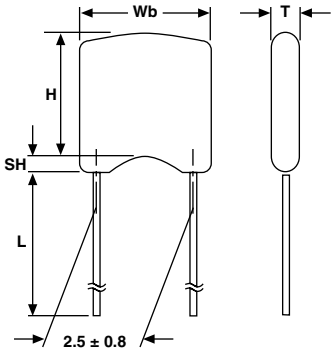
Multilayer Ceramic Dipped Radial K10 Capacitors

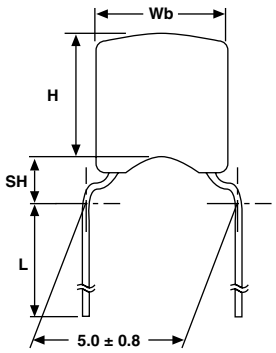
DIMENSIONS

RoHS COMPLIANT



L2

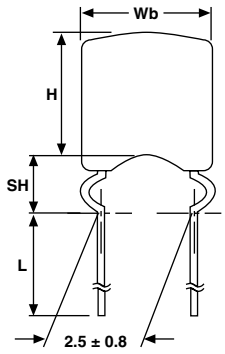
Component outline for
lead spacing 2.5 mm ± 0.8 mm
(straight leads)



H5

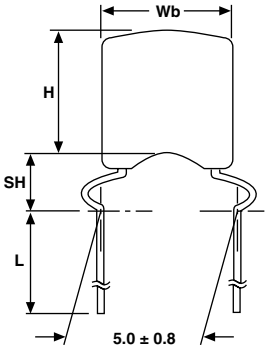
Component outline for
lead spacing 5.0 mm ± 0.8 mm
(flat bent leads)

L2 and H5 are preferred styles



K2

Component outline for
lead spacing 2.5 mm ± 0.8 mm
(outside kink)



K5

Component outline for
lead spacing 5.0 mm ± 0.8 mm
(outside kink)

CAPACITOR DIMENSIONS AND WEIGHT in millimeter (inches)								
SIZE	**$Wb_{max.}$**	**$H_{max.}$**	**$T_{max.}$**	**MAX. SEATING HEIGHT (SH)**				**WEIGHT (g)**
				L2	**H5**	**K2**	**K5**	
10	3.6 (0.142)	3.6 (0.142)	2.3 (0.090)	1.58 (0.062)	2.54 (0.100)	3.50 (0.140)	3.50 (0.140)	≈ 0.10

Note

- Bulk packed types have a standard lead length L = 25.4 mm (1.0") minimum
- Thickness is defined as “T”

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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

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CAPACITANCE RANGE CHART

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
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		

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PART NUMBER LISTING - if not in range chart, please contact cmll@vishay.com

MONO-KAP Y5V - 50 V_{DC} CLEAR TEXT CODE			
CAPACITANCE (pF)	RATED VOLTAGE (V_{DC})	+ 80 %/- 20 % TOLERANCE 13th digit (T = Reel, U = Ammo, 3 = Bulk)	LEAD SPACING mm (inch)
10 000	50	K103Z10Y5VF5.L2	2.5 mm (0.10)
15 000		K153Z10Y5VF5.H5	5.0 mm (0.20)
15 000		K153Z10Y5VF5.L2	2.5 mm (0.10)
22 000		K223Z10Y5VF5.H5	5.0 mm (0.20)
22 000		K223Z10Y5VF5.L2	2.5 mm (0.10)
33 000		K333Z10Y5VF5.H5	5.0 mm (0.20)
33 000		K333Z10Y5VF5.L2	2.5 mm (0.10)
47 000		K473Z10Y5VF5.H5	5.0 mm (0.20)
47 000		K473Z10Y5VF5.L2	2.5 mm (0.10)
68 000		K683Z10Y5VF5.H5	5.0 mm (0.20)
68 000		K683Z10Y5VF5.L2	2.5 mm (0.10)
100 000		K104Z10Y5VF5.H5	5.0 mm (0.20)
100 000		K104Z10Y5VF5.L2	2.5 mm (0.10)
150 000		K154Z10Y5VF5.H5	5.0 mm (0.20)
150 000		K154Z10Y5VF5.L2	2.5 mm (0.10)

