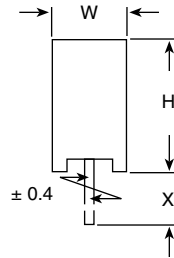
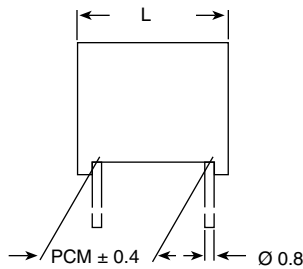
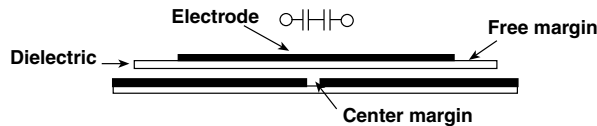


AC-Capacitors, Suppression Capacitors Class X2 AC 440 V (MKT)

Dimensions in mm



| LEAD LENGTH X (mm) | ORDERING CODE** |
|-----------------------|---------------------|
| 4 ⁻¹ | F1772-...-4204/4264 |
| 6 ⁻¹ | F1772-...-4200/4260 |
| 15 ⁻¹ | F1772-...-4215/4265 |
| 30 ⁺⁵ | F1772-...-4230/4263 |


MAXIMUM PULSE RISE TIME: (dU/dt) in V/μs

| RATED VOLTAGE | PITCH (mm) | | | |
|---------------|------------|------|------|------|
| | 15.0 | 22.5 | 27.5 | 37.5 |
| AC 440 V | 200 | 150 | 100 | 100 |

RATED VOLTAGE

AC 440 V, 50 Hz/60 Hz

PERMISSIBLE DC VOLTAGE

DC 1000 V

TERMINALS

Radial tinned wire

COATING

Plastic case, epoxy resin sealed, flame retardant UL 94 V-0

CLIMATIC TESTING CLASS ACC.TO EN 60068-1

40/100/56

CAPACITANCE RANGE

E6 series 0.01 μF X2 to 1.0 μF X2

E12 values on request

FURTHER TECHNICAL DATA

See page 21 (Document No. 26504)

FEATURES

- Compliant to RoHS directive 2002/95/EC

CAPACITANCE TOLERANCE

Standard: ± 20 %

DISSIPATION FACTOR TAN δ

< 1 % measured at 1 kHz

INSULATION RESISTANCE
FOR C ≤ 0.33 μF

30 GΩ average value

15 GΩ minimum value

TIME CONSTANT
FOR C > 0.33 μF

10 000 s average value

5000 s minimum value

TEST VOLTAGE

(Electrode/electrode): DC 2150 V/2 s

REFERENCE STANDARDS

EN 132 400, 1994

EN 60068-1

IEC 60384-14/2, 1993

UL 1283

UL 1414

CSA 22.2 No. 8-M 86

CSA 22.2 No. 1-M 90

DIELECTRIC

Polyester film

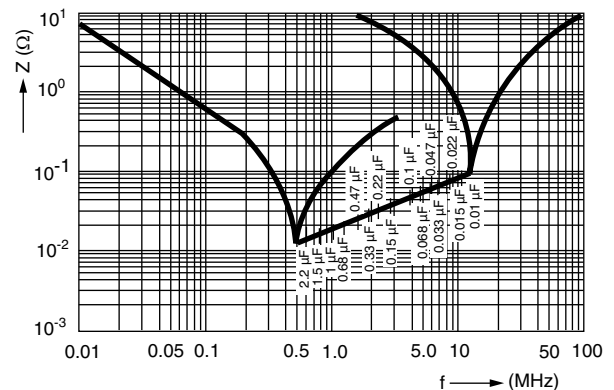
ELECTRODES

Metal evaporated

CONSTRUCTION




Metallized film capacitor

Internal series connection

 Between interconnected terminations and case (foil method):
 AC 2500 V for 2 s at 25 °C.

 Impedance (Z) as a function of frequency (f) at T_a = 20 °C (average). Measurement with lead length 6 mm.

**RoHS
COMPLIANT**

APPROVALS

| COUNTRY | SPECIFICATION | ELECTRICAL VALUES | APPROVAL REFERENCE | APPROVAL MARK |
|--|---|---|------------------------|---|
| U.S.A. (for AC 250 V) | UL 1283 UL 1414 | 0.01 to 1.0 μ F X 0.01 to 1.0 μ F X | E 76297 E 100682 |  |
| Canada (for AC 250 V) | C 22.2 No. 8-M 1986 C 22.2 No. 1-M 1994 | 0.01 to 1.0 μ F X 0.01 to 0.82 μ F X | LR 64546 LR 64546-8 |  |
| CB TEST-CERTIFICATE (for AC 440 V) | | 0.01 to 1.0 μ F X2 | DE 1-8221 | |
| Germany | EN 132 400; 1999 IEC 60384-14, 2nd edition, 1995 | 0.01 to 1.0 μ F X2 | 40005095 |  |
| This approval mark together with the CB-Certificate replace all national approval marks of the following countries (they have already signed the CB-Agreement): | | | | |
| Austria | Belgium | Denmark | Finland | Sweden |
| France | Germany | Ireland | Italy | Switzerland |
| Netherlands | Israel | Portugal | Spain | Great Britain |
| Japan | Norway | China | Poland | Czech. Republic |
| Singapore | Rep. of Korea | Hungary | Iceland | Slovenia |

