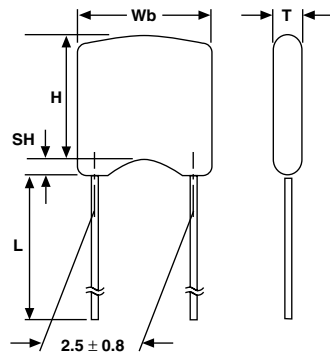


## Dipped Radial Multilayer Ceramic Capacitors for 50 - 100 Vdc

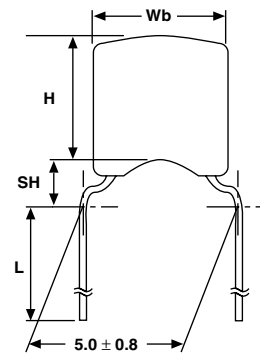


RoHS  
COMPLIANT

### DIMENSIONS

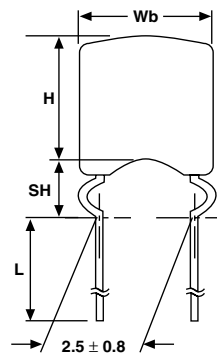


**L2**  
Component outline for  
Lead spacing  $2.5 \pm 0.8$  mm  
(straight leads)

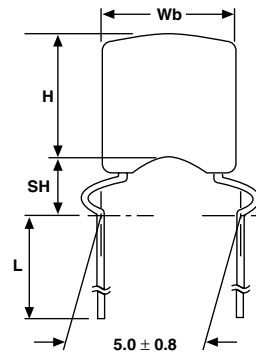


**H5**  
Component outline for  
Lead spacing  $5.0 \pm 0.8$  mm  
(flat bent leads)

L2 and H5 are preferred styles



**K2**  
Component outline for  
Lead spacing  $2.5 \pm 0.8$  mm  
(outside kink)



**K5**  
Component outline for  
Lead spacing  $5.0 \pm 0.8$  mm  
(outside kink)

CAPACITOR DIMENSIONS AND WEIGHT								
SIZE	Wb <sub>MAX</sub>	H <sub>MAX</sub>	T <sub>MAX</sub>	MAX. SEATING HEIGHT (SH)				WEIGHT (g)
				L2	H5	K2	K5	
15	4.0 (0.15)	4.0 (0.15)	2.5 (0.100)	1.58 (0.062)	2.54 (0.100)	3.50 (0.140)	3.50 (0.140)	≈ 0.15
20	5.0 (0.20)	5.0 (0.20)	3.2 (0.13)	1.58 (0.062)	2.54 (0.100)	3.50 (0.140)	3.50 (0.140)	≈ 0.16

**Note**

1. Bulk packed types have a standard lead length L = 25.4 mm (1.0 inch) minimum
2. Dimensions between parentheses are in inches
3. Thickness is defined as T



QUICK REFERENCE DATA						
DESCRIPTION	VALUE					
Capacitance range	10 pF to 6800 pF		100 pF to 1.0 $\mu$ F		0.1 $\mu$ F to 1.0 $\mu$ F	
Rated DC voltage	50 V	100 V	50 V	100 V	50 V	100 V
Tolerance on capacitance	$\pm 5\%/\pm 10\%$		$\pm 10\%/\pm 20\%$		+ 80/- 20 %	
Dielectric Code	C0G (NP0)		X7R		Y5V	

ORDERING INFORMATION									
K	103	K	15	X7R	F	5	3	H	5
PRODUCT TYPE	CAPACITANCE CODE	CAPACITANCE TOLERANCE	SIZE CODE	TEMP. CHAR.	RATED VOLTAGE	LEAD DIAMETER	LEAD LENGTH/PACKAGING	LEAD STYLE	LEAD SPACING
K = Mono-Kap	Two significant digits followed by the number of zeros. example: 103 = 10 000 pF	J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z = + 80/- 20%	Ref. mechanical spec.	C0G X7R Y5V	F = 50 V <sub>DC</sub> H = 100 V <sub>DC</sub>	5 = 0.5 mm (0.020")	3 = bulk, with lead length of 30 $\pm$ 5.0 (1.25") T = Tape and Reel U = Ammo pack	L = Straight Lead H = High Seated assy	2 = 2.5 (0.100") 5 = 5.0 (0.200")



