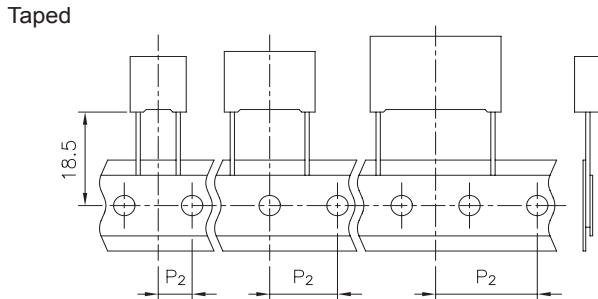


Fig. 1

Fig. 2

Fig. 3



| | | |
|---------|-----------------|----------|
| Ød±0.05 | P = 22.5 - 27.5 | p = 37.5 |
| | 0.8 | 1.0 |

All dimensions are in mm.

PRODUCT CODE SYSTEM

The part number, comprising 14 digits, is formed as follows:



- Digit 1 to 3 Series code.
- Digit 4 d.c. rated voltage:
D = 63Vdc E = 100Vdc G = 160Vdc
I = 250Vdc M = 400Vdc
- Digit 5 Pitch:
N=22.5mm; R=27.5 mm; W=37.5mm
- Digit 6 to 9 Digits 7 - 8 - 9 indicate the first three digits of Capacitance value and the 6th digit indicates the number of zeros that must be added to obtain the Rated Capacitance in pF.
- Digit 10 to 11 Mechanical version and/or packaging (table 1)
- Digit 12 Identifies the dimensions and electrical characteristics.
- Digit 13 Internal use.
- Digit 14 Capacitance tolerance:
J=5%; K=10%; M=20%

**METALLIZED POLYESTER FILM CAPACITOR
D.C. MULTIPURPOSE APPLICATIONS**

Typical applications: blocking, coupling, decoupling, by-passing, interference suppression in low voltage applications (i. e. Automotive)

PRODUCT CODE: **JSP**

| Pitch (mm) | Box thickness (mm) | Maximum dimensions (mm) | | |
|------------|--------------------|-------------------------|--------|--------|
| | | B max | H max | L max |
| 22.5 | All | B +0.2 | H +0.1 | L +0.3 |
| 27.5 | All | B +0.2 | H +0.1 | L +0.3 |
| 37.5 | All | B +0.3 | H +0.1 | L +0.3 |

GENERAL TECHNICAL DATA

- Dielectric:** polyester film (polyethylene terephthalate).
- Plates:** aluminium layer deposited by evaporation under vacuum.
- Winding:** non-inductive type.
- Leads:** tinned wire.
- Protection:** plastic case, thermosetting resin filled.
Box material is solvent resistant and flame retardant according to UL94 V0.
- Marking:** manufacturer's logo, series (JSP), capacitance, tolerance, D.C. rated voltage, manufacturing date code.
- Climatic category:** 55/105/56 IEC 60068-1
- Operating temperature range:** -55 to +125°C
- Related documents:** IEC 60384-2

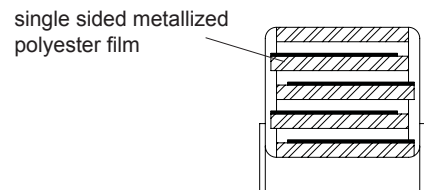


Table 1

| Standard packaging style | Lead length (mm) | Taping style | | | Ordering code (Digit 10 to 11) |
|--------------------------|-----------------------------------------|---------------------|------------|------------|--------------------------------|
| | | P ₂ (mm) | Fig. (No.) | Pitch (mm) | |
| REEL Ø 500mm | | 19.05 | 3 | 22.5/27.5 | CK |
| Loose, short leads | 4 ⁺² | | | | AA |
| Loose, long leads | 30 ⁺⁵ 25 ^{+2/-1} | | | | 40 50 |