MONO-KAP X7R - 50 V_{DC} CLEAR TEXT CODE			
CAPACITANCE (pF)	RATED VOLTAGE (V_{DC})	10 % TOLERANCE 13th digit (1) (T = Reel, U = Ammo, 3 = Bulk)	LEAD SPACING mm (inch)
100	50	K101K10X7RF5.L2	2.5 mm (0.20)
100		K101K10X7RF5.H5	5.0 mm (0.20)
120		K121K10X7RF5.L2	2.5 mm (0.10)
120		K121K10X7RF5.H5	5.0 mm (0.20)
150		K151K10X7RF5.L2	2.5 mm (0.10)
150		K151K10X7RF5.H5	5.0 mm (0.20)
180		K181K10X7RF5.L2	2.5 mm (0.10)
180		K181K10X7RF5.H5	5.0 mm (0.20)
220		K221K10X7RF5.L2	2.5 mm (0.10)
220		K221K10X7RF5.H5	5.0 mm (0.20)
270		K271K10X7RF5.L2	2.5 mm (0.10)
270		K271K10X7RF5.H5	5.0 mm (0.20)
330		K331K10X7RF5.L2	2.5 mm (0.10)
330		K331K10X7RF5.H5	5.0 mm (0.20)
390		K391K10X7RF5.L2	2.5 mm (0.10)
390		K391K10X7RF5.H5	5.0 mm (0.20)
470		K471K10X7RF5.L2	2.5 mm (0.10)
470		K471K10X7RF5.H5	5.0 mm (0.20)
560		K561K10X7RF5.L2	2.5 mm (0.10)
560		K561K10X7RF5.H5	5.0 mm (0.20)
680		K681K10X7RF5.L2	2.5 mm (0.10)
680		K681K10X7RF5.H5	5.0 mm (0.20)
820		K821K10X7RF5.L2	2.5 mm (0.10)
820		K821K10X7RF5.H5	5.0 mm (0.20)
1000		K102K10X7RF5.L2	2.5 mm (0.10)
1000		K102K10X7RF5.H5	5.0 mm (0.20)
1200		K122K10X7RF5.L2	2.5 mm (0.10)
1200		K122K10X7RF5.H5	5.0 mm (0.20)
1500		K152K10X7RF5.L2	2.5 mm (0.10)
1500		K152K10X7RF5.H5	5.0 mm (0.20)

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MONO-KAP X7R - 50 V_{DC} CLEAR TEXT CODE			
CAPACITANCE (pF)	RATED VOLTAGE (V_{DC})	10 % TOLERANCE 13th digit (1) (T = Reel, U = Ammo, 3 = Bulk)	LEAD SPACING mm (inch)
1800	50	K182K10X7RF5.L2	2.5 mm (0.10)
1800		K182K10X7RF5.H5	5.0 mm (0.20)
2200		K222K10X7RF5.L2	2.5 mm (0.10)
2200		K222K10X7RF5.H5	5.0 mm (0.20)
2700		K272K10X7RF5.L2	2.5 mm (0.10)
2700		K272K10X7RF5.H5	5.0 mm (0.20)
3300		K332K10X7RF5.L2	2.5 mm (0.10)
3300		K332K10X7RF5.H5	5.0 mm (0.20)
3900		K392K10X7RF5.L2	2.5 mm (0.10)
3900		K392K10X7RF5.H5	5.0 mm (0.20)
4700		K472K10X7RF5.L2	2.5 mm (0.10)
4700		K472K10X7RF5.H5	5.0 mm (0.20)
5600		K562K10X7RF5.L2	2.5 mm (0.10)
5600		K562K10X7RF5.H5	5.0 mm (0.20)
6800		K682K10X7RF5.L2	2.5 mm (0.10)
6800		K682K10X7RF5.H5	5.0 mm (0.20)
8200		K822K10X7RF5.L2	2.5 mm (0.10)
8200		K822K10X7RF5.H5	5.0 mm (0.20)
10 000		K103K10X7RF5.L2	2.5 mm (0.10)
10 000		K103K10X7RF5.H5	5.0 mm (0.20)
12 000		K123K10X7RF5.L2	2.5 mm (0.10)
12 000		K123K10X7RF5.H5	5.0 mm (0.20)
15 000		K153K10X7RF5.L2	2.5 mm (0.10)
15 000		K153K10X7RF5.H5	5.0 mm (0.20)
18 000		K183K10X7RF5.L2	2.5 mm (0.10)
18 000		K183K10X7RF5.H5	5.0 mm (0.20)
22 000		K223K10X7RF5.L2	2.5 mm (0.10)
22 000		K223K10X7RF5.H5	5.0 mm (0.20)
27 000		K273K10X7RF5.L2	2.5 mm (0.10)
27 000		K273K10X7RF5.H5	5.0 mm (0.20)
33 000		K333K10X7RF5.L2	2.5 mm (0.10)
33 000		K333K10X7RF5.H5	5.0 mm (0.20)
39 000		K393K10X7RF5.L2	2.5 mm (0.10)
39 000		K393K10X7RF5.H5	5.0 mm (0.20)
39 000		K393K10X7RF5.L2	2.5 mm (0.10)
39 000		K393K10X7RF5.H5	5.0 mm (0.20)
47 000		K473K10X7RF5.L2	2.5 mm (0.10)
47 000		K473K10X7RF5.H5	5.0 mm (0.20)
47 000		K473K10X7RF5.L2	2.5 mm (0.10)
47 000		K473K10X7RF5.H5	5.0 mm (0.20)
56 000		K563K10X7RF5.L2	2.5 mm (0.10)
56 000		K563K10X7RF5.H5	5.0 mm (0.20)
56 000		K563K10X7RF5.L2	2.5 mm (0.10)
56 000		K563K10X7RF5.H5	5.0 mm (0.20)
68 000		K683K10X7RF5.L2	2.5 mm (0.10)
68 000		K683K10X7RF5.H5	5.0 mm (0.20)
82 000		K823K10X7RF5.L2	2.5 mm (0.10)
82 000		K823K10X7RF5.H5	5.0 mm (0.20)
100 000		K104K10X7RF5.L2	2.5 mm (0.10)
100 000		K104K10X7RF5.H5	5.0 mm (0.20)