## CAPACITANCE RANGE CHART COG (NP0) DIELECTRIC

SIZE		15		20	
RATED VOLTAGE		50	100	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	.	.		
39pF	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 $\mu$ F	103				

## Y5V DIELECTRIC

SIZE		15		20	
RATED VOLTAGE		50	100	50	100
VALUE	CODE				
0.01 $\mu$ F	103	.	.		
0.015 $\mu$ F	153	.	.		
0.022 $\mu$ F	223	.	.		
0.033 $\mu$ F	333	.	.		
0.047 $\mu$ F	473	.	.		
0.068 $\mu$ F	683	.	.		
0.10 $\mu$ F	104	.	.		
0.15 $\mu$ F	154	.	.		.
0.22 $\mu$ F	224	.	.		.
0.33 $\mu$ F	334	.	.		.
0.47 $\mu$ F	474			.	
0.68 $\mu$ F	684			.	
1.0 $\mu$ F	105			.	

## X7R DIELECTRIC

SIZE		15		20	
RATED VOLTAGE		50	100	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 $\mu$ F	103	.	.		
0.012 $\mu$ F	123	.	.		
0.015 $\mu$ F	153	.	.		
0.018 $\mu$ F	183	.	.		
0.022 $\mu$ F	223	.	.		
0.027 $\mu$ F	273	.	.		.
0.033 $\mu$ F	333	.	.		.
0.039 $\mu$ F	393	.	.		.
0.047 $\mu$ F	473	.	.		.
0.056 $\mu$ F	563	.	.		.
0.068 $\mu$ F	683	.	.		.
0.082 $\mu$ F	823	.	.		.
0.10 $\mu$ F	104	.	.		.
0.15 $\mu$ F	154			.	.
0.22 $\mu$ F	224			.	.
0.33 $\mu$ F	334			.	.
0.47 $\mu$ F	474			.	.
0.68 $\mu$ F	684			.	.
1.0 $\mu$ F	105			.	.



<b>MONO-KAP Y5V - 50 VDC CLEAR TEXT CODE</b>			
CAP (pF)	RATED VOLTAGE (Vdc)	LEAD SPACING	+ 80/- 20 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
10 000	50 Vdc	2.5 mm (0.10")	K103Z15Y5VF5.L2
10 000		5.0 mm (0.20")	K103Z15Y5VF5.H5
15 000		2.5 mm (0.10")	K153Z15Y5VF5.L2
15 000		5.0 mm (0.20")	K153Z15Y5VF5.H5
22 000		2.5 mm (0.10")	K223Z15Y5VF5.L2
22 000		5.0 mm (0.20")	K223Z15Y5VF5.H5
33 000		2.5 mm (0.10")	K333Z15Y5VF5.L2
33 000		5.0 mm (0.20")	K333Z15Y5VF5.H5
47 000		2.5 mm (0.10")	K473Z15Y5VF5.L2
47 000		5.0 mm (0.20")	K473Z15Y5VF5.H5
68 000		2.5 mm (0.10")	K683Z15Y5VF5.L2
68 000		5.0 mm (0.20")	K683Z15Y5VF5.H5
100 000		2.5 mm (0.10")	K104Z15Y5VF5.L2
100 000		5.0 mm (0.20")	K104Z15Y5VF5.H5
150 000		2.5 mm (0.10")	K154Z15Y5VF5.L2
150 000		5.0 mm (0.20")	K154Z15Y5VF5.H5
220 000		2.5 mm (0.10")	K224Z15Y5VF5.L2
220 000		5.0 mm (0.20")	K224Z15Y5VF5.H5
330 000		2.5 mm (0.10")	K334Z20Y5VF5.L2
330 000		5.0 mm (0.20")	K334Z20Y5VF5.H5
470 000		2.5 mm (0.10")	K474Z20Y5VF5.L2
470 000		5.0 mm (0.20")	K474Z20Y5VF5.H5
680 000		2.5 mm (0.10")	K684Z20Y5VF5.L2
680 000		5.0 mm (0.20")	K684Z20Y5VF5.H5
1 000 000		2.5 mm (0.10")	K105Z20Y5VF5.L2
1 000 000		5.0 mm (0.20")	K105Z20Y5VF5.H5

