

# Kingtronics®

# HKT

## High Voltage Multilayer Chip Ceramic Capacitor

### APPLICATIONS

HKT SMD is widely used in Analog & Digital Modems, LAN/WAN Interface, Lighting Ballast Circuits, Voltage Multipliers, DC-DC Converter, Back-lighting Inverters.

### Product Part Number Identification

1. HKT multilayer chip capacitor

<u>HKT</u>	<u>1206</u>	<u>X7R</u>	<u>102</u>	<u>K</u>	<u>202</u>	<u>P</u>	<u>T</u>	<u>R</u>
Part No	a	b	c	d	e	f	g	h

a. Size Code (Inches).

b. T.C. Characteristics: NPO(COG), X7R, X5R, X7T, X7S, X6S, Y5V

c. Nominal Capacitance(pF): 0R6=0.6, 1R6=1.6, 102=10X10<sup>2</sup>, 105=10X10<sup>5</sup>

d. Tolerance:

A=±0.05pF, B=±0.1pF, C=±0.25pF, D=±0.5pF, J=±5%

K=±10%, M=±20%

e. Rated Voltage:

500=50V, 501=500V, 102=1000V, 502=5000V

f. Termination: P=Standard

g. Packaging Style: N=Bulk, T=Tape & Reel.

h. Pb: R=RoHS

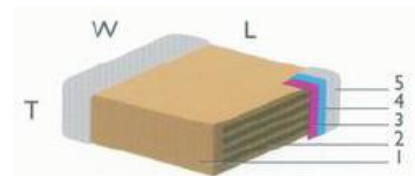
### FEATURES

- Small size
- Excellent Break down voltage, low DF
- RoHS compliant
- Suit to re-flow soldering, wave soldering, hand soldering



### Dimensions and Structure (Unit: mm)

Type		Dimensions				Structure (Unit: Inches)	
British expression	Metric expression	L	W	T /Code		No	Name
0603	1608	1.60±0.10	0.80±0.10	0.80±0.10	C	1	Ceramic Dielectric
0603 <sup>*1</sup>	1608	1.60±0.20 <sup>*1</sup>	0.80±0.20 <sup>*1</sup>	0.80±0.20 <sup>*1</sup>	C	2	Inner Electrode
0603 <sup>*3</sup>	1608	1.60-0/+0.3	0.80-0/+0.3	0.80-0/+0.3	C	3	Silver Layer
0805	2012	2.00±0.10	1.25±0.10	0.60±0.10	B	4	Nickel Layer
				0.85±0.10	D	5	Tin Layer
				1.25±0.20	F		
0805 <sup>*1</sup>	2012	2.00±0.20 <sup>*1</sup>	1.25±0.20 <sup>*1</sup>	0.60±0.10	B		
				0.85±0.20	D		
				1.25±0.20	F		
1206	3216	3.20±0.20	1.60±0.20	0.85±0.10	D		
				1.00±0.10	E		
				1.25±0.20	F		
				1.60±0.20	H		
1206 <sup>*1</sup>	3216	3.20±0.30 <sup>*1</sup>	1.60±0.30 <sup>*1</sup>	0.85±0.10	D		
				1.00±0.10	E		
				1.25±0.20	F		
				1.60±0.30 <sup>*1</sup>	H		
1210	3225	3.20±0.30	2.5±0.20	0.85±0.10	D		
				1.25±0.20	F		
				1.60±0.20	H		
				2.00±0.20	G		
				2.50±0.30	M		
1210 <sup>*1</sup>	3225	3.20±0.40 <sup>*1</sup>	2.5±0.30 <sup>*1</sup>	0.85±0.10	D		
				1.25±0.20	F		
				1.60±0.30	H		
				2.00±0.20	G		
				2.50±0.30	M		



\*1 Stands for Capacitance Range: ≥1uF

\*3 Stands for Capacitance Range: ≥10uF

**Kingtronics® International Company**

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Ceramic Capacitor

## Capacitance & Voltage

Cp/VDC	0603						
	NPO				X7R		
	500	250	200	100	250	200	100
0R2	C	C	C	C			
0R3	C	C	C	C			
0R4	C	C	C	C			
0R5	C	C	C	C			
0R6	C	C	C	C			
0R7	C	C	C	C			
0R8	C	C	C	C			
0R9	C	C	C	C			
1R0	C	C	C	C			
1R1	C	C	C	C			
1R2	C	C	C	C			
1R3	C	C	C	C			
1R5	C	C	C	C			
1R6	C	C	C	C			
1R8	C	C	C	C			
2R0	C	C	C	C			
2R2	C	C	C	C			
2R4	C	C	C	C			
2R7	C	C	C	C			
3R0	C	C	C	C			
3R3	C	C	C	C			
3R6	C	C	C	C			
3R9	C	C	C	C			
4R0	C	C	C	C			
4R3	C	C	C	C			
4R7	C	C	C	C			
5R0	C	C	C	C			
5R1	C	C	C	C			
5R6	C	C	C	C			
6R0	C	C	C	C			
6R2	C	C	C	C			
6R8	C	C	C	C			
7R0	C	C	C	C			
7R5	C	C	C	C			
8R0	C	C	C	C			
8R2	C	C	C	C			
9R0	C	C	C	C			
9R1	C	C	C	C			
100	C	C	C	C			
120	C	C	C	C			
150	C	C	C	C			
180	C	C	C	C			
200	C	C	C	C			

