

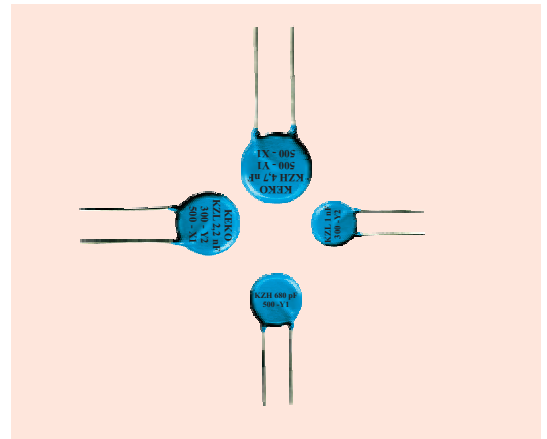
## SAFETY CERAMIC DISC CAPACITORS KZ SERIES

### Description

Safety ceramic disc KZ capacitors are intended for galvanic separation of mains and conductive parts that might be touched, i.e. antenna inputs in radio and TV sets. They are ideal for line by-pass, antenna coupling and across-the-line applications, especially for the circuits exposed to danger of electric shock. These capacitors meet safety rules applicable to electronic apparatus and associated fittings for domestic or similar general use, connected to mains according to EN 132 400.

KZ capacitors offered by KEKO VARICON cover capacitance range from 330 pF to 4700 pF, operating at AC rated voltages 300 V for Y2 Class and 500 V for Y1 and X1 Classes at frequency of 50 Hz.

KEKO VARICON presently offers two groups of Type 2 KZ capacitors : group KZL - Class Y2 and Class X1 which can withstand test voltage of 2.5 kV AC and group KZH - Class Y1 and Class X1 which can withstand test voltage of 4kVAC.



### Features

- Capacitance range ..... 330 pF to 4700 pF.
- Rated AC Voltage  $V_{rms}$ .....500 V (X1), 300 V(Y2) / 50 Hz.
- 7 Model sizes available ..... 6 to 14 mm discs.
- Dielectric Temperature Characteristics : 2E3.
- Available with straight and crimped leads.
- Available in tape and reel for automatic pick and place.

- File No. 5883.11-4670-0011/31A4Y F35/KIL, Mark Licence No. 124251, according to standard EN 132 400 / IEC 60384-14 for KZL X1/Y2 capacitors for capacitance from 330 pF to 4700 pF for rated voltage 300/500 VAC.
- File No. 5883.11-4620-1010/A11, according to standard DIN VDE 0560-2/05.70 for capacitance range from 33 pF to 4700 pF for rated voltage 400 VAC.
- UL1414 & CSA C22.2 Antenna Coupling, Across-The-Line and Line-By-Pass Applications File E163318 for KZL-Y2/X1 for capacitance range from 330 pF to 4700 pF for rated voltage of 300/500 V-~
- *Lead free components.*

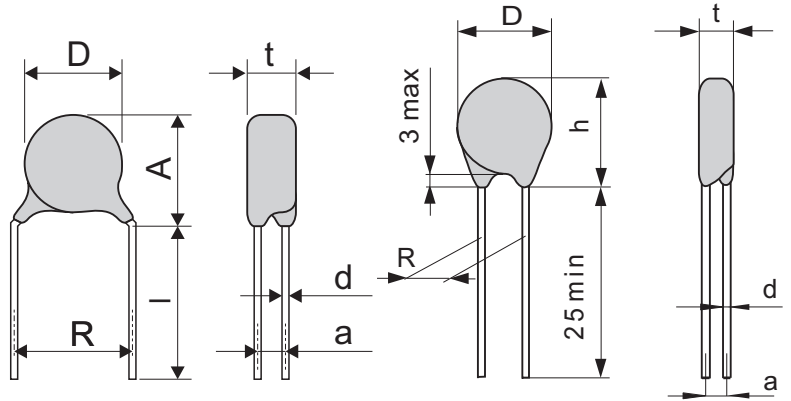
### KZH X1/Y1

- Capacitance range ..... 330 pF to 4700 pF.
- Rated AC Voltage  $V_{rms}$  ..... 500 V / 50 Hz.
- 8 Model sizes available .... 6 to 16 mm discs.
- Dielectric Temperature Characteristics : 2E3.