<b>MONO-KAP X7R - 50 VDC CLEAR TEXT CODE</b>				
CAP (PF)	RATED VOLTAGE (Vdc)	LEAD SPACING	10 % TOLERANCE	20 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
100	50 Vdc	2.5 mm (0.10")	K101K15X7RF5.L2	K101M15X7RF5.L2
100		5.0 mm (0.20")	K101K15X7RF5.H5	K101M15X7RF5.H5
120		2.5 mm (0.10")	K121K15X7RF5.L2	K121M15X7RF5.L2
120		5.0 mm (0.20")	K121K15X7RF5.H5	K121M15X7RF5.H5
150		2.5 mm (0.10")	K151K15X7RF5.L2	K151M15X7RF5.L2
150		5.0 mm (0.20")	K151K15X7RF5.H5	K151M15X7RF5.H5
180		2.5 mm (0.10")	K181K15X7RF5.L2	K181M15X7RF5.L2
180		5.0 mm (0.20")	K181K15X7RF5.H5	K181M15X7RF5.H5
220		2.5 mm (0.10")	K221K15X7RF5.L2	K221M15X7RF5.L2
220		5.0 mm (0.20")	K221K15X7RF5.H5	K221M15X7RF5.H5
270		2.5 mm (0.10")	K271K15X7RF5.L2	K271M15X7RF5.L2
270		5.0 mm (0.20")	K271K15X7RF5.H5	K271M15X7RF5.H5
330		2.5 mm (0.10")	K331K15X7RF5.L2	K331M15X7RF5.L2



<b>MONO-KAP X7R - 50 VDC CLEAR TEXT CODE</b>				
CAP (PF)	RATED VOLTAGE (Vdc)	LEAD SPACING	10 % TOLERANCE	20 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
330	50 Vdc	5.0 mm (0.20")	K331K15X7RF5.H5	K331M15X7RF5.H5
390		2.5 mm (0.10")	K391K15X7RF5.L2	K391M15X7RF5.L2
390		5.0 mm (0.20")	K391K15X7RF5.H5	K391M15X7RF5.H5
470		2.5 mm (0.10")	K471K15X7RF5.L2	K471M15X7RF5.L2
470		5.0 mm (0.20")	K471K15X7RF5.H5	K471M15X7RF5.H5
560		2.5 mm (0.10")	K561K15X7RF5.L2	K561M15X7RF5.L2
560		5.0 mm (0.20")	K561K15X7RF5.H5	K561M15X7RF5.H5
680		2.5 mm (0.10")	K681K15X7RF5.L2	K681M15X7RF5.L2
680		5.0 mm (0.20")	K681K15X7RF5.H5	K681M15X7RF5.H5
820		2.5 mm (0.10")	K821K15X7RF5.L2	K821M15X7RF5.L2
820		5.0 mm (0.20")	K821K15X7RF5.H5	K821M15X7RF5.H5
1000		2.5 mm (0.10")	K102K15X7RF5.L2	K102M15X7RF5.L2
1000		5.0 mm (0.20")	K102K15X7RF5.H5	K102M15X7RF5.H5
1200		2.5 mm (0.10")	K122K15X7RF5.L2	K122M15X7RF5.L2
1200		5.0 mm (0.20")	K122K15X7RF5.H5	K122M15X7RF5.H5
1500		2.5 mm (0.10")	K152K15X7RF5.L2	K152M15X7RF5.L2
1500		5.0 mm (0.20")	K152K15X7RF5.H5	K152M15X7RF5.H5
1800		2.5 mm (0.10")	K182K15X7RF5.L2	K182M15X7RF5.L2
1800		5.0 mm (0.20")	K182K15X7RF5.H5	K182M15X7RF5.H5
2200		2.5 mm (0.10")	K222K15X7RF5.L2	K222M15X7RF5.L2
2200		5.0 mm (0.20")	K222K15X7RF5.H5	K222M15X7RF5.H5
2700		2.5 mm (0.10")	K272K15X7RF5.L2	K272M15X7RF5.L2
2700		5.0 mm (0.20")	K272K15X7RF5.H5	K272M15X7RF5.H5
3300		2.5 mm (0.10")	K332K15X7RF5.L2	K332M15X7RF5.L2
3300		5.0 mm (0.20")	K332K15X7RF5.H5	K332M15X7RF5.H5
3900		2.5mm (0.10")	K392K15X7RF5.L2	K392M15X7RF5.L2
3900		5.0 mm (0.20")	K392K15X7RF5.H5	K392M15X7RF5.H5
4700		2.5 mm (0.10")	K472K15X7RF5.L2	K472M15X7RF5.L2
4700		5.0 mm (0.20")	K472K15X7RF5.H5	K472M15X7RF5.H5
5600		2.5 mm (0.10")	K562K15X7RF5.L2	K562M15X7RF5.L2
5600		5.0 mm (0.20")	K562K15X7RF5.H5	K562M15X7RF5.H5
6800		2.5 mm (0.10")	K682K15X7RF5.L2	K682M15X7RF5.L2
6800		5.0 mm (0.20")	K682K15X7RF5.H5	K682M15X7RF5.H5
8200		2.5 mm (0.10")	K822K15X7RF5.L2	K822M15X7RF5.L2
8200		5.0 mm (0.20")	K822K15X7RF5.H5	K822M15X7RF5.H5
10 000		2.5 mm (0.10")	K103K15X7RF5.L2	K103M15X7RF5.L2
10 000		5.0 mm (0.20")	K103K15X7RF5.H5	K103M15X7RF5.H5
12 000		2.5 mm (0.10")	K123K15X7RF5.L2	K123M15X7RF5.L2
12 000		5.0 mm (0.20")	K123K15X7RF5.H5	K123M15X7RF5.H5
15 000		2.5 mm (0.10")	K153K15X7RF5.L2	K153M15X7RF5.L2
15 000	5.0 mm (0.20")	K153K15X7RF5.H5	K153M15X7RF5.H5	
18 000	2.5 mm (0.10")	K183K15X7RF5.L2	K183M15X7RF5.L2	
18 000	5.0 mm (0.20")	K183K15X7RF5.H5	K183M15X7RF5.H5	
22 000	2.5 mm (0.10")	K223K15X7RF5.L2	K223M15X7RF5.L2	
22 000	5.0 mm (0.20")	K223K15X7RF5.H5	K223M15X7RF5.H5	
27 000	2.5 mm (0.10")	K273K15X7RF5.L2	K273M15X7RF5.L2	



