

# Ceramic AC Capacitors

## Class X1, 440V<sub>AC</sub> / Class Y2, 300V<sub>AC</sub>

**DESIGN:**

Disc capacitors with epoxy coating

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

- (X1): 440V<sub>AC</sub>, 50Hz (IEC 60384-14.2)
- (Y2): 300V<sub>AC</sub>, 50Hz (IEC 60384-14.2)
- 250V<sub>AC</sub>, 60Hz (UL1414, CSA C22.2)

**DIELECTRIC STRENGTH BETWEEN LEADS:**

Component test:  
 2600V<sub>DC</sub>, 50Hz, 2s  
 As repeated test admissible only once with  
 2340V<sub>AC</sub>, 50Hz, 2s  
 Random sampling test (destructive test):  
 2600V<sub>AC</sub>, 50Hz, 60s

**DIELECTRIC STRENGTH OF BODY INSULATION:**

2600V<sub>AC</sub>, 50Hz, 60s (destructive test)

**DISSIPATION FACTOR tan δ:**

≤ 25 · 10<sup>-3</sup>

**INSULATION RESISTANCE R<sub>is</sub>:**

≥ 6 · 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

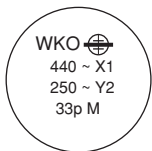
**TAPING AND SPECIAL LEAD CONFIGURATIONS:**

On request

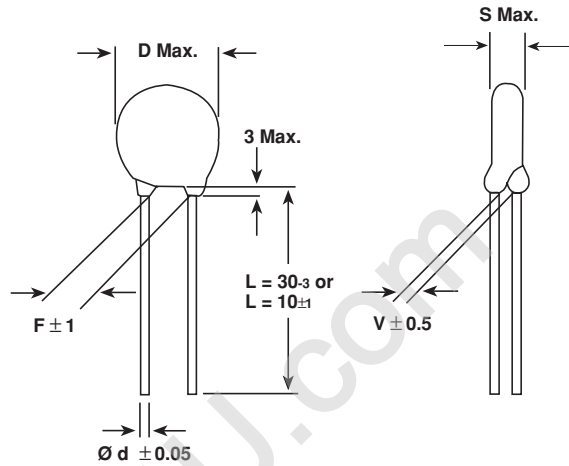
**MARKING:**

D ≤ 9mm

D ≥ 10mm

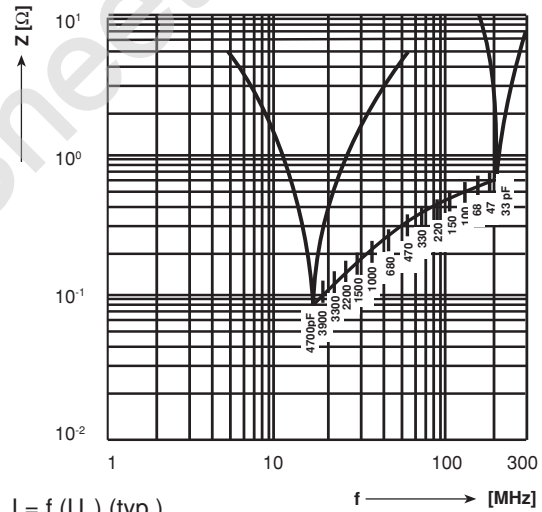


All approval marks are also shown on the label.

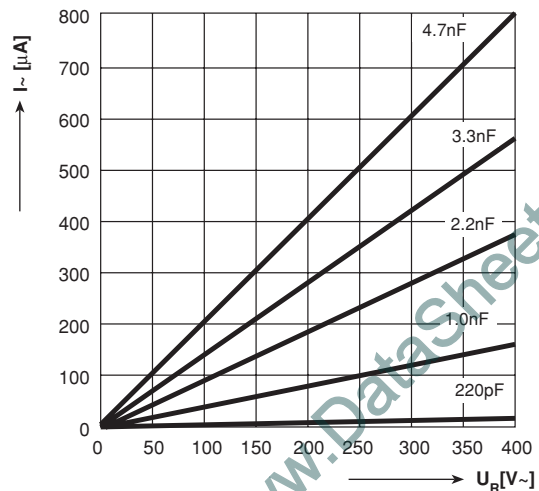


• Dimensions in mm

Impedance (Z) as a function of frequency (f) at T<sub>a</sub> = 20°C (average). Measurement with lead length 50mm.



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





CAPACITANCE (pF)	D x s Max. (mm)	F ± 1* (mm)	d ± 0.05* (mm)	V ± 0.5* (mm)	ORDERING CODE	CERAMIC DIELECTRIC
33	7.0 x 4.5	7.5	0.6	1.6	WKO330□CP□□□K	N 750
47	7.0 x 4.5				WKO470□CP□□□K	
68	7.0 x 4.5			1.9	WKO680□CP□□□K	K 1200
100	7.0 x 4.5				WKO101□CP□□□K	K 1500
150	7.0 x 4.5				WKO151□CP□□□K	K 2000
220	7.0 x 4.5				WKO221□CP□□□K	
330	7.0 x 4.5				WKO331□CP□□□K	
470	7.0 x 4.5				WKO471□CP□□□K	K 4000
680	9.0 x 5.0			2.0	WKO681□CP□□□K	
1000	9.0 x 5.0			0.8	WKO102□CP□□□K	
1500	10.0 x 5.0				WKO152□CP□□□K	
2200	12.0 x 5.0				WKO222□CP□□□K	
3300	13.0 x 5.0				WKO332□CP□□□K	
3900	14.5 x 5.0				WKO392□CP□□□K	
4700	14.5 x 5.0	2.1	WKO472□CP□□□K			
		12.5				

\*Standard lead configuration, other lead spacing and diameter available on request

Capacitance Tolerances: ± 10%, ± 20%

<b>Ordering Code:</b>	<input type="checkbox"/> 7th digit:	Capacitance tolerance:	± 10% = K ± 20% = M
	<input type="checkbox"/> 10th/11th/12th digit:	Lead configuration (See General Information)	

APPROVALS			
IEC 60384-14 2nd Edition (1993) Table II & A 1 (1995-06)	(Y2) CB-Test Certificate (X1) CB-Test Certificate	Fi 338A 2 (250V <sub>AC</sub> ) Fi 435 A 1 (440V <sub>AC</sub> )	
EN 132400 (1994) These approvals together with the CB-Test Certificate substitutes the national approval of the nations given in the table below	(Y2) CB-Test Certificate (X1) CB-Test Certificate	DE 1-7465 (300V <sub>AC</sub> ) DE 1-7465 (440V <sub>AC</sub> )	
UL 1414	Across-the-line, line to ground antenna-coupling and line-by-pass capacitor	E 183844 V1 S2 (250V <sub>AC</sub> )	
CSA C22.2 No. 1-M1981	33pF to 1500pF: Across-the-line, line-to-ground and antenna isolation capacitor 2200pF to 4700pF: Antenna and line isolation capacitor	LR 64546-10 (250V <sub>AC</sub> )	

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