 360 | | 0.4 | 73601 | 83601 | | | 03601 | 13601 | |
| 390 | | 0.5 | 73901 | 83901 | | | 03901 | 13901 | |
| 430 | | 0.5 | 74301 | 84301 | | | 04301 | 14301 | |
| 470 | | 0.5 | 74701 | 84701 | | | 04701 | 14701 | |
| 510 | | 0.5 | 75101 | 85101 | | | 05101 | 15101 | |
| 560 | | 0.5 | 75601 | 85601 | | | 05601 | 15601 | |
| $l_t = 28.0\text{ mm}$; $d_t = 0.60 \pm 0.06\text{ mm}$ | | | | | | | | | |
| 620 | 6.0 × 15.0 | 0.5 | 76201 | 86201 | 1500 | 250 | | | |
| 680 | | 0.5 | 76801 | 86801 | | | | | |
| 750 | | 0.5 | 77501 | 87501 | | | | | |
| 820 | | 0.5 | 78201 | 88201 | | | | | |
| 910 | | 0.5 | 79101 | 89101 | | | | | |
| 1000 | | 0.5 | 71002 | 81002 | | | | | |
| 1100 | | 0.5 | 71102 | 81102 | | | | | |
| 1200 | | 0.5 | 71202 | 81202 | | | | | |
| 1300 | 6.5 × 15.0 | 0.6 | 71302 | 81302 | 1500 | 250 | | | |
| 1500 | | 0.6 | 71502 | 81502 | | | | | |
| 1600 | | 0.7 | 71602 | 81602 | | | | | |
| 1800 | | 0.7 | 71802 | 81802 | | | | | |



| C (E 24) (pF) | DIMENSIONS $d_{max} \times l_{max}$ (mm) | MASS (g) | CATALOG NUMBER 2222 464 AND PACKAGING | | | | | |
|---------------------|------------------------------------------------|-------------|---------------------------------------------|-------------|------|-----------------|------------------------------------|-------------|
| | | | TAPED ON REEL | | | LOOSE IN BOX | UNIDIRECTIONAL | |
| | | | TAPE DISTANCE 63.5 mm | | | | C-tol = ±2% | C-tol = ±1% |
| | | | C-tol = ±2% | C-tol = ±1% | SPQ | SPQ | | |
| 2000 | 7.0 × 15.0 | 0.8 | 72002 | 82002 | 1000 | 200 | last 5 digits of catalog number | SPQ |
| 2200 | | 0.9 | 72202 | 82202 | | | | |
| 2400 | | 0.9 | 72402 | 82402 | | | | |
| 2700 | 7.5 × 15.0 | 0.9 | 72702 | 82702 | 1000 | 150 | last 5 digits of catalog number | SPQ |
| 3000 | | 1.0 | 73002 | 83002 | | | | |
| 3300 | 8.0 × 15.0 | 1.1 | 73302 | 83302 | 1000 | 150 | last 5 digits of catalog number | SPQ |
| 3600 | | 1.2 | 73602 | 83602 | | | | |
| 3900 | | 1.3 | 73902 | 83902 | | | | |
| 4300 | 8.5 × 15.0 | 1.4 | 74302 | 84302 | 1000 | 125 | last 5 digits of catalog number | SPQ |
| 4700 | | 1.5 | 74702 | 84702 | | | | |

Available on request

| PACKAGING | TAPE DISTANCE (mm) |
|-------------------|--------------------|
| Taped in ammopack | 52.5 |
| | 63.5 |
| Taped on reel | 52.5 |