**Dipped Radial Multilayer Ceramic Capacitors  
50 - 100 Vdc**

<b>MONO-KAP X7R - 50 VDC CLEAR TEXT CODE</b>				
CAP (PF)	RATED VOLTAGE (VDC)	LEAD SPACING	10 % TOLERANCE	20 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
27 000	50 Vdc	5.0 mm (0.20")	K273K15X7RF5.H5	K273M15X7RF5.H5
33 000		2.5 mm (0.10")	K333K15X7RF5.L2	K333M15X7RF5.L2
33 000		5.0 mm (0.20")	K333K15X7RF5.H5	K333M15X7RF5.H5
39 000		2.5 mm (0.10")	K393K15X7RF5.L2	K393M15X7RF5.L2
39 000		5.0 mm (0.20")	K393K15X7RF5.H5	K393M15X7RF5.H5
47 000		2.5 mm (0.10")	K473K15X7RF5.L2	K473M15X7RF5.L2
47 000		5.0 mm (0.20")	K473K15X7RF5.H5	K473M15X7RF5.H5
56 000		2.5 mm (0.10")	K563K15X7RF5.L2	K563M15X7RF5.L2
56 000		5.0 mm (0.20")	K563K15X7RF5.H5	K563M15X7RF5.H5
68 000		2.5 mm (0.10")	K683K15X7RF5.L2	K683M15X7RF5.L2
68 000		5.0 mm (0.20")	K683K15X7RF5.H5	K683M15X7RF5.H5
82 000		2.5 mm (0.10")	K823K15X7RF5.L2	K823M15X7RF5.L2
82 000		5.0 mm (0.20")	K823K15X7RF5.H5	K823M15X7RF5.H5
100 000		2.5 mm (0.10")	K104K15X7RF5.L2	K104M15X7RF5.L2
100 000		5.0 mm (0.20")	K104K15X7RF5.H5	K104M15X7RF5.H5
150 000		2.5 mm (0.10")	K154K20X7RF5.L2	K154M20X7RF5.L2
150 000		5.0 mm (0.20")	K154K20X7RF5.H5	K154M20X7RF5.H5
220 000		2.5 mm (0.10")	K224K20X7RF5.L2	K224M20X7RF5.L2
220 000		5.0 mm (0.20")	K224K20X7RF5.H5	K224M20X7RF5.H5
330 000		2.5 mm (0.10")	K334K20X7RF5.L2	K334M20X7RF5.L2
330 000		5.0 mm (0.20")	K334K20X7RF5.H5	K334M20X7RF5.H5
470 000		2.5 mm (0.10")	K474K20X7RF5.L2	K474M20X7RF5.L2
470 000		5.0 mm (0.20")	K474K20X7RF5.H5	K474M20X7RF5.H5
680 000		2.5 mm (0.10")	K684K20X7RF5.L2	K684M20X7RF5.L2
680 000		5.0 mm (0.20")	K684K20X7RF5.H5	K684M20X7RF5.H5
1 000 000		2.5 mm (0.10")	K105K20X7RF5.L2	K105M20X7RF5.L2
1 000 000		5.0 mm (0.20")	K105K20X7RF5.H5	K105M20X7RF5.H5