| CAPACITANCE | TOL. (%) | PITCH (mm) | BOX NO. | DIMENSIONS W x H x L (mm) (+ 0.2/- 0.4 mm) | WEIGHT LEAD LENGTH 6^{-1} mm (g) | QUANTITY PACKAGE LEAD LENGTH $\leq 6^{-1}$ mm (pcs) ⁽¹⁾ | ORDERING CODE ⁽²⁾ |
|------------------|-------------|---------------|------------|--|---|--|------------------------------|
| 0.01 μ F X2 | ± 20 | 15.0 | 05 | 5.3 x 10.3 x 17.8 | 1.4 | 750 | F1772-310-42 .. |
| 0.015 μ F X2 | ± 20 | 15.0 | 49 | 6.0 x 12.0 x 17.9 | 2.0 | 600 | F1772-315-42 .. |
| 0.022 μ F X2 | ± 20 | 15.0 | 07 | 7.3 x 13.3 x 17.8 | 2.0 | 450 | F1772-322-42 .. |
| 0.033 μ F X2 | ± 20 | 15.0 | 08 | 8.3 x 14.3 x 17.8 | 2.7 | 325 | F1772-333-42 .. |
| 0.047 μ F X2 | ± 20 | 22.5 | 09 | 6.3 x 14.3 x 26.3 | 3.3 | 260 | F1772-347-42 .. |
| 0.047 μ F X2 | ± 20 | 15.0 | 28 | 8.3 x 17.3 x 17.8 | 3.5 | 300 | F1772-347-426 . |
| 0.068 μ F X2 | ± 20 | 22.5 | 11 | 7.3 x 15.3 x 26.3 | 4.1 | 235 | F1772-368-42 .. |
| 0.068 μ F X2 | ± 20 | 15.0 | 35 | 10.3 x 17.3 x 17.8 | 4.3 | 225 | F1772-368-426 . |
| 0.1 μ F X2 | ± 20 | 22.5 | 12 | 8.3 x 16.3 x 26.3 | 4.6 | 200 | F1772-410-42 .. |
| 0.1 μ F X2 | ± 20 | 15.0 | 36 | 13.3 x 22.3 x 17.8 | 4.2 | 185 | F1772-410-426 . |
| 0.15 μ F X2 | ± 20 | 27.5 | 29 | 8.8 x 18.3 x 31.3 | 6.8 | 160 | F1772-415-42 .. |
| 0.15 μ F X2 | ± 20 | 22.5 | 13 | 10.3 x 18.3 x 26.3 | 6.7 | 170 | F1772-415-426 . |
| 0.22 μ F X2 | ± 20 | 27.5 | 14 | 11.0 x 21.0 x 31.0 | 9.1 | 125 | F1772-422-42 .. |
| 0.22 μ F X2 | ± 20 | 22.5 | 27 | 12.3 x 19.8 x 26.3 | 8.7 | 125 | F1772-422-426 . |
| 0.33 μ F X2 | ± 20 | 27.5 | 15 | 13.0 x 23.3 x 31.3 | 12.9 | 110 | F1772-433-42 .. |
| 0.33 μ F X2 | ± 20 | 22.5 | 38 | 15.3 x 26.3 x 26.3 | 14.3 | 110 | F1772-433-426 . |
| 0.47 μ F X2 | ± 20 | 37.5 | 44 | 12.0 x 22.3 x 41.3 | 15.2 | 90 | F1772-447-42 .. |
| 0.47 μ F X2 | ± 20 | 27.5 | 17 | 16.0 x 29.3 x 31.3 | 20.0 | 85 | F1772-447-426 . |
| 0.68 μ F X2 | ± 20 | 37.5 | 19 | 15.5 x 28.3 x 41.3 | 24.0 | 70 | F1772-468-42 .. |
| 0.68 μ F X2 | ± 20 | 27.5 | 40 | 17.8 x 32.8 x 31.3 | 24.4 | 80 | F1772-468-426 . |
| 1.0 μ F X2 | ± 20 | 37.5 | 20 | 17.8 x 32.3 x 41.3 | 31.6 | 60 | F1772-510-42 .. |
| 1.0 μ F X2 | ± 20 | 27.5 | 41 | 19.5 x 34.8 x 31.3 | 29.5 | 70 | F1772-510-426 . |

Notes

- Inbuilt discharging resistor on request (with larger case dimensions).
- ⁽¹⁾ Further information about packaging quantities with different lead length and/or taped versions.
See page 16 (Document No. 27608 Packaging Quantities). Use Box No. as reference
- ⁽²⁾ These capacitors can be delivered on continuous tape and reel - see page 14/15 (Document Number 27622).
The ordering code is: F1772-...-4290 at H = 16.5 mm
F1772-...-4291 at H = 18.5 mm
F1772-...-4960 at H = 16.5 mm
F1772-...-4961 at H = 18.5 mm

**APPLICATION NOTES**

- For X2 electromagnetic interference suppression in **across the line applications** (50 Hz/60 Hz) with a maximum mains voltage of 440 V_{AC}.
- These capacitors are not intended for continuous pulse applications. For these situations, capacitors of the AC and pulse programs must be used.
- These capacitors can be used for series impedance application in case safety approvals are requested.
- The maximum ambient temperature must not exceed 100 °C.
- Rated voltage pulse slope:
If the pulse voltage is lower than the rated voltage, the values of the specific reference data can be multiplied by $620 V_{DC}$ and divided by the applied voltage.



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