**METALLIZED POLYESTER FILM CAPACITOR
D.C. MULTIPURPOSE APPLICATIONS**

PRODUCT CODE: JSP

| Rated Cap. | 63Vdc / 40Vac Std dimensions | | | | Max dv/dt (V/μs) | Max K ₀ (V ² /μs) | Part Number |
|------------|---------------------------------|------|------|------|---------------------|--------------------------------------------|-----------------|
| | B | H | L | p | | | |
| 4.7 μF | 7.0 | 16.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 4470--0-- |
| 5.6 μF | 7.0 | 16.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 4560--0-- |
| 6.8 μF | 7.0 | 16.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 4680--0-- |
| 8.2 μF | 7.0 | 16.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 4820--0-- |
| 10 μF | 7.0 | 16.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 5100--0-- |
| 12 μF | 7.0 | 16.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 5120--0-- |
| 15 μF | 7.0 | 16.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 5150--0-- |
| 18 μF | 8.5 | 17.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 5180--0-- |
| 22 μF | 8.5 | 17.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 5220--0-- |
| 27 μF | 11.0 | 20.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 5270--0-- |
| 33 μF | 11.0 | 20.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 5330--0-- |
| 39 μF | 13.0 | 22.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 5390--0-- |
| 47 μF | 13.0 | 22.0 | 26.5 | 22.5 | 25.0 | 3.15 E3 | JSPDN 5470--0-- |
| 15 μF | 9.0 | 17.0 | 32.0 | 27.5 | 20.0 | 2.52 E3 | JSPDR 5150--0-- |
| 18 μF | 9.0 | 17.0 | 32.0 | 27.5 | 20.0 | 2.52 E3 | JSPDR 5180--0-- |
| 22 μF | 9.0 | 17.0 | 32.0 | 27.5 | 20.0 | 2.52 E3 | JSPDR 5220--0-- |
| 27 μF | 9.0 | 17.0 | 32.0 | 27.5 | 20.0 | 2.52 E3 | JSPDR 5270--0-- |
| 33 μF | 11.0 | 20.0 | 32.0 | 27.5 | 20.0 | 2.52 E3 | JSPDR 5330--0-- |
| 39 μF | 11.0 | 20.0 | 32.0 | 27.5 | 20.0 | 2.52 E3 | JSPDR 5390--0-- |
| 47 μF | 13.0 | 25.0 | 32.0 | 27.5 | 20.0 | 2.52 E3 | JSPDR 5470--0-- |
| 56 μF | 13.0 | 25.0 | 32.0 | 27.5 | 20.0 | 2.52 E3 | JSPDR 5560--0-- |
| 68 μF | 14.0 | 28.0 | 32.0 | 27.5 | 20.0 | 2.52 E3 | JSPDR 5680--0-- |
| 82 μF | 14.0 | 28.0 | 32.0 | 27.5 | 20.0 | 2.52 E3 | JSPDR 5820--0-- |
| 100 μF | 18.0 | 33.0 | 32.0 | 27.5 | 20.0 | 2.52 E3 | JSPDR 6100--0-- |
| 120 μF | 18.0 | 33.0 | 32.0 | 27.5 | 20.0 | 2.52 E3 | JSPDR 6120--0-- |
| 33 μF | 11.0 | 22.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW5330--0-- |
| 39 μF | 11.0 | 22.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW5390--0-- |
| 47 μF | 11.0 | 22.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW5470--0-- |
| 56 μF | 11.0 | 22.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW5560--0-- |
| 68 μF | 13.0 | 24.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW5680--0-- |
| 82 μF | 13.0 | 24.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW5820--0-- |
| 100 μF | 16.0 | 28.5 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW6100--0-- |
| 120 μF | 16.0 | 28.5 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW6120--0-- |
| 150 μF | 19.0 | 32.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW6150--0-- |
| 180 μF | 19.0 | 32.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW6180--0-- |
| 220 μF | 20.0 | 40.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW6220--0-- |
| 270 μF | 24.0 | 44.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW6270--0-- |
| 330 μF | 24.0 | 44.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW6330--0-- |
| 390 μF | 30.0 | 45.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW6390--0-- |
| 470 μF | 30.0 | 45.0 | 41.5 | 37.5 | 15.0 | 1.89 E3 | JSPDW6470--0-- |