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Cp/VDC	0603						
	NPO				X7R		
	500	250	200	100	250	200	100
220	C	C	C	C			
270	C	C	C	C			
300	C	C	C	C			
330	C	C	C	C			
390	C	C	C	C			
470	C	C	C	C			
560	C	C	C	C			
680	C	C	C	C			
820	C	C	C	C			
101	C	C	C	C	C	C	C
121	C	C	C	C	C	C	C
151	C	C	C	C	C	C	C
181	C	C	C	C	C	C	
221		C	C	C	C	C	C
271		C	C	C	C	C	C
331		C	C	C	C	C	C
391		C	C	C	C	C	C
471		C	C	C	C	C	C
561				C	C	C	C
681				C	C	C	C
821				C	C	C	C
102				C	C	C	C
152					C	C	C
182					C	C	C
222					C	C	C
272					C	C	C
332					C	C	C
472					C	C	C
562					C	C	C
682					C	C	C
103							C
153							C
183							C
223							C
273							C
333							C
393							C
473							C
563							C
683							C
104							C

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Cp/VDC	0805					
	NPO				X7R	
	630	500	250	100	250	100
0R2	B	B	B	B		
0R3	B	B	B	B		
0R4	B	B	B	B		
0R5	B	B	B	B		
0R6	B	B	B	B		
0R7	B	B	B	B		
0R8	B	B	B	B		
0R9	B	B	B	B		
1R0	B	B	B	B		
1R1	B	B	B	B		
1R2	B	B	B	B		
1R3	B	B	B	B		
1R5	B	B	B	B		
1R6	B	B	B	B		
1R8	B	B	B	B		
2R0	B	B	B	B		
2R2	B	B	B	B		
2R4	B	B	B	B		
2R7	B	B	B	B		
3R0	B	B	B	B		
3R3	B	B	B	B		
3R6	B	B	B	B		
3R9	B	B	B	B		
4R0	B	B	B	B		
4R3	B	B	B	B		
4R7	B	B	B	B		
5R0	B	B	B	B		
5R1	B	B	B	B		
5R6	B	B	B	B		
6R0	B	B	B	B		
6R2	B	B	B	B		
6R8	B	B	B	B		
7R0	B	B	B	B		
7R5	B	B	B	B		
8R0	B	B	B	B		
8R2	B	B	B	B		
9R0	B	B	B	B		
9R1	B	B	B	B		
100	B	B	B	B		
120	B	B	B	B		
150	B	B	B	B		
180	B	B	B	B		
200	B	B	B	B		
220	B	B	B	B		

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Cp/VDC	0805						
	NPO			X7R		X7S	
	630	500	250	100	250	100	100
270	B	B	B	B			
300	B	B	B	B			
330	B	B	B	B			
390	B	B	B	B			
470	B	B	B	B			
560	B	B	B	B			
680	B	B	B	B			
820	B	B	B	B			
101	B	B	B	B	B	B	
121	B	B	B	B	B	B	
151	B	B	B	B	B	B	
181	B	B	B	B	B	B	
201	B	B	B	B	B	B	
221	B	B	B	B	D	D	
271	B	B	B	B	D	D	
331	B	B	B	B	D/F	D/F	
391		D	B	B	D/F	D/F	
471		D	B	B	D/F	D/F	
561		D	B	B	D/F	D/F	
681		D	B	B	D/F	D/F	
821		D	B	B	D/F	D/F	
102		D	B	B	D/F	D/F	
152			B	B	D/F	D/F	
182				B	D/F	D/F	
222				B	D/F	D/F	
272					D/F	D/F	
332					D/F	D/F	
472					D/F	D/F	
562					D/F	D/F	
682					D/F	D/F	
103					D/F	D/F	
153					F	D/F	
183					F	D/F	
223					F	D/F	
273					F	D/F	
333					F	D/F	
393					F	D/F	
473					F	D/F	
563					F	D/F	
683					F	D/F	
104					F	D/F	
154						F	
184						F	
224						F	F