Note

(1) 20 % tolerance available

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MONO-KAP C0G - 50 V_{DC} CLEAR TEXT CODE			
CAPACITANCE (pF)	RATED VOLTAGE (V_{DC})	5 % TOLERANCE 13th digit (T = Reel, U = Ammo, 3 = Bulk)	LEAD SPACING mm (inch)
10	50	K100J10C0GF5.L2	2.5 mm (0.10)
10		K100J10C0GF5.H5	5.0 mm (0.20)
12		K120J10C0GF5.L2	2.5 mm (0.10)
12		K120J10C0GF5.H5	5.0 mm (0.20)
15		K150J10C0GF5.L2	2.5 mm (0.10)
15		K150J10C0GF5.H5	5.0 mm (0.20)
18		K180J10C0GF5.L2	2.5 mm (0.10)
18		K180J10C0GF5.H5	5.0 mm (0.20)
22		K220J10C0GF5.L2	2.5 mm (0.10)
22		K220J10C0GF5.H5	5.0 mm (0.20)
27		K270J10C0GF5.L2	2.5 mm (0.10)
27		K270J10C0GF5.H5	5.0 mm (0.20)
33		K330J10C0GF5.L2	2.5 mm (0.10)
33		K330J10C0GF5.H5	5.0 mm (0.20)
39		K390J10C0GF5.L2	2.5 mm (0.10)
39		K390J10C0GF5.H5	5.0 mm (0.20)
47		K470J10C0GF5.L2	2.5 mm (0.10)
47		K470J10C0GF5.H5	5.0 mm (0.20)
56		K560J10C0GF5.L2	2.5 mm (0.10)
56		K560J10C0GF5.H5	5.0 mm (0.20)
68		K680J10C0GF5.L2	2.5 mm (0.10)
68		K680J10C0GF5.H5	5.0 mm (0.20)
82		K820J10C0GF5.L2	2.5 mm (0.10)
82		K820J10C0GF5.H5	5.0 mm (0.20)
100		K101J10C0GF5.L2	2.5 mm (0.10)
100		K101J10C0GF5.H5	5.0 mm (0.20)
120		K121J10C0GF5.L2	2.5 mm (0.10)
120		K121J10C0GF5.H5	5.0 mm (0.20)
150		K151J10C0GF5.L2	2.5 mm (0.10)
150		K151J10C0GF5.H5	5.0 mm (0.20)
180		K181J10C0GF5.L2	2.5 mm (0.10)
180		K181J10C0GF5.H5	5.0 mm (0.20)
220		K221J10C0GF5.L2	2.5 mm (0.10)
220		K221J10C0GF5.H5	5.0 mm (0.20)
270		K271J10C0GF5.L2	2.5 mm (0.10)
270		K271J10C0GF5.H5	5.0 mm (0.20)
330		K331J10C0GF5.L2	2.5 mm (0.10)
330		K331J10C0GF5.H5	5.0 mm (0.20)
390		K391J10C0GF5.L2	2.5 mm (0.10)
390		K391J10C0GF5.H5	5.0 mm (0.20)
470		K471J10C0GF5.L2	2.5 mm (0.10)
470		K471J10C0GF5.H5	5.0 mm (0.20)
560		K561J10C0GF5.L2	2.5 mm (0.10)
560		K561J10C0GF5.H5	5.0 mm (0.20)
680		K681J10C0GF5.L2	2.5 mm (0.10)
680		K681J10C0GF5.H5	5.0 mm (0.20)
820		K821J10C0GF5.L2	2.5 mm (0.10)
820		K821J10C0GF5.H5	5.0 mm (0.20)
1000		K102J10C0GF5.L2	2.5 mm (0.10)
1000		K102J10C0GF5.H5	5.0 mm (0.20)

