

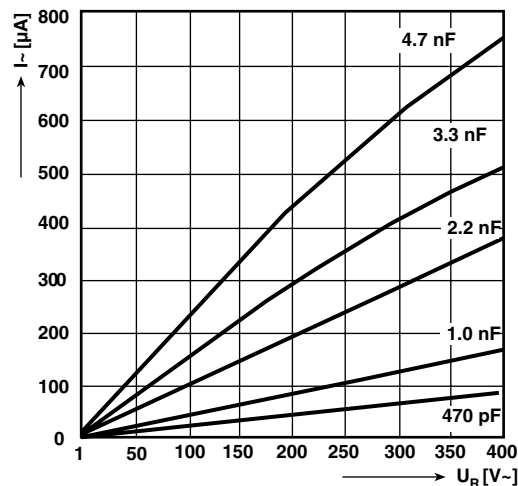
Ceramic AC Capacitors Class X1, 760 V_{AC}/Class Y1, 500 V_{AC}



Dimensions in mm

Note

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



DESIGN

Disc capacitors with epoxy coating

RATED VOLTAGE U_R

- (X1): 760 V_{AC}, 50 Hz (IEC 60384-14.2)
- (Y1): 500 V_{AC}, 50 Hz (IEC 60384-14.2)
- 250 V_{AC}, 60 Hz (UL1414, CSA C22.2)

DIELECTRIC STRENGTH BETWEEN LEADS

- Component test:
- 4000 V_{AC}, 50 Hz, 2 s
- As repeated test admissible only once with:
- 3600 V_{AC}, 50 Hz, 2 s
- Random sampling test (destructive test):
- 4000 V_{AC}, 50 Hz, 60 s

DIELECTRIC STRENGTH OF BODY INSULATION

4000 V_{AC}, 50 Hz, 60 s (destructive test)

DISSIPATION FACTOR tan δ

≤ 25 x 10⁻³

INSULATION RESISTANCE R_{IS}

≥ 10 x 10⁹ Ω

CATEGORY TEMPERATURE RANGE θ_A

(- 40 to + 125) °C

CLIMATIC CATEGORY ACC. TO EN60068-1

40/125/21

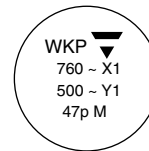
COATING

Epoxy dipped, insulating, flame retarding acc. to UL 94V-0

TAPING AND SPECIAL LEAD CONFIGURATIONS

On request

MARKING



WKP 33 pF to 1.5 nF

WKP 2.2 nF to 4.7 nF

Note

- All approval marks are also shown on the label.

ORDERING INFORMATION, CERAMIC X1/Y1 CAPACITORS WKP						
CAPACITANCE ⁽²⁾ (pF)	TOL. (%)	D x s (mm)	F ± 1 ⁽¹⁾ (mm)	d ± 0.05 ⁽¹⁾ (mm)	V ± 0.5 ⁽¹⁾ (mm)	ORDERING CODE
CLASS 1 N 750						
33	± 10 , ± 20	8.0 x 6.0	12.5	0.6	1.9	WKP330□CP□□□KR
CLASS 2 K 1200						
47	± 10 , ± 20	8.0 x 6.0	12.5	0.6	2.3	WKP470□CP□□□KR
68						WKP680□CP□□□KR
CLASS 2 K 1500						
100	± 10 , ± 20	8.0 x 6.0	12.5	0.6	2.3	WKP101□CP□□□KR
CLASS 2 K 2000						
150	± 10 , ± 20	8.0 x 6.0	12.5	0.6	2.3	WKP151□CP□□□KR
220						WKP221□CP□□□KR
CLASS 2 K 4000						
330	± 10 , ± 20	8.0 x 6.0	12.5	0.6	2.5	WKP331□CP□□□KR
470		9.0 x 6.0				WKP471□CP□□□KR
680						WKP681□CP□□□KR
1000						10.0 x 6.0
1500		12.0 x 6.0		WKP152□CP□□□KR		
2200		13.0 x 6.0		WKP222□CP□□□KR		
3300		15.0 x 6.0		WKP332□CP□□□KR		
3900		16.0 x 6.0		WKP392□CP□□□KR		
4700		18.0 x 6.0		WKP472□CP□□□KR		

Notes

- ⁽¹⁾ Standard lead configuration, other lead spacing and diameter available on request.
- ⁽²⁾ Capacitance values from 470 pF to 4700 pF: The alternative usage of smaller VKP series is recommended for new application.

ORDERING CODE			
□	7 th digit	Capacitance Tolerance:	± 10 % = K ± 20 % = M
□□□	10 th to 12 th digit	Lead Configuration (see General Information)	
R	14 th digit	RoHS Compliant Component	

APPROVALS						
IEC 60384 - 14 / 2nd Issue (1993) incl. Am. 1 (1995) - Safety Tests						
EN 132 400 (1994) - Safety Tests						
THAT APPROVAL TOGETHER WITH THE CB TEST CERTIFICATE SUBSTITUTES THE NATIONAL APPROVAL OF THE FOLLOWING						
Belgium	France	Italy	Austria	China	Japan	Spain
Denmark	Greece	Luxembourg	Portugal	Singapore	Poland	United
Germany	Ireland	Netherlands	Sweden	Slovenia	Hungaria	Czech Republic
Finland	Iceland	Norway	Switzerland	Korea	Israel	
Y1 - Capacitor: CB-Test Certificate: DE-1-11002-A1				33 pF ... 4.7 nF	500 V _{AC}	
X1 - Capacitor: CB-Test Certificate: DE-1-11002-A1				33 pF ... 4.7 nF	760 V _{AC}	
Minimum thickness of insulation: 0.4 mm						
UNDERWRITERS LABORATORIES INC.						
UL 1414	Across-the-line, Antenna-coupling and Line-by-pass component.			33 pF ... 4.7 nF	250 V _{AC}	
CANADIAN STANDARDS ASSOCIATION						
CSA C22.2	Across-the-line, antenna-coupling and line-by-pass component			33 pF ... 4.7 nF	250 V _{AC}	
NO 1-98	Agency Files / Licences			E 183 844 V1 S1		

ORDERING INFORMATION						
<u>WKP</u>	<u>221</u>	<u>M</u>	<u>CP</u>	<u>ED0</u>	<u>K</u>	<u>R</u>
SERIES	CAP. VALUE	TOLERANCE	RATED VOLTAGE	LEAD CONFIGURATION	INTERNAL CODE	ROHS COMPLIANT



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 and agree to fully indemnify and hold Vishay and its distributors harmless from and against any and all claims, liabilities, expenses and damages arising or resulting in connection with such use or sale, including attorneys fees, even if such claim alleges that Vishay or its distributor was negligent regarding the design or manufacture of the part. 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.