### Absolute Maximum Ratings

	KZL X1	KZL Y2	KZH X1/Y1
Units	2E3		
Capacitance range (C)	pF 330 to 4700		
Capacitance Tolerance	%		
Voltage Dependence	yes		
Dissipation Factor tg $\delta$	$\leq 25 \cdot 10^{-3}$		$\leq 25 \cdot 10^{-3}$
Rated AC Voltage Range ( $V_{rms}$ ) at 50 Hz	500	300	500
Measuring Conditions			
AC Voltage	V $1 \pm 0.2$		
Frequency	kHz $1 \pm 20 \%$		
Test AC Voltage	kV 2.5 for 2 s		kV 4 for 2 s
Test AC Voltage to Earth	kV 2.5		kV 4
Insulation Resistance IR at 500 V	G $\Omega$ $\geq 6$		G $\Omega$ $\geq 10$
AC Voltage Proof of Coating	kV 2.5 for 60 s		kV 4 for 60s
Operating Ambient Temperature	$^{\circ}\text{C}$ -40 to +125		
Climatic Category	40/125/21 - GPF		
Comply with standards	IEC 384-14, UL1414, CSA C 22.2 No. 1-M1994		

**Device Ratings and Characteristics**



**Safety Disc Capacitors - KZL Class Y2, X1**

Type	C pF	tan δ 10E-3	V <sub>rms</sub> V	D max mm	t max mm	R ± 1 mm	d ± 0,05 mm	h/A max mm	a ± 1 mm
KZL 330 pF M 2E3 300/500 Y2/X1	330	25	300/500	6	5	7,5	0,6	9	1,9
KZL 470 pF M 2E3 300/500 Y2/X1	470	25	300/500	6	5	7,5	0,6	9	1,9
KZL 680 pF M 2E3 300/500 Y2/X1	680	25	300/500	7	5	7,5	0,6	10	1,9
KZL 1.0 nF M 2E3 300/500 Y2/X1	1000	25	300/500	8	5	7,5	0,8	11	2,1
KZL 1.5 nF M 2E3 300/500 Y2/X1	1500	25	300/500	9	5	7,5	0,8	12	2,1
KZL 2.2 nF M 2E3 300/500 Y2/X1	2200	25	300/500	10	5	7,5	0,8	13	2,1
KZL 3.3 nF M 2E3 300/500 Y2/X1	3300	25	300/500	12	5	7,5	0,8	15	2,1
KZL 3.9 nF M 2E3 300/500 Y2/X1	3900	25	300/500	12	5	7,5	0,8	15	2,1
KZL 4.7 nF M 2E3 300/500 Y2/X1	4700	25	300/500	14	5	7,5	0,8	17	2,1

**Safety Disc Capacitors - KZH Class Y1, X1**

Type	C pF	tan δ 10E-3	V <sub>rms</sub> V	D max mm	t max mm	R ± 1 mm	d ± 0,05 mm	h/A max mm	a ± 1 mm
KZH 330 pF M 2E3 500 Y1/X1	330	25	500	7	6,5	10	0,8	10	3,1
KZH 470 pF M 2E3 500 Y1/X1	470	25	500	7	6,5	10	0,8	10	3,1
KZH 680 pF M 2E3 500 Y1/X1	680	25	500	7	6,5	10	0,8	10	3,1
KZH 1.0 nF M 2E3 500 Y1/X1	1000	25	500	8	6,5	10	0,8	11	3,1
KZH 1.5 nF M 2E3 500 Y1/X1	1500	25	500	9	6,5	10	0,8	12	3,1
KZH 2.2 nF M 2E3 500 Y1/X1	2200	25	500	12	6,5	10	0,8	14	3,1
KZH 3.3 nF M 2E3 500 Y1/X1	3300	25	500	12	6,5	10	0,8	15	3,1
KZH 3.9 nF M 2E3 500 Y1/X1	3900	25	500	14	6,5	10	0,8	17	3,1
KZH 4.7 nF M 2E3 500 Y1/X1	4700	25	500	16	6,5	10	0,8	19	3,1

**Impedance Frequency Characteristics**