Mechanical version and packaging (Table1) _____
 Internal use _____
 Tolerance: J (±5%); K (±10%); M (±20%) _____

| Rated Cap. | 100Vdc / 63Vac Std dimensions | | | | Max dv/dt (V/μs) | Max K ₀ (V ² /μs) | Part Number |
|------------|----------------------------------|------|------|------|---------------------|--------------------------------------------|-----------------|
| | B | H | L | p | | | |
| 3.3 μF | 7.0 | 16.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 4330--0-- |
| 3.9 μF | 7.0 | 16.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 4390--0-- |
| 4.7 μF | 7.0 | 16.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 4470--0-- |
| 5.6 μF | 7.0 | 16.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 4560--0-- |
| 6.8 μF | 7.0 | 16.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 4680--0-- |
| 8.2 μF | 7.0 | 16.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 4820--0-- |
| 10 μF | 8.5 | 17.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 5100--0-- |
| 12 μF | 8.5 | 17.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 5120--0-- |
| 15 μF | 8.5 | 17.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 5150--0-- |
| 18 μF | 11.0 | 20.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 5180--0-- |
| 22 μF | 11.0 | 20.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 5220--0-- |
| 27 μF | 13.0 | 22.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 5270--0-- |
| 33 μF | 13.0 | 22.0 | 26.5 | 22.5 | 27.0 | 5.4 E3 | JSPEN 5330--0-- |
| 10 μF | 9.0 | 17.0 | 32.0 | 27.5 | 22.0 | 4.4 E3 | JSPER 5100--0-- |
| 12 μF | 9.0 | 17.0 | 32.0 | 27.5 | 22.0 | 4.4 E3 | JSPER 5120--0-- |
| 15 μF | 9.0 | 17.0 | 32.0 | 27.5 | 22.0 | 4.4 E3 | JSPER 5150--0-- |
| 18 μF | 9.0 | 17.0 | 32.0 | 27.5 | 22.0 | 4.4 E3 | JSPER 5180--0-- |
| 22 μF | 11.0 | 20.0 | 32.0 | 27.5 | 22.0 | 4.4 E3 | JSPER 5220--0-- |
| 27 μF | 11.0 | 20.0 | 32.0 | 27.5 | 22.0 | 4.4 E3 | JSPER 5270--0-- |
| 33 μF | 13.0 | 25.0 | 32.0 | 27.5 | 22.0 | 4.4 E3 | JSPER 5330--0-- |
| 39 μF | 13.0 | 25.0 | 32.0 | 27.5 | 22.0 | 4.4 E3 | JSPER 5390--0-- |
| 47 μF | 14.0 | 28.0 | 32.0 | 27.5 | 22.0 | 4.4 E3 | JSPER 5470--0-- |
| 56 μF | 14.0 | 28.0 | 32.0 | 27.5 | 22.0 | 4.4 E3 | JSPER 5560--0-- |
| 68 μF | 18.0 | 33.0 | 32.0 | 27.5 | 22.0 | 4.4 E3 | JSPER 5680--0-- |
| 82 μF | 18.0 | 33.0 | 32.0 | 27.5 | 22.0 | 4.4 E3 | JSPER 5820--0-- |
| 22 μF | 11.0 | 22.0 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW5220--0-- |
| 27 μF | 11.0 | 22.0 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW5270--0-- |
| 33 μF | 11.0 | 22.0 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW5330--0-- |
| 39 μF | 11.0 | 22.0 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW5390--0-- |
| 47 μF | 13.0 | 24.0 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW5470--0-- |
| 56 μF | 13.0 | 24.0 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW5560--0-- |
| 68 μF | 16.0 | 28.5 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW5680--0-- |
| 82 μF | 16.0 | 28.5 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW5820--0-- |
| 100 μF | 19.0 | 32.0 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW6100--0-- |
| 120 μF | 19.0 | 32.0 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW6120--0-- |
| 150 μF | 20.0 | 40.0 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW6150--0-- |
| 180 μF | 24.0 | 44.0 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW6180--0-- |
| 220 μF | 30.0 | 45.0 | 41.5 | 37.5 | 17.0 | 3.4 E3 | JSPEW6220--0-- |

Mechanical version and packaging (Table1) _____
 Internal use _____
 Tolerance: J (±5%); K (±10%); M (±20%) _____

All dimensions are mm.

