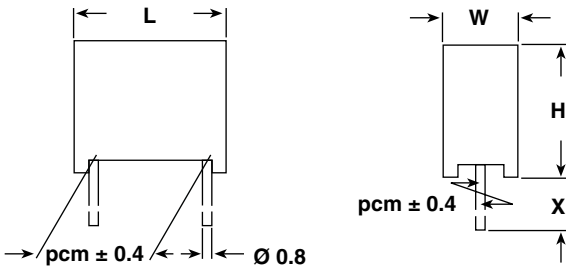
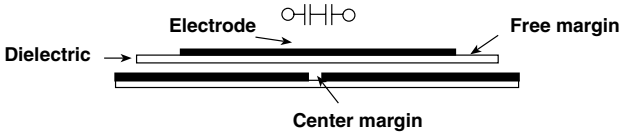
AC-Capacitors, Suppression Capacitors
Class X2 AC 300 V (MKT)

Dimensions in mm



LEAD LENGTH X (mm)	ORDERING CODE**
4^{-1}	F1772-. . .-3004
6^{-1}	F1772-. . .-3000
15^{-1}	F1772-. . .-3015
30^{+5}	F1772-. . .-3030



MAXIMUM PULSE RISE TIME: (d_u/d_t) in V/µs

RATED VOLTAGE	PITCH (mm)			
	15.0	22.5	27.5	37.5
AC 300 V	200	150	100	100

RATED VOLTAGE:
AC 300 V, 50/60 Hz

PERMISSIBLE DC VOLTAGE:
DC 800 V

TERMINALS:
Radial tinned copper wire

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

CLIMATIC TESTING CLASS ACC. TO EN 60068-1:
40/100/56

CAPACITANCE RANGE:
E12 series 0.01 µFX2 - 2.2 µFX2
preferred values acc. to E6

FURTHER TECHNICAL DATA:
See page 21 (Document No 26504)

FEATURES:
Product is completely lead (Pb)-free
Product is RoHS compliant

Pb-free

e3

RoHS COMPLIANT

CAPACITANCE TOLERANCE:
Standard: ± 10 %

DISSIPATION FACTOR TANδ:
< 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 sec. average value
5000 sec. minimum value

TEST VOLTAGE:
(Electrode/electrode): DC 2150 V/2 sec.

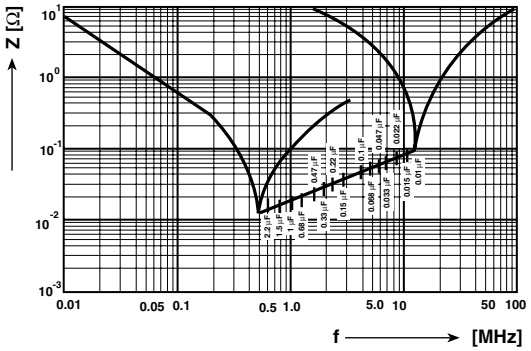
REFERENCE STANDARDS:
EN 132 400, 1994
EN 60068-1
IEC 60384-14/2, 1993
UL 1283
UL 1414
CSA 22.2 No. 8-M 86
CSA 22.2 No. 1-M 90

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 sec. at 25 °C.



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

Downloaded from Arrow.com.

