

K10 Series Multilayer Ceramic Dipped Radial Capacitors



KEY BENEFITS

- High capacitance in small size
- Cost effective solution
- Compliant to RoHS Directive 2011/65/EU, and REACH Regulation EC 1907/2006

KEY SPECIFICATIONS

- Capacitance range: Class 1 C0G range 10 pF to 1 nF; Class 2 X7R range 100 pF to 100 nF; Class 2 Y5V range 10 nF to 150 nF
- Dielectric strength: 250 % of rated voltage
- Insulation resistance: $\geq 10\,000\,\text{M}\Omega$
- IEC 60384-9 Class 2
- IEC 60384-8 Class 1 and EIA 198
- Operating Temperature: C0G, X7R: $-55\,^{\circ}\text{C}$ to $+125\,^{\circ}\text{C}$; Y5V: $-30\,^{\circ}\text{C}$ to $+85\,^{\circ}\text{C}$

APPLICATIONS

- Bypassing
- Coupling/decoupling
- Signal comparison

RESOURCES

- Datasheet: Mono-Kap® - <http://www.vishay.com/doc?45183>
- For technical questions contact cmll@vishay.com

One of the World's Largest Manufacturers of
Discrete Semiconductors and Passive Components





CERAMIC CAPACITORS

MONO-KAP®



Dipped Radial Multilayer Ceramic K10 Capacitors

C0G (NP0) DIELECTRIC			
SIZE		10	
RATED VOLTAGE		50	100
VALUE	CODE		
10 pF	100	*	*
12 pF	120	*	*
15 pF	150	*	*
18 pF	180	*	*
22 pF	220	*	*
27 pF	270	*	*
33 pF	330	*	*
39 pF	390	*	*
47 pF	470	*	*
56 pF	560	*	*
68 pF	680	*	*
82 pF	820	*	*
100 pF	101	*	*
120 pF	121	*	*
150 pF	151	*	*
180 pF	181	*	*
220 pF	221	*	*
270 pF	271	*	*
330 pF	331	*	*
390 pF	391	*	*
470 pF	471	*	*
560 pF	561	*	*
680 pF	681	*	*
820 pF	821	*	*
1000 pF	102	*	*
1200 pF	122	*	*
1500 pF	152	*	*
1800 pF	182	*	*
2200 pF	222	*	*
2700 pF	272	*	*
3300 pF	332	*	*
3900 pF	392	*	*
4700 pF	472	*	*
5600 pF	562	*	*
6800 pF	682	*	*
8200 pF	822	*	*
0.01 µF	103	*	*

Y5V DIELECTRIC			
SIZE		10	
RATED VOLTAGE		50	100
VALUE	CODE		
0.01 µF	103	*	*
0.015 µF	153	*	*
0.022 µF	223	*	*
0.033 µF	333	*	*
0.047 µF	473	*	*
0.068 µF	683	*	*
0.10 µF	104	*	*
0.15 µF	154	*	*
0.22 µF	224	*	*
0.33 µF	334	*	*
0.47 µF	474	*	*
0.68 µF	684	*	*
1.0 µF	105	*	*

X7R DIELECTRIC			
SIZE		10	
RATED VOLTAGE		50	100
VALUE	CODE		
100 pF	101	*	*
120 pF	121	*	*
150 pF	151	*	*
180 pF	181	*	*
220 pF	221	*	*
270 pF	271	*	*
330 pF	331	*	*
390 pF	391	*	*
470 pF	471	*	*
560 pF	561	*	*
680 pF	681	*	*
820 pF	821	*	*
1000 pF	102	*	*
1200 pF	122	*	*
1500 pF	152	*	*
1800 pF	182	*	*
2200 pF	222	*	*
2700 pF	272	*	*
3300 pF	332	*	*
3900 pF	392	*	*
4700 pF	472	*	*
5600 pF	562	*	*
6800 pF	682	*	*
8200 pF	822	*	*
0.01 µF	103	*	*
0.012 µF	123	*	*
0.015 µF	153	*	*
0.018 µF	183	*	*
0.022 µF	223	*	*
0.027 µF	273	*	*
0.033 µF	333	*	*
0.039 µF	393	*	*
0.047 µF	473	*	*
0.056 µF	563	*	*
0.068 µF	683	*	*
0.082 µF	823	*	*
0.10 µF	104	*	*
0.12 µF	124	*	*
0.15 µF	154	*	*
0.22 µF	224	*	*
0.33 µF	334	*	*
0.47 µF	474	*	*
0.68 µF	684	*	*
1.0 µF	105	*	*

QUICK REFERENCE DATA					
DESCRIPTION	VALUE				
Capacitance range	10 pF to 1000 pF		100 pF to 0.1 µF		0.01 µF to 0.15 µF
Rated DC voltage	50 V	100 V	50 V	100 V	50 V
Tolerance on capacitance	± 5 %, ± 10 %		± 10 %, ± 20 %		+ 80 %/- 20 %
Dielectric Code	C0G (NP0)		X7R		Y5V

ORDERING INFORMATION									
K	103	K	10	X7R	F	5	3	H	5
PRODUCT TYPE	CAPACITANCE CODE	CAPACITANCE TOLERANCE	SIZE CODE	TEMP. CHAR.	RATED VOLTAGE	LEAD DIA.	LEAD LENGTH/ PACKAGING	LEAD STYLE	LEAD SPACING
K = Mono-Kap	Two significant digits followed by the number of zeros. For example: 103 = 10 000 pF	J = ± 5 % K = ± 10 % M = ± 20 % Z = + 80%/- 20 %	Ref. mech. spec.	C0G X7R Y5V	F = 50 V _{DC} H = 100 V _{DC}	5 = 0.5 mm (0.020")	3 = Bulk, with lead length of 30 ± 5.0 mm (1.25") T = Tape and reel U = Ammopack	L = Straight Lead H = High seated assy	2 = 2.5 (0.100") 5 = 5.0 (0.200")
Ordering Example: K-103-K-10-X7R-F-5-3-H-5									

Capacitors - High Capacitance in Small Size

Revision 16-Nov-09