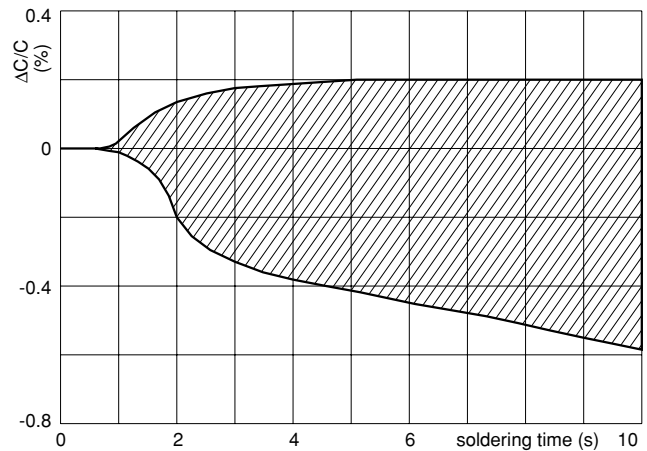
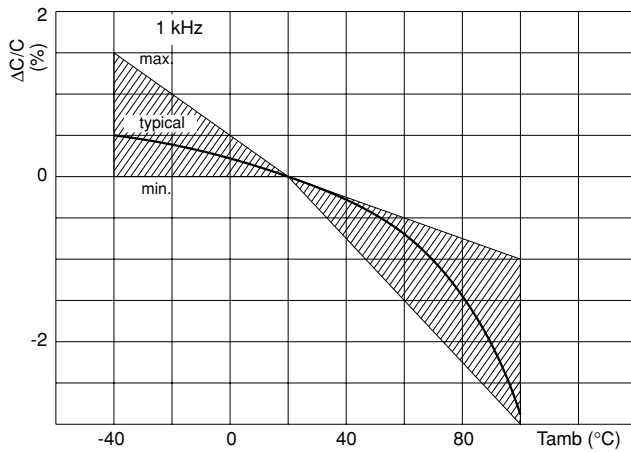
CAPACITANCE

Temperature coefficient:

- between -40 and +20 °C for C ≤ 1000 pF: $-(125 \pm 125) \times 10^{-6}/K$
- between -40 and +20 °C for C > 1000 pF:
 $-(125 \pm 60) \times 10^{-6}/K$
- between +20 and +100 °C: $-(250 \pm 120) \times 10^{-6}/K$.

SOLDERING CONDITIONS

The capacitance stability is dependent on the maximum temperature the capacitor reaches during soldering. The figure below shows the typical $\Delta C/C$ as a function of soldering time under the worst possible mounting conditions (horizontal on the PCB, minimum possible pitch) and with 80 °C preheating.