Note

(1) 10 % tolerance available

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MONO-KAP X7R - 100 V_{DC} CLEAR TEXT CODE			
CAPACITANCE (pF)	RATED VOLTAGE (V_{DC})	10 % TOLERANCE 13th digit (T = Reel, U = Ammo, 3 = Bulk)	LEAD SPACING mm (inch)
100	100	K101K10X7RH5.L2	2.5 mm (0.10)
100		K101K10X7RH5.H5	5.0 mm (0.20)
120		K121K10X7RH5.L2	2.5 mm (0.10)
120		K121K10X7RH5.H5	5.0 mm (0.20)
150		K151K10X7RH5.L2	2.5 mm (0.10)
150		K151K10X7RH5.H5	5.0 mm (0.20)
180		K181K10X7RH5.L2	2.5 mm (0.10)
180		K181K10X7RH5.H5	5.0 mm (0.20)
220		K221K10X7RH5.L2	2.5 mm (0.10)
220		K221K10X7RH5.H5	5.0 mm (0.20)
270		K271K10X7RH5.L2	2.5 mm (0.10)
270		K271K10X7RH5.H5	5.0 mm (0.20)
330		K331K10X7RH5.L2	2.5 mm (0.10)
330		K331K10X7RH5.H5	5.0 mm (0.20)
390		K391K10X7RH5.L2	2.5 mm (0.10)
390		K391K10X7RH5.H5	5.0 mm (0.20)
470		K471K10X7RH5.L2	2.5 mm (0.10)
470		K471K10X7RH5.H5	5.0 mm (0.20)
560		K561K10X7RH5.L2	2.5 mm (0.10)
560		K561K10X7RH5.H5	5.0 mm (0.20)
680		K681K10X7RH5.L2	2.5 mm (0.10)
680		K681K10X7RH5.H5	5.0 mm (0.20)
820		K821K10X7RH5.L2	2.5 mm (0.10)
820		K821K10X7RH5.H5	5.0 mm (0.20)
1000		K102K10X7RH5.L2	2.5 mm (0.10)
1000		K102K10X7RH5.H5	5.0 mm (0.20)
1200		K122K10X7RH5.L2	2.5 mm (0.10)
1200		K122K10X7RH5.H5	5.0 mm (0.20)
1500		K152K10X7RH5.L2	2.5 mm (0.10)
1500		K152K10X7RH5.H5	5.0 mm (0.20)
1800		K182K10X7RH5.L2	2.5 mm (0.10)
1800		K182K10X7RH5.H5	5.0 mm (0.20)
2200		K222K10X7RH5.L2	2.5 mm (0.10)
2200		K222K10X7RH5.H5	5.0 mm (0.20)
2700		K272K10X7RH5.L2	2.5 mm (0.10)
2700		K272K10X7RH5.H5	5.0 mm (0.20)
3300		K332K10X7RH5.L2	2.5 mm (0.10)
3300		K332K10X7RH5.H5	5.0 mm (0.20)
3900		K392K10X7RH5.L2	2.5 mm (0.10)
3900		K392K10X7RH5.H5	5.0 mm (0.20)
4700		K472K10X7RH5.L2	2.5 mm (0.10)
4700		K472K10X7RH5.H5	5.0 mm (0.20)
5600		K562K10X7RH5.L2	2.5 mm (0.10)
5600		K562K10X7RH5.H5	5.0 mm (0.20)
6800		K682K10X7RH5.L2	2.5 mm (0.10)
6800		K682K10X7RH5.H5	5.0 mm (0.20)
8200		K822K10X7RH5.L2	2.5 mm (0.10)
8200		K822K10X7RH5.H5	5.0 mm (0.20)
10 000		K103K10X7RH5.L2	2.5 mm (0.10)
10 000		K103K10X7RH5.H5	5.0 mm (0.20)