APPROVALS

COUNTRY	SPECIFICATION	ELECTRICAL VALUES	APPROVAL REFERENCE	APPROVAL MARK
U.S.A. (for AC 250 V)	UL 1283 UL 1414	0.01 - 2.2 µFX 0.01 - 1.0 µFX	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 - 2.2 µFX 0.01 - 0.82 µFX	LR 64546 LR 64546-8	
CB TEST-CERTIFICATE (for AC 300 V)		0.01 - 2.2 µFX2	DE 1-8791	
Germany	EN 132 400; 1999 IEC 60384-14, 2nd edition, 1995	0.01 - 2.2 µFX2	40005079	
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 < = 6^{-1} mm (pcs)**	ORDERING CODE***
0.01 µFX2	**± 10**	**15.0**	**05**	**5.3 x 10.3 x 17.8**	**1.4**	**750**	**F1772-310-3 . . .**
0.012 µFX2	± 10	15.0	05	5.3 x 10.3 x 17.8	1.4	750	F1772-312-3 . . .
0.015 µFX2	**± 10**	**15.0**	**05**	**5.3 x 10.3 x 17.8**	**1.4**	**750**	**F1772-315-3 . . .**
0.018 µFX2	± 10	15.0	05	5.3 x 10.3 x 17.8	1.4	750	F1772-318-3 . . .
0.022 µFX2	**± 10**	**15.0**	**05**	**5.3 x 10.3 x 17.8**	**1.4**	**750**	**F1772-322-3 . . .**
0.027 µFX2	± 10	15.0	05	5.3 x 10.3 x 17.8	1.4	750	F1772-327-3 . . .
0.033 µFX2	**± 10**	**15.0**	**06**	**6.3 x 12.3 x 17.8**	**2.0**	**500**	**F1772-333-3 . . .**
0.039 µFX2	± 10	15.0	06	6.3 x 12.3 x 17.8	2.0	500	F1772-339-3 . . .
0.047 µFX2	**± 10**	**15.0**	**07**	**7.3 x 13.3 x 17.8**	**2.4**	**450**	**F1772-347-3 . . .**
0.056 µFX2	± 10	15.0	07	7.3 x 13.3 x 17.8	2.4	450	F1772-356-3 . . .
0.068 µFX2	**± 10**	**15.0**	**08**	**8.3 x 14.3 x 17.8**	**2.7**	**300**	**F1772-368-3 . . .**
0.082 µFX2	± 10	15.0	08	8.3 x 14.3 x 17.8	2.7	300	F1772-382-3 . . .
0.1 µFX2	**± 10**	**15.0***	**28**	**8.3 x 17.3 x 17.8**	**3.5**	**300**	**F1772-410-3 . . .**
0.12 µFX2	± 10	15.0*	35	10.3 x 17.3 x 17.8	4.3	225	F1772-412-3 . . .
0.15 µFX2	**± 10**	**22.5***	**12**	**8.3 x 16.3 x 26.3**	**4.6**	**200**	**F1772-415-3 . . .**
0.18 µFX2	± 10	22.5*	12	8.3 x 16.3 x 26.3	4.6	200	F1772-418-3 . . .
0.22 µFX2	**± 10**	**22.5***	**13**	**10.3 x 18.3 x 26.3**	**6.7**	**170**	**F1772-422-3 . . .**
0.27 µFX2	± 10	27.5*	23	8.8 x 16.8 x 31.3	6.3	150	F1772-427-3 . . .
0.33 µFX2	**± 10**	**27.5***	**14**	**11.0 x 20.3 x 31.3**	**6.3**	**125**	**F1772-433-3 . . .**
0.39 µFX2	± 10	27.5*	14	11.0 x 20.3 x 31.3	9.1	125	F1772-439-3 . . .
0.47 µFX2	**± 10**	**27.5***	**15**	**13.0 x 23.3 x 31.3**	**12.9**	**110**	**F1772-447-3 . . .**
0.56 µFX2	± 10	27.5*	15	13.0 x 23.3 x 31.3	12.9	110	F1772-456-3 . . .
0.68 µFX2	**± 10**	**27.5***	**18**	**14.5 x 24.3 x 31.3**	**15.0**	**100**	**F1772-468-3 . . .**
0.82 µFX2	± 10	27.5*	40	17.8 x 32.8 x 31.3	20.7	80	F1772-482-3 . . .
1.0 µFX2	**± 10**	**27.5***	**40**	**17.8 x 32.8 x 31.3**	**20.7**	**80**	**F1772-510-3 . . .**
1.2 µFX2	± 10	27.5*	40	17.8 x 32.8 x 31.3	20.7	80	F1772-512-3 . . .
1.5 µFX2	**± 10**	**37.5***	**20**	**17.8 x 32.3 x 41.3**	**31.6**	**60**	**F1772-515-3 . . .**
1.8 µFX2	± 10	37.5*	20	17.8 x 32.3 x 41.3	31.6	60	F1772-518-3 . . .
2.2 µFX2	**± 10**	**37.5***	**42**	**19.8 x 39.8 x 42.3**	**44.2**	**56**	**F1772-522-3 . . .**

Preferred values in bold print.

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

* Different pitch on request.

** Further information about packaging quantities with different lead length and/or taped versions.
See page 16 (Document No 27608 Packing Quantities). Use Box No. as reference

Downloaded from Arrow.com.

APPLICATION NOTES

- For X2 electromagnetic interference suppression in **across the line applications** (50/60 Hz) with a maximum mains voltage of 300 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 420 V (DC) and divided by the applied voltage.

Downloaded from Arrow.com.

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay’s knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts. Product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.

Downloaded from Arrow.com.