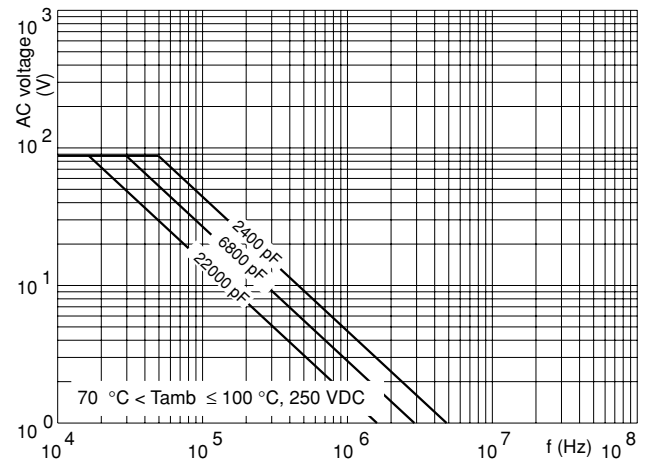
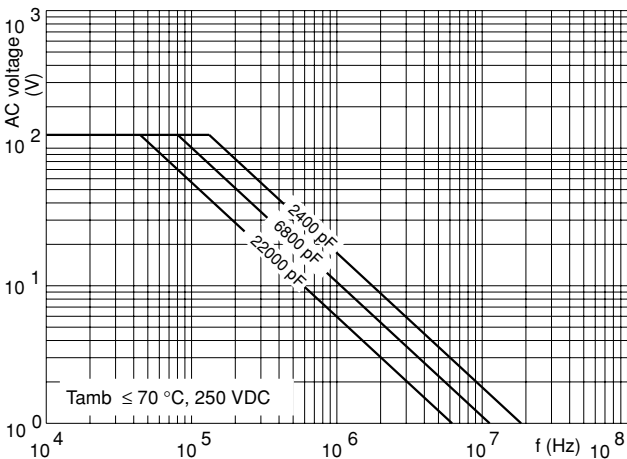
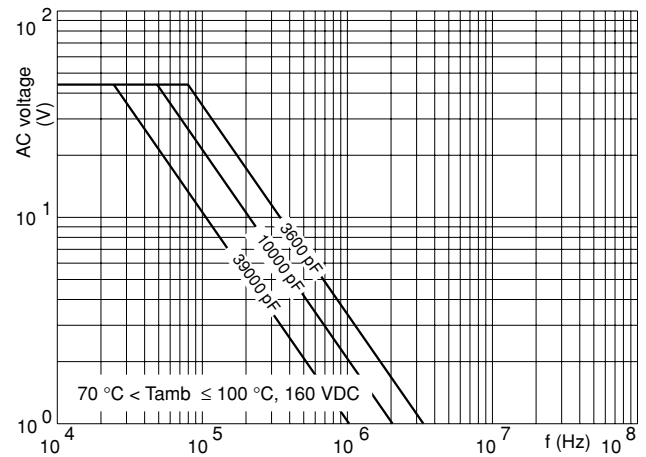
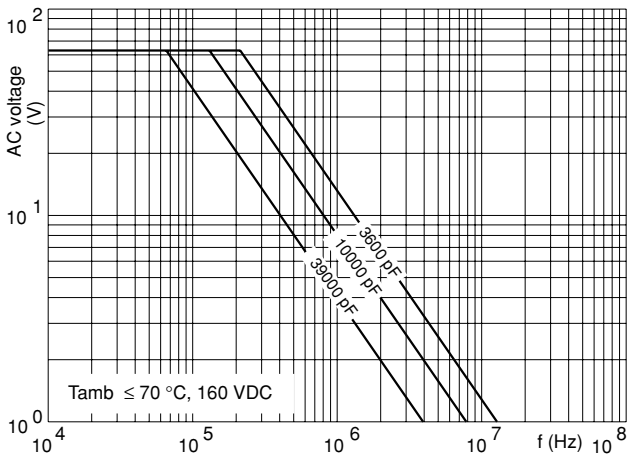
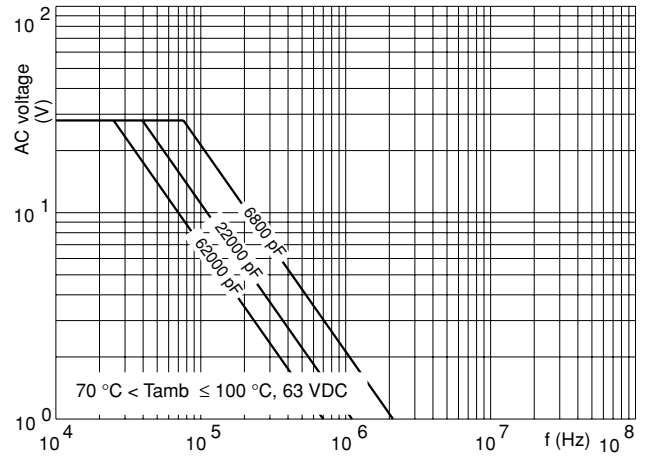
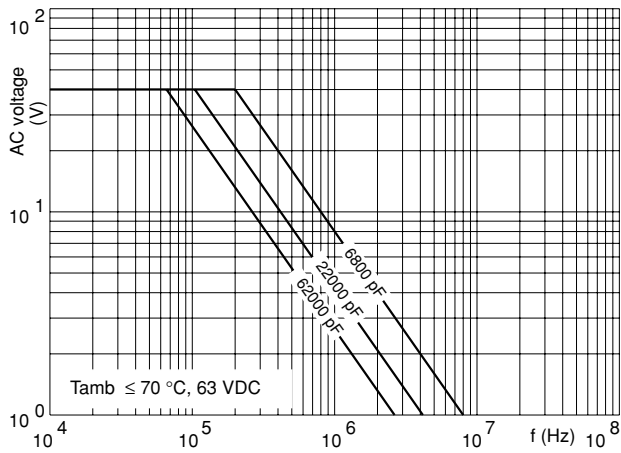
KP 460 to 464

Vishay BCcomponents

Polypropylene Film Foil Capacitors
KP Axial Epoxy Lacquered Type



MAXIMUM RMS VOLTAGE (SINEWAVE) AS A FUNCTION OF FREQUENCY





Polypropylene Film Foil Capacitors
KP Axial Epoxy Lacquered Type

KP 460 to 464

Vishay BCcomponents