Note

(1) 20 % tolerance available

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MONO-KAP C0G - 100 V_{DC} CLEAR TEXT CODE			
CAPACITANCE (pF)	RATED VOLTAGE (V_{DC})	5 % TOLERANCE 13th digit (T = Reel, U = Ammo, 3 = Bulk)	LEAD SPACING mm (inch)
10	100	K100J10C0GH5.L2	2.5 mm (0.10)
10		K100J10C0GH5.H5	5.0 mm (0.20)
12		K120J10C0GH5.L2	2.5 mm (0.10)
12		K120J10C0GH5.H5	5.0 mm (0.20)
15		K150J10C0GH5.L2	2.5 mm (0.10)
15		K150J10C0GH5.H5	5.0 mm (0.20)
18		K180J10C0GH5.L2	2.5 mm (0.10)
18		K180J10C0GH5.H5	5.0 mm (0.20)
22		K220J10C0GH5.L2	2.5 mm (0.10)
22		K220J10C0GH5.H5	5.0 mm (0.20)
27		K270J10C0GH5.L2	2.5 mm (0.10)
27		K270J10C0GH5.H5	5.0 mm (0.20)
27		K270J10C0GH5.L2	2.5 mm (0.10)
27		K270J10C0GH5.H5	5.0 mm (0.20)
33		K330J10C0GH5.L2	2.5 mm (0.10)
33		K330J10C0GH5.H5	5.0 mm (0.20)
39		K390J10C0GH5.L2	2.5 mm (0.10)
39		K390J10C0GH5.H5	5.0 mm (0.20)
47		K470J10C0GH5.L2	2.5 mm (0.10)
47		K470J10C0GH5.H5	5.0 mm (0.20)
56		K560J10C0GH5.L2	2.5 mm (0.10)
56		K560J10C0GH5.H5	5.0 mm (0.20)
68		K680J10C0GH5.L2	2.5 mm (0.10)
68		K680J10C0GH5.H5	5.0 mm (0.20)
82		K820J10C0GH5.L2	2.5 mm (0.10)
82		K820J10C0GH5.H5	5.0 mm (0.20)
100		K101J10C0GH5.L2	2.5 mm (0.10)
100		K101J10C0GH5.H5	5.0 mm (0.20)
120		K121J10C0GH5.L2	2.5 mm (0.10)
120		K121J10C0GH5.H5	5.0 mm (0.20)
150		K151J10C0GH5.L2	2.5 mm (0.10)
150		K151J10C0GH5.H5	5.0 mm (0.20)
180		K181J10C0GH5.L2	2.5 mm (0.10)
180		K181J10C0GH5.H5	5.0 mm (0.20)
220		K221J10C0GH5.L2	2.5 mm (0.10)
220		K221J10C0GH5.H5	5.0 mm (0.20)
270		K271J10C0GH5.L2	2.5 mm (0.10)
270		K271J10C0GH5.H5	5.0 mm (0.20)
330		K331J10C0GH5.L2	2.5 mm (0.10)
330		K331J10C0GH5.H5	5.0 mm (0.20)
390		K391J10C0GH5.L2	2.5 mm (0.10)
390		K391J10C0GH5.H5	5.0 mm (0.20)
470		K471J10C0GH5.L2	2.5 mm (0.10)
470		K471J10C0GH5.H5	5.0 mm (0.20)
560		K561J10C0GH5.L2	2.5 mm (0.10)
560		K561J10C0GH5.H5	5.0 mm (0.20)

Note

(1) 10 % tolerance available

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