**METALLIZED POLYESTER FILM CAPACITOR
D.C. MULTIPURPOSE APPLICATIONS**

PRODUCT CODE: JSP

| Rated Cap. | 160Vdc / 90Vac Std dimensions | | | | Max dv/dt (V/μs) | Max K ₀ (V ² /μs) | Part Number |
|------------|----------------------------------|------|------|------|---------------------|--------------------------------------------|----------------|
| | B | H | L | p | | | |
| 2.2 μF | 7.0 | 16.0 | 26.5 | 22.5 | 35.0 | 11.2 E3 | JSP GN4220-0-- |
| 2.7 μF | 7.0 | 16.0 | 26.5 | 22.5 | 35.0 | 11.2 E3 | JSP GN4270-0-- |
| 3.3 μF | 7.0 | 16.0 | 26.5 | 22.5 | 35.0 | 11.2 E3 | JSP GN4330-0-- |
| 3.9 μF | 7.0 | 16.0 | 26.5 | 22.5 | 35.0 | 11.2 E3 | JSP GN4390-0-- |
| 4.7 μF | 8.5 | 17.0 | 26.5 | 22.5 | 35.0 | 11.2 E3 | JSP GN4470-0-- |
| 5.6 μF | 8.5 | 17.0 | 26.5 | 22.5 | 35.0 | 11.2 E3 | JSP GN4560-0-- |
| 6.8 μF | 11.0 | 20.0 | 26.5 | 22.5 | 35.0 | 11.2 E3 | JSP GN4680-0-- |
| 8.2 μF | 11.0 | 20.0 | 26.5 | 22.5 | 35.0 | 11.2 E3 | JSP GN4820-0-- |
| 10 μF | 13.0 | 22.0 | 26.5 | 22.5 | 35.0 | 11.2 E3 | JSP GN5100-0-- |
| 12 μF | 13.0 | 22.0 | 26.5 | 22.5 | 35.0 | 11.2 E3 | JSP GN5120-0-- |
| 3.3 μF | 9.0 | 17.0 | 32.0 | 27.5 | 30.0 | 9.6 E3 | JSP GR4330-0-- |
| 3.9 μF | 9.0 | 17.0 | 32.0 | 27.5 | 30.0 | 9.6 E3 | JSP GR4390-0-- |
| 4.7 μF | 9.0 | 17.0 | 32.0 | 27.5 | 30.0 | 9.6 E3 | JSP GR4470-0-- |
| 5.6 μF | 9.0 | 17.0 | 32.0 | 27.5 | 30.0 | 9.6 E3 | JSP GR4560-0-- |
| 6.8 μF | 9.0 | 17.0 | 32.0 | 27.5 | 30.0 | 9.6 E3 | JSP GR4680-0-- |
| 8.2 μF | 11.0 | 20.0 | 32.0 | 27.5 | 30.0 | 9.6 E3 | JSP GR4820-0-- |
| 10 μF | 11.0 | 20.0 | 32.0 | 27.5 | 30.0 | 9.6 E3 | JSP GR5100-0-- |
| 12 μF | 13.0 | 25.0 | 32.0 | 27.5 | 30.0 | 9.6 E3 | JSP GR5120-0-- |
| 15 μF | 13.0 | 25.0 | 32.0 | 27.5 | 30.0 | 9.6 E3 | JSP GR5150-0-- |
| 18 μF | 14.0 | 28.0 | 32.0 | 27.5 | 30.0 | 9.6 E3 | JSP GR5180-0-- |
| 22 μF | 18.0 | 33.0 | 32.0 | 27.5 | 30.0 | 9.6 E3 | JSP GR5220-0-- |
| 27 μF | 18.0 | 33.0 | 32.0 | 27.5 | 30.0 | 9.6 E3 | JSP GR5270-0-- |
| 10 μF | 11.0 | 22.0 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW5100-0-- |
| 12 μF | 11.0 | 22.0 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW5120-0-- |
| 15 μF | 11.0 | 22.0 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW5150-0-- |
| 18 μF | 13.0 | 24.0 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW5180-0-- |
| 22 μF | 16.0 | 28.5 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW5220-0-- |
| 27 μF | 16.0 | 28.5 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW5270-0-- |
| 33 μF | 19.0 | 32.0 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW5330-0-- |
| 39 μF | 19.0 | 32.0 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW5390-0-- |
| 47 μF | 20.0 | 40.0 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW5470-0-- |
| 56 μF | 20.0 | 40.0 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW5560-0-- |
| 68 μF | 24.0 | 44.0 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW5680-0-- |
| 82 μF | 24.0 | 44.0 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW5820-0-- |
| 100 μF | 30.0 | 45.0 | 41.5 | 37.5 | 25.0 | 8.0 E3 | JSPGW6100-0-- |