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## Capacitance & Voltage

Cp/VDC	1206											
	NPO						X7R					
	2000	1000	630	500	250	100	2000	1000	630	500	250	100
0R5	D	D	D	D	D	D						
1R0	D	D	D	D	D	D						
1R1	D	D	D	D	D	D						
1R2	D	D	D	D	D	D						
1R3	D	D	D	D	D	D						
1R5	D	D	D	D	D	D						
1R6	D	D	D	D	D	D						
1R8	D	D	D	D	D	D						
2R0	D	D	D	D	D	D						
2R2	D	D	D	D	D	D						
2R4	D	D	D	D	D	D						
2R7	D	D	D	D	D	D						
3R0	D	D	D	D	D	D						
3R3	D	D	D	D	D	D						
3R6	D	D	D	D	D	D						
3R9	D	D	D	D	D	D						
4R0	D	D	D	D	D	D						
4R3	D	D	D	D	D	D						
4R7	D	D	D	D	D	D						
5R0	D	D	D	D	D	D						
5R1	D	D	D	D	D	D						
5R6	D	D	D	D	D	D						
6R0	D	D	D	D	D	D						
6R2	D	D	D	D	D	D						
6R8	D	D	D	D	D	D						
7R0	D	D	D	D	D	D						
7R5	D	D	D	D	D	D						
8R0	D	D	D	D	D	D						
8R2	D	D	D	D	D	D						
9R0	D	D	D	D	D	D						
9R1	D	D	D	D	D	D						
100	D	D	D	D	D	D						
120	D	D	D	D	D	D						
150	D	D	D	D	D	D						
180	D	D	D	D	D	D						
200	D	D	D	D	D	D						
220	D/E	D	D	D	D	D						
270	D/E	D	D	D	D	D						
300	D/E	D	D	D	D	D						
330	D/E	D	D	D	D	D						
390	D/E	D	D	D	D	D						
470	D/E	D	D	D	D	D						
560	D/E	D	D	D	D	D						
680	D/E	D	D	D	D	D						
820	D/E	D	D	D	D	D						

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### Capacitance & Voltage

Cp/VDC	1206													
	NPO						X7R						X7S	
	2000	1000	630	500	250	100	2000	1000	630	500	250	100	250	100
101	D/E	D/E	D	D	D	D	F	F	F	F	F			
121		D/E	D	D	D	D	F	F	F	F	F			
151		D/E	D	D	D	D	F	F	F	F	F			
181		D/E	D	D	D	D	F	F	F	F	F			
201		D/E	D	D	D	D	F	F	F	F	F			
101		D/E	D	D	D	D	F	F	F	F	F			
121		D/E	D	D	D	D	F	F	F	F	F			
151		D/E	D	D	D	D	F	F	F	F	F			
181		D/E	D	D	D	D	F	F	F	F	F			
221		D/E	D	D	D	D	F	F	F	F	F	D		
271		D/E	D	D	D	D	F	F	F	F	F	D		
331		D/E	D	D	D	D	F	F	F	F	F	D		
391			D	D	D	D	F	F	F	F	F	D		
471			D	D	D	D	F	F	F	F	F	D		
561			D	D	D	D	F	F	F	F	F	D		
681			D	D	D	D	F	F	F	F	F	D		
821			D	D	D	D	F	F	F	F	F	D		
102			D	D	D	D	F	F	F	F	F	D		
152			D	D	D	D	H	F	F	F	F	D		
182			D	D	D	D	H	F	F	F	F	D		
222			D	D	D	D	H	F	F	F	F	D		
272				D	D	D		F	F	F	F	D		
332				D	D	D		F	F	F	F	D		
472						D		F	F	F	F	D		
562						D		F	F	F	F	D		
682						D		F	F	F	F	D		
103						D		F	F	F	F	D		
153								H	F	F	F	D		
183									F	F	F	D		
223									F	F	F	D		
273									H	H	F	D		
333									H	H	F	D		
393									H	H	F	D		
473									H	H	F	D		
563										H	F	D		
683										H	F	D		
104										H	F	D		
154											H	D		
184											H	D		
224											H	D	H	D
274												D		D
334												D		D
474												F		F
684												F/H		F/H
105												H		H

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## Capacitance & Voltage

Cp/VDC	1210												
	NPO					X7R						X7S	X7T
	2000	1000	500	250	100	2000	1000	630	500	250	100	100	100
100	D												
120	D												
150	D												
180	D												
200	D												
220	D												
270	D												
300	D												
330	D												
390	D												
470	D												
560	D												
680	D												
820	D												
101	D	D	D	D	D								
121	F	D	D	D	D								
151	F	D	D	D	D								
181	F	D	D	D	D								
201	F	D	D	D	D								
221	F	D	D	D	D	F	F	F	F	F	F		
271		D	D	D	D	F	F	F	F	F	F		
331		D	D	D	D	F	F	F	F	F	F		
391		D	D	D	D	F	F	F	F	F	F		
471		D	D	D	D	F	F	F	F	F	F		
561		F	D	D	D	F	F	F	F	F	F		
681		F	D	D	D	F	F	F	F	F	F		
821		F	D	D	D	F	F	F	F	F	F		
102		F	D	D	D	F	F	F	F	F	F		
152			D	D	D	F	F	F	F	F	F		
182			D	D	D	F	F	F	F	F	F		
222			D	D	D	F	F	F	F	F	F		
272			F	D	D	H	F	F	F	F	F		
332				D	D	H	F	F	F	F	F		
472				D	D	H	F	F	F	F	F		
562							F	F	F	F	F		
682							F	F	F	F	F		
103							F	F	F	F	F		
153							F	F	F	F	F		
223							H	H	H	F	F		
333								H	H	F	F		
473								G	G	F	F		
563										F	F		
683										F	F		
104										F	F		
154										H	H		
224										G	H		
334											G		
374											G		
474											G	G	
684											H	H	
105											H	H	
225													M
475													M

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