

## Ceramic AC Capacitors Class X1, 760 V<sub>AC</sub>/Class Y1, 500 V<sub>AC</sub>



Dimensions in mm

**Note**

Impedance (Z) as a function of frequency (f) at T<sub>a</sub> = 20 °C (average).  
Measurement with lead length 6 mm.



I = f (U<sub>R</sub>) (typ.)



**DESIGN**

Disc capacitors with epoxy coating

**RATED VOLTAGE U<sub>R</sub>**

- (X1): 760 V<sub>AC</sub>, 50 Hz (IEC 60384-14.2)
- (Y1): 500 V<sub>AC</sub>, 50 Hz (IEC 60384-14.2)
- 250 V<sub>AC</sub>, 60 Hz (UL1414, CSA C22.2)

**DIELECTRIC STRENGTH BETWEEN LEADS**

- Component test:
- 4000 V<sub>AC</sub>, 50 Hz, 2 s
- As repeated test admissible only once with:
- 3600 V<sub>AC</sub>, 50 Hz, 2 s
- Random sampling test (destructive test):
- 4000 V<sub>AC</sub>, 50 Hz, 60 s

**DIELECTRIC STRENGTH OF BODY INSULATION**

4000 V<sub>AC</sub>, 50 Hz, 60 s (destructive test)

**DISSIPATION FACTOR tan δ**

≤ 25 x 10<sup>-3</sup>

**INSULATION RESISTANCE R<sub>IS</sub>**

≥ 10 x 10<sup>9</sup> Ω

**CATEGORY TEMPERATURE RANGE θ<sub>A</sub>**

(- 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.

<b>ORDERING INFORMATION, CERAMIC X1/Y1 CAPACITORS WKP</b>							
CAPACITANCE <sup>(2)</sup> (pF)	TOL. (%)	D x s (mm)	F ± 1 <sup>(1)</sup> (mm)	d ± 0.05 <sup>(1)</sup> (mm)	V ± 0.5 <sup>(1)</sup> (mm)	ORDERING CODE	
<b>CLASS 1 N 750</b>							
33	± 10 , ± 20	8.0 x 6.0	12.5	0.6	1.9	WKP330□CP□□□KR	
<b>CLASS 2 K 1200</b>							
47	± 10 , ± 20	8.0 x 6.0	12.5	0.6	2.3	WKP470□CP□□□KR	
68						WKP680□CP□□□KR	
<b>CLASS 2 K 1500</b>							
100	± 10 , ± 20	8.0 x 6.0	12.5	0.6	2.3	WKP101□CP□□□KR	
<b>CLASS 2 K 2000</b>							
150	± 10 , ± 20	8.0 x 6.0	12.5	0.6	2.3	WKP151□CP□□□KR	
220						WKP221□CP□□□KR	
<b>CLASS 2 K 4000</b>							
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	WKP102□CP□□□KR
1500		12.0 x 6.0		0.8	2.7	WKP152□CP□□□KR	
2200						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**

<sup>(1)</sup> Standard lead configuration, other lead spacing and diameter available on request.

<sup>(2)</sup> Capacitance values from 470 pF to 4700 pF: The alternative usage of smaller VKP series is recommended for new application.

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

<b>APPROVALS</b>						
<b>IEC 60384 - 14 / 2<sup>nd</sup> Issue (1993) incl. Am. 1 (1995) - Safety Tests</b>						
<b>EN 132 400 (1994) - Safety Tests</b>						
<b>THAT APPROVAL TOGETHER WITH THE CB TEST CERTIFICATE SUBSTITUTES THE NATIONAL APPROVAL OF THE FOLLOWING</b>						
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 <sub>AC</sub>	
X1 - Capacitor: CB-Test Certificate: DE-1-11002-A1				33 pF ... 4.7 nF	760 V <sub>AC</sub>	
Minimum thickness of insulation: 0.4 mm						
<b>UNDERWRITERS LABORATORIES INC.</b>						
<b>UL 1414</b>	Across-the-line, Antenna-coupling and Line-by-pass component.			33 pF ... 4.7 nF	250 V <sub>AC</sub>	
<b>CANADIAN STANDARDS ASSOCIATION</b>						
<b>CSA C22.2</b>	Across-the-line, antenna-coupling and line-by-pass component			33 pF ... 4.7 nF	250 V <sub>AC</sub>	
<b>NO 1-98</b>	Agency Files / Licences			E 183 844 V1 S1		

<b>ORDERING INFORMATION</b>						
<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



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