Mechanical version and packaging (Table1) _____
 Internal use _____
 Tolerance: J (±5%); K (±10%); M (±20%) _____

| Rated Cap. | 250Vdc / 160Vac Std dimensions | | | | Max dv/dt (V/μs) | Max K ₀ (V ² /μs) | Part Number |
|------------|-----------------------------------|------|------|------|---------------------|--------------------------------------------|----------------|
| | B | H | L | p | | | |
| 1.0 μF | 7.0 | 16.0 | 26.5 | 22.5 | 40.0 | 20.0 E3 | JSP IN4100-0-- |
| 1.2 μF | 7.0 | 16.0 | 26.5 | 22.5 | 40.0 | 20.0 E3 | JSP IN4120-0-- |
| 1.5 μF | 7.0 | 16.0 | 26.5 | 22.5 | 40.0 | 20.0 E3 | JSP IN4150-0-- |
| 1.8 μF | 7.0 | 16.0 | 26.5 | 22.5 | 40.0 | 20.0 E3 | JSP IN4180-0-- |
| 2.2 μF | 7.0 | 16.0 | 26.5 | 22.5 | 40.0 | 20.0 E3 | JSP IN4220-0-- |
| 2.7 μF | 8.5 | 17.0 | 26.5 | 22.5 | 40.0 | 20.0 E3 | JSP IN4270-0-- |
| 3.3 μF | 8.5 | 17.0 | 26.5 | 22.5 | 40.0 | 20.0 E3 | JSP IN4330-0-- |
| 3.9 μF | 11.0 | 20.0 | 26.5 | 22.5 | 40.0 | 20.0 E3 | JSP IN4390-0-- |
| 4.7 μF | 11.0 | 20.0 | 26.5 | 22.5 | 40.0 | 20.0 E3 | JSP IN4470-0-- |
| 5.6 μF | 13.0 | 22.0 | 26.5 | 22.5 | 40.0 | 20.0 E3 | JSP IN4560-0-- |
| 6.8 μF | 13.0 | 22.0 | 26.5 | 22.5 | 40.0 | 20.0 E3 | JSP IN4680-0-- |
| 2.2 μF | 9.0 | 17.0 | 32.0 | 27.5 | 35.0 | 17.5 E3 | JSP IR4220-0-- |
| 2.7 μF | 9.0 | 17.0 | 32.0 | 27.5 | 35.0 | 17.5 E3 | JSP IR4270-0-- |
| 3.3 μF | 9.0 | 17.0 | 32.0 | 27.5 | 35.0 | 17.5 E3 | JSP IR4330-0-- |
| 3.9 μF | 9.0 | 17.0 | 32.0 | 27.5 | 35.0 | 17.5 E3 | JSP IR4390-0-- |
| 4.7 μF | 11.0 | 20.0 | 32.0 | 27.5 | 35.0 | 17.5 E3 | JSP IR4470-0-- |
| 5.6 μF | 11.0 | 20.0 | 32.0 | 27.5 | 35.0 | 17.5 E3 | JSP IR4560-0-- |
| 6.8 μF | 13.0 | 25.0 | 32.0 | 27.5 | 35.0 | 17.5 E3 | JSP IR4680-0-- |
| 8.2 μF | 13.0 | 25.0 | 32.0 | 27.5 | 35.0 | 17.5 E3 | JSP IR4820-0-- |
| 10 μF | 14.0 | 28.0 | 32.0 | 27.5 | 35.0 | 17.5 E3 | JSP IR5100-0-- |
| 12 μF | 18.0 | 33.0 | 32.0 | 27.5 | 35.0 | 17.5 E3 | JSP IR5120-0-- |
| 15 μF | 18.0 | 33.0 | 32.0 | 27.5 | 35.0 | 17.5 E3 | JSP IR5150-0-- |
| 18 μF | 18.0 | 33.0 | 32.0 | 27.5 | 25.0 | 17.5 E3 | JSP IR5180-0-- |
| 5.6 μF | 11.0 | 22.0 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW4560-0-- |
| 6.8 μF | 11.0 | 22.0 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW4680-0-- |
| 8.2 μF | 11.0 | 22.0 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW4820-0-- |
| 10 μF | 13.0 | 24.0 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW5100-0-- |
| 12 μF | 13.0 | 24.0 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW5120-0-- |
| 15 μF | 16.0 | 28.5 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW5150-0-- |
| 18 μF | 16.0 | 28.5 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW5180-0-- |
| 22 μF | 19.0 | 32.0 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW5220-0-- |
| 27 μF | 19.0 | 32.0 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW5270-0-- |
| 33 μF | 20.0 | 40.0 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW5330-0-- |
| 39 μF | 24.0 | 44.0 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW5390-0-- |
| 47 μF | 30.0 | 45.0 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW5470-0-- |
| 56 μF | 30.0 | 45.0 | 41.5 | 37.5 | 30.0 | 15.0 E3 | JSPIW5560-0-- |