<b>MONO-KAP C0G - 50 VDC CLEAR TEXT CODE</b>				
CAP (PF)	RATED VOLTAGE (VDC)	LEAD SPACING	5 % TOLERANCE	10 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
10	50 Vdc	2.5 mm (0.10")	K100J15C0GF5.L2	K100K15C0GF5.L2
10		5.0 mm (0.20")	K100J15C0GF5.H5	K100K15C0GF5.H5
12		2.5 mm (0.10")	K120J15C0GF5.L2	K120K15C0GF5.L2
12		5.0 mm (0.20")	K120J15C0GF5.H5	K120K15C0GF5.H5
15		2.5 mm (0.10")	K150J15C0GF5.L2	K150K15C0GF5.L2
15		5.0 mm (0.20")	K150J15C0GF5.H5	K150K15C0GF5.H5
18		2.5 mm (0.10")	K180J15C0GF5.L2	K180K15C0GF5.L2
18		5.0 mm (0.20")	K180J15C0GF5.H5	K180K15C0GF5.H5
22		2.5 mm (0.10")	K220J15C0GF5.L2	K220K15C0GF5.L2
22		5.0 mm (0.20")	K220J15C0GF5.H5	K220K15C0GF5.H5
27		2.5 mm (0.10")	K270J15C0GF5.L2	K270K15C0GF5.L2
27		5.0 mm (0.20")	K270J15C0GF5.H5	K270K15C0GF5.H5
33		2.5 mm (0.10")	K330J15C0GF5.L2	K330K15C0GF5.L2
33		5.0 mm (0.20")	K330J15C0GF5.H5	K330K15C0GF5.H5



