

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