Mechanical version and packaging (Table1) _____
 Internal use _____
 Tolerance: J (±5%); K (±10%); M (±20%) _____

All dimensions are mm.

**METALLIZED POLYESTER FILM CAPACITOR
D.C. MULTIPURPOSE APPLICATIONS**

PRODUCT CODE: **JSP**

TEST METHOD AND PERFORMANCE

Damp heat, steady state:

Test conditions 1st

Temperature: +40°C±2°C
Relative humidity (RH): 93% ±2%
Test duration: 56 days

Performance

Capacitance change |ΔC/C|: ≤5%
DF change (Δtgδ): ≤50x10⁻⁴ at 1kHz
Insulation resistance: ≥50% of initial limit.

Endurance:

Test conditions 1st

Temperature: +105°C±2°C
Test duration: 2000 h
Voltage applied: 1.25xV_R

Test conditions 2nd

Temperature: +125°C±2°C
Test duration: 1000 h
Voltage applied: 1.25xV_R

Performance

Capacitance change |ΔC/C|: ≤5%
DF change (Δtgδ): ≤50x10⁻⁴ at 10kHz for C≤1μF
≤30x10⁻⁴ at 1kHz for C>1μF

Insulation resistance: ≥50% of initial limit.

Resistance to soldering heat:

Test conditions

Solder bath temperature: +260°C±5°C
Dipping time (with heat screen): 10 s±1 s

Performance

Capacitance change |ΔC/C|: ≤2%
DF change (Δtgδ): ≤50x10⁻⁴ at 10kHz for C≤1μF
≤30x10⁻⁴ at 1kHz for C>1μF

Insulation resistance: ≥initial limit.

Long term stability (after two years):

Storage: standard environmental conditions (see page 12 of DC film capacitors catalogue)

Performance

Capacitance change |ΔC/C|: ≤2%

ELECTRICAL CHARACTERISTICS

Rated voltage (V_R):

63Vdc - 100Vdc - 160Vdc - 250Vdc

Rated temperature (T_R):+85°C

Temperature derated voltage:

for temperatures between +85°C and the upper operating temperature a decreasing factor of 1.25% per degree °C on the rated voltage V_R (d.c. and a.c.) has to be applied.

Capacitance range: 1.0 μF to 470 μF.

Capacitance values:

E12 series (IEC 60063 Norm).

Capacitance tolerances (measured at 1 kHz):

±5% (J); ±10% (K); ±20% (M).