<b>MONO-KAP COG - 50 VDC CLEAR TEXT CODE</b>				
CAP (PF)	RATED VOLTAGE (VDC)	LEAD SPACING	5 % TOLERANCE	10 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
39	50 Vdc	2.5 mm (0.10")	K390J15C0GF5.L2	K390K15C0GF5.L2
39		5.0 mm (0.20")	K390J15C0GF5.H5	K390K15C0GF5.H5
47		2.5 mm (0.10")	K470J15C0GF5.L2	K470K15C0GF5.L2
47		5.0 mm (0.20")	K470J15C0GF5.H5	K470K15C0GF5.H5
56		2.5 mm (0.10")	K560J15C0GF5.L2	K560K15C0GF5.L2
56		5.0 mm (0.20")	K560J15C0GF5.H5	K560K15C0GF5.H5
68		2.5 mm (0.10")	K680J15C0GF5.L2	K680K15C0GF5.L2
68		5.0 mm (0.20")	K680J15C0GF5.H5	K680K15C0GF5.H5
82		2.5 mm (0.10")	K820J15C0GF5.L2	K820K15C0GF5.L2
82		5.0 mm (0.20")	K820J15C0GF5.H5	K820K15C0GF5.H5
100		2.5 mm (0.10")	K101J15C0GF5.L2	K101K15C0GF5.L2
100		5.0 mm (0.20")	K101J15C0GF5.H5	K101K15C0GF5.H5
120		2.5 mm (0.10")	K121J15C0GF5.L2	K121K15C0GF5.L2
120		5.0 mm (0.20")	K121J15C0GF5.H5	K121K15C0GF5.H5
150		2.5 mm (0.10")	K151J15C0GF5.L2	K151K15C0GF5.L2
150		5.0 mm (0.20")	K151J15C0GF5.H5	K151K15C0GF5.H5
180		2.5 mm (0.10")	K181J15C0GF5.L2	K181K15C0GF5.L2
180		5.0 mm (0.20")	K181J15C0GF5.H5	K181K15C0GF5.H5
220		2.5 mm (0.10")	K221J15C0GF5.L2	K221K15C0GF5.L2
220		5.0 mm (0.20")	K221J15C0GF5.H5	K221K15C0GF5.H5
270		2.5 mm (0.10")	K271J15C0GF5.L2	K271K15C0GF5.L2
270		5.0 mm (0.20")	K271J15C0GF5.H5	K271K15C0GF5.H5
330		2.5 mm (0.10")	K331J15C0GF5.L2	K331K15C0GF5.L2
330		5.0 mm (0.20")	K331J15C0GF5.H5	K331K15C0GF5.H5
390		2.5 mm (0.10")	K391J15C0GF5.L2	K391K15C0GF5.L2
390		5.0 mm (0.20")	K391J15C0GF5.H5	K391K15C0GF5.H5
470		2.5 mm (0.10")	K471J15C0GF5.L2	K471K15C0GF5.L2
470		5.0 mm (0.20")	K471J15C0GF5.H5	K471K15C0GF5.H5
560		2.5 mm (0.10")	K561J15C0GF5.L2	K561K15C0GF5.L2
560		5.0 mm (0.20")	K561J15C0GF5.H5	K561K15C0GF5.H5
680		2.5 mm (0.10")	K681J15C0GF5.L2	K681K15C0GF5.L2
680		5.0 mm (0.20")	K681J15C0GF5.H5	K681K15C0GF5.H5
820		2.5 mm (0.10")	K821J15C0GF5.L2	K821K15C0GF5.L2
820		5.0 mm (0.20")	K821J15C0GF5.H5	K821K15C0GF5.H5
1000		2.5 mm (0.10")	K102J15C0GF5.L2	K102K15C0GF5.L2
1000		5.0 mm (0.20")	K102J15C0GF5.H5	K102K15C0GF5.H5
1200		2.5 mm (0.10")	K122J15C0GF5.L2	K122K15C0GF5.L2
1200		5.0 mm (0.20")	K122J15C0GF5.H5	K122K15C0GF5.H5
1500		2.5 mm (0.10")	K152J15C0GF5.L2	K152K15C0GF5.L2
1500		5.0 mm (0.20")	K152J15C0GF5.H5	K152K15C0GF5.H5
1800		2.5 mm (0.10")	K182J15C0GF5.L2	K182K15C0GF5.L2
1800		5.0 mm (0.20")	K182J15C0GF5.H5	K182K15C0GF5.H5
2200	2.5 mm (0.10")	K222J15C0GF5.L2	K222K15C0GF5.L2	
2200	5.0 mm (0.20")	K222J15C0GF5.H5	K222K15C0GF5.H5	
2700	2.5 mm (0.10")	K272J20C0GF5.L2	K272K20C0GF5.L2	
2700	5.0 mm (0.20")	K272J20C0GF5.H5	K272K20C0GF5.H5	



