F1772-4000



Vishay Roederstein

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

Dimensions in mm



LEAD LENGTH X (mm)	ORDERING CODE***
4-1	F17724004
6 ⁻¹	F17724000
15 ⁻¹	F17724015
30 ⁺⁵	F17724030



MAXIMUM PULSE RISE TIME

(dU/dt) in V/µs

RATED	PITCH (mm)				
VOLTAGE	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

E12 series 0.01 μF X2 - 1.0 μF X2 preferred values acc. to E6

FURTHER TECHNICAL DATA

See page 21 (Document No. 26504)

FEATURES

Compliant to RoHS directive 2002/95/EC

CAPACITANCE TOLERANCE

Standard: ± 10 %

DISSIPATION FACTOR TAN δ < 1 % measured at 1 kHz

INSULATION RESISTANCE

FOR C \leq 0.33 µF: 30 G Ω average value 15 G Ω 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 $^{\circ}\text{C}.$



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



ROHS COMPLIANT

Vishay Roederstein





APPROVALS

COUNTRY	SPECIFICATION	ELECTRICAL VALUES	APPROVAL REFERENCE	APPROVAL MARK	
U.S.A. (for AC 250 V)	UL 1283 UL 1414	0.01 μF X - 1.0 μF X 0.01 μF X - 1.0 μF X	E 76297 E 100682	71	
Canada (for AC 250 V)	C 22.2 No. 8-M 1986 C 22.2 No. 1-M 1994	0.01 μF X - 1.0 μF X 0.01 μF X - 0.82 μF X	LR 64546 LR 64546-8	()	
CB TEST-CERTIFIC	CB TEST-CERTIFICATE (for AC 440 V)		DE 1-8221		
Germany	EN 132 400; 1999 IEC 60384-14, 2nd edition, 1995				
This a	pproval mark together with the CB-Ce (they have a	rtificate replace all national ap already signed the CB-Agreen		ountries	
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 (+ 0.2/- 0.4 mm)	WEIGHT LEAD LENGTH 6 ⁻¹ mm (g)	QUANTITY PACKAGE LEAD LENGTH 6 ⁻¹ mm (pcs) ⁽²⁾	ORDERING CODE ⁽³⁾
0.01 µF X2	± 10	15.0	06	6.3 x 12.3 x 17.8	2.0	500	F1772-310-4
0.012 μF X2	± 10	15.0	06	6.3 x 12.3 x 17.8	2.0	500	F1772-312-4
0.015 µF X2	± 10	15.0	07	7.3 x 13.3 x 17.8	2.4	450	F1772-315-4
0.018 μF X2	± 10	15.0	07	7.3 x 13.3 x 17.8	2.4	450	F1772-318-4
0.022 µF X2	± 10	15.0	08	8.3 x 14.3 x 17.8	2.7	325	F1772-322-4
0.027 μF X2	± 10	15.0	08	8.3 x 14.3 x 17.8	2.7	325	F1772-327-4
0.033 µF X2	± 10	15.0	28	8.3 x 17.3 x 17.8	2.7	300	F1772-333-4
0.039 μF X2	± 10	22.5 (1)	09	6.3 x 14.3 x 26.3	3.3	260	F1772-339-4
0.047 µF X2	± 10	22.5 ⁽¹⁾	11	7.3 x 15.3 x 26.3	4.1	235	F1772-347-4
0.056 μF X2	± 10	22.5 ⁽¹⁾	12	8.3 x 16.3 x 26.3	4.6	200	F1772-356-4
0.068 µF X2	± 10	22.5 ⁽¹⁾	12	8.3 x 16.3 x 26.3	4.6	200	F1772-368-4
0.082 μF X2	± 10	22.5 (1)	12	8.3 x 16.3 x 26.3	4.6	200	F1772-382-4
0.1 µF X2	± 10	22.5 ⁽¹⁾	13	10.3 x 18.3 x 26.3	6.7	170	F1772-410-4
0.12 μF X2	± 10	22.5 ⁽¹⁾	13	10.3 x 18.3 x 26.3	6.7	170	F1772-412-4
0.15 µF X2	± 10	27.5 ⁽¹⁾	14	11.0 x 21.0 x 31.0	9.1	125	F1772-415-4
0.18 μF X2	± 10	27.5 ⁽¹⁾	14	11.0 x 21.0 x 31.0	9.1	125	F1772-418-4
0.22 µF X2	± 10	27.5 ⁽¹⁾	15	13.0 x 23.3 x 31.3	12.9	110	F1772-422-4
0.27 μF X2	± 10	27.5 ⁽¹⁾	15	13.0 x 23.3 x 31.3	12.9	110	F1772-427-4
0.33 µF X2	± 10	27.5 ⁽¹⁾	18	14.5 x 24.3 x 31.3	15.0	100	F1772-433-4
0.39 μF X2	± 10	37.5 ⁽¹⁾	14	12.0 x 22.3 x 41.3	15.2	90	F1772-439-4
0.47 µF X2	± 10	37.5 ⁽¹⁾	16	14.0 x 24.3 x 41.3	18.9	80	F1772-447-4
0.56 μF X2	± 10	37.5 ⁽¹⁾	19	15.5 x 28.3 x 41.3	24.0	70	F1772-456-4
0.68 µF X2	± 10	37.5 ⁽¹⁾	19	15.5 x 28.3 x 41.3	24.0	70	F1772-468-4
0.82 μF X2	± 10	37.5 ⁽¹⁾	20	17.9 x 32.4 x 41.3	31.6	60	F1772-482-4
1.0 µF X2	± 10	37.5 ⁽¹⁾	42	19.8 x 39.9 x 42.3	44.2	55	F1772-510-4

Preferred values in bold print.

Notes

• Inbuilt discharging resistor on request (with larger case dimensions).

⁽¹⁾ Different pitch on request.

- (2) 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
 ⁽³⁾ These capacitors can be delivered on continuous tape and reel see page 14/15 (Docum
- (3) These capacitors can be delivered on continuous tape and reel see page 14/15 (Document Number 27622). The ordering code is F1772-...-4900 at H = 16.5 mm, F1772-...-4901 at H = 18.5 mm.



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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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