Total self-inductance (L): (Lead length ~2 mm)

| | | | |
|------------|------|------|------|
| Pitch (mm) | 22.5 | 27.5 | 37.5 |
| L (nH) ≈ | 18 | 18 | 22 |

Dissipation factor (DF):

tgδx10⁻⁴ at +25°C±5°C

| kHz | C≤0.1μF | C>1μF |
|-----|---------|-------|
| 1 | ≤ 100 | ≤100 |
| 10 | ≤ 150 | |

Insulation resistance:

Test conditions

Temperature: +25°C°5°C
Voltage charge time: 1min
Voltage charge: 50Vdc for V_R < 100Vdc
100Vdc for V_R ≥ 100Vdc

Performance

For VR ≤ 100Vdc
≥3750 MΩ for C≤0.33μF (50000 MΩ)*
≥1250 s for C >0.33μF (5000 s)*
For VR > 100Vdc
≥30000 MΩ for C≤0.33μF (50000 MΩ)*
≥10000 s for C >0.33μF (17000 s)*
* Typical value.

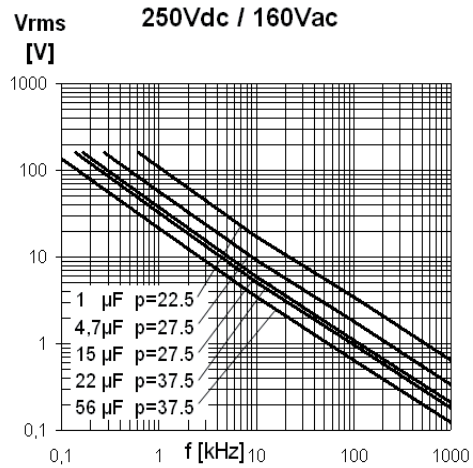
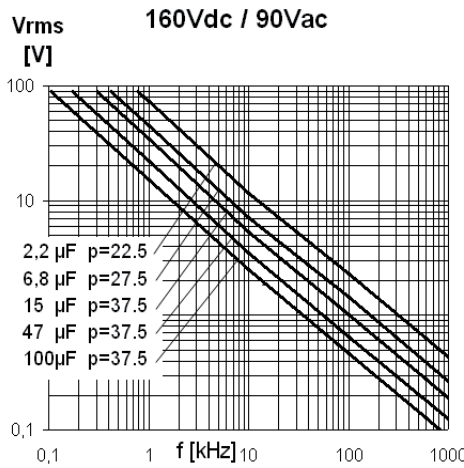
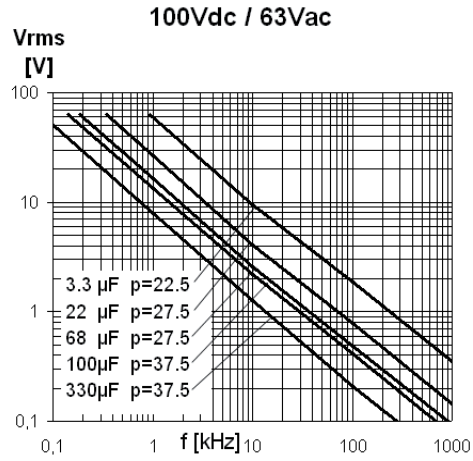
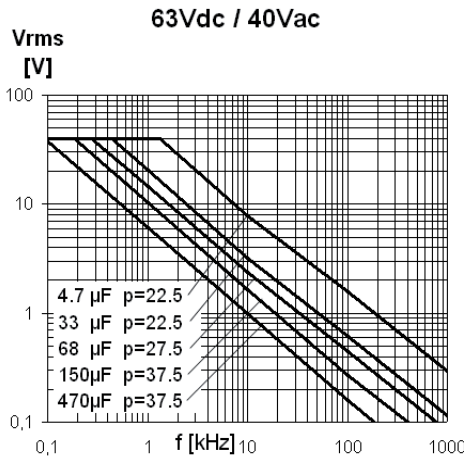
Test voltage between terminations:

1.6xV_R applied for 2 s at +25°C±5°C

**METALLIZED POLYESTER FILM CAPACITOR
D.C. MULTIPURPOSE APPLICATIONS**

PRODUCT CODE: JSP

MAX. VOLTAGE (Vr.m.s.) VERSUS FREQUENCY (sinusoidal wave-form / $T_h = 80^\circ\text{C}$)

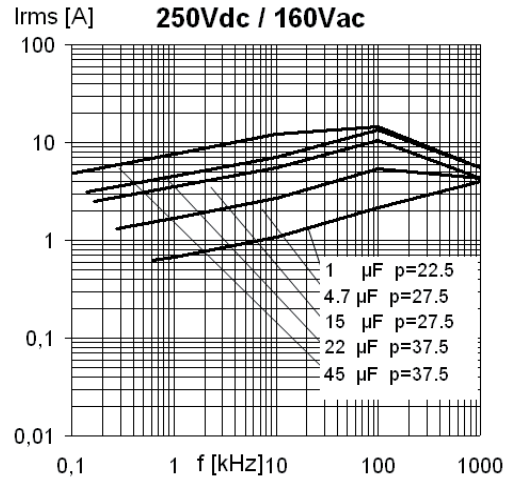
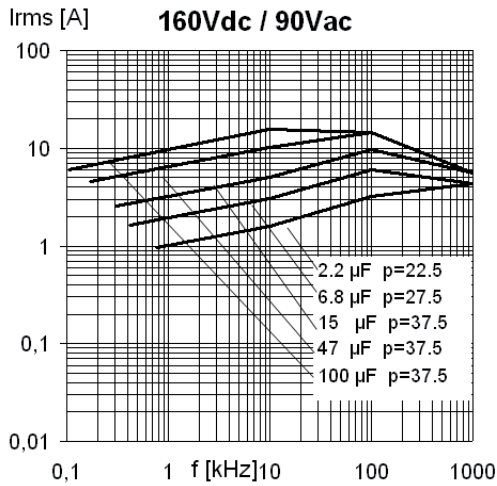
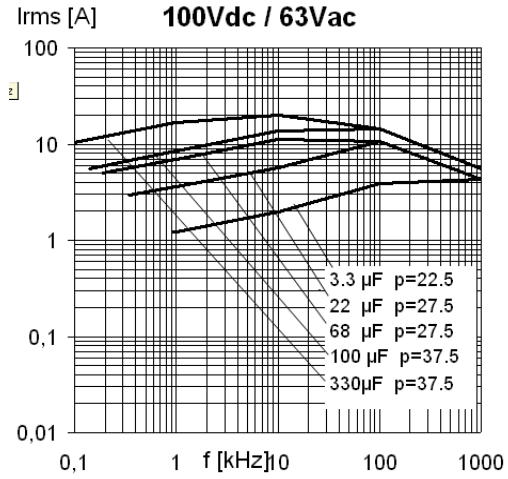
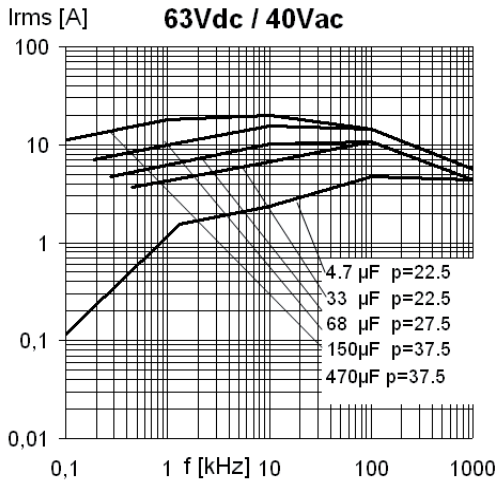


Note: * T_h =max. ambient temperature surrounding the capacitor or hottest contact point (i.e. tracks), whichever is higher, in the worst operation conditions in $^\circ\text{C}$

**METALLIZED POLYESTER FILM CAPACITOR
D.C. MULTIPURPOSE APPLICATIONS**

PRODUCT CODE: JSP

MAX. CURRENT (I_{r.m.s.}) VERSUS FREQUENCY (sinusoidal wave-form / T_h = 80°C)



Note: *T_h=max. ambient temperature surrounding the capacitor or hottest contact point (i.e. tracks), whichever is higher, in the worst operation conditions in °C