Dipped Radial Multilayer Ceramic Capacitors  
50 - 100 Vdc

<b>MONO-KAP C0G - 50 VDC CLEAR TEXT CODE</b>				
CAP (PF)	RATED VOLTAGE (VDC)	LEAD SPACING	5 % TOLERANCE	10 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
3300	50 Vdc	2.5 mm (0.10")	K332J20C0GF5.L2	K332K20C0GF5.L2
3300		5.0 mm (0.20")	K332J20C0GF5.H5	K332K20C0GF5.H5
3900		2.5 mm (0.10")	K392J20C0GF5.L2	K392K20C0GF5.L2
3900		5.0 mm (0.20")	K392J20C0GF5.H5	K392K20C0GF5.H5
4700		2.5 mm (0.10")	K472J20C0GF5.L2	K472K20C0GF5.L2
4700		5.0 mm (0.20")	K472J20C0GF5.H5	K472K20C0GF5.H5
5600		2.5 mm (0.10")	K562J20C0GF5.L2	K562K20C0GF5.L2
5600		5.0 mm (0.20")	K562J20C0GF5.H5	K562K20C0GF5.H5
6800		2.5 mm (0.10")	K682J20C0GF5.L2	K682K20C0GF5.L2
6800		5.0 mm (0.20")	K682J20C0GF5.H5	K682K20C0GF5.H5
8200		2.5 mm (0.10")	K822J20C0GF5.L2	K822K20C0GF5.L2
8200		5.0 mm (0.20")	K822J20C0GF5.H5	K822K20C0GF5.H5
10 000		2.5 mm (0.10")	K103J20C0GF5.L2	K103K20C0GF5.L2
10 000		5.0 mm (0.20")	K103J20C0GF5.H5	K103K20C0GF5.H5

<b>MONO-KAP Y5V - 100 VDC CLEAR TEXT CODE</b>			
CAP (pF)	RATED VOLTAGE (Vdc)	LEAD SPACING	+ 80/- 20 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
10 000	100 Vdc	2.5 mm (0.10")	K103Z15Y5VH53L2
10 000		5.0 mm (0.20")	K103Z15Y5VH53H5
15 000		2.5 mm (0.10")	K153Z15Y5VH53L2
15 000		5.0 mm (0.20")	K153Z15Y5VH53H5
22 000		2.5 mm (0.10")	K223Z15Y5VH53L2
22 000		5.0 mm (0.20")	K223Z15Y5VH53H5
33 000		2.5 mm (0.10")	K333Z15Y5VH53L2
33 000		5.0 mm (0.20")	K333Z15Y5VH53H5
47 000		2.5 mm (0.10")	K473Z15Y5VH53L2
47 000		5.0 mm (0.20")	K473Z15Y5VH53H5
68 000		2.5 mm (0.10")	K683Z15Y5VH53L2
68 000		5.0 mm (0.20")	K683Z15Y5VH53H5
100 000		2.5 mm (0.10")	K104Z15Y5VH53L2
100 000		5.0 mm (0.20")	K104Z15Y5VH53H5
150 000		2.5 mm (0.10")	K154Z20Y5VH53L2
150 000		5.0 mm (0.20")	K154Z20Y5VH53H5
220 000		2.5 mm (0.10")	K224Z20Y5VH53L2
220 000		5.0 mm (0.20")	K224Z20Y5VH53H5





**MONO-KAP X7R - 100 VDC CLEAR TEXT CODE**

CAP (pF)	RATED VOLTAGE (Vdc)	LEAD SPACING	10 % TOLERANCE	20 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
100	100 Vdc	2.5 mm (0.10")	K101K15X7RH5.L2	K101M15X7RH5.L2
100		5.0 mm (0.20")	K101K15X7RH5.H5	K101M15X7RH5.H5
120		2.5 mm (0.10")	K121K15X7RH5.L2	K121M15X7RH5.L2
120		5.0 mm (0.20")	K121K15X7RH5.H5	K121M15X7RH5.H5
150		2.5 mm (0.10")	K151K15X7RH5.L2	K151M15X7RH5.L2
150		5.0 mm (0.20")	K151K15X7RH5.H5	K151M15X7RH5.H5
180		2.5 mm (0.10")	K181K15X7RH5.L2	K181M15X7RH5.L2
180		5.0 mm (0.20")	K181K15X7RH5.H5	K181M15X7RH5.H5
220		2.5 mm (0.10")	K221K15X7RH5.L2	K221M15X7RH5.L2
220		5.0 mm (0.20")	K221K15X7RH5.H5	K221M15X7RH5.H5
270		2.5 mm (0.10")	K271K15X7RH5.L2	K271M15X7RH5.L2
270		5.0 mm (0.20")	K271K15X7RH5.H5	K271M15X7RH5.H5
330		2.5 mm (0.10")	K331K15X7RH5.L2	K331M15X7RH5.L2
330		5.0 mm (0.20")	K331K15X7RH5.H5	K331M15X7RH5.H5
390		2.5 mm (0.10")	K391K15X7RH5.L2	K391M15X7RH5.L2
390		5.0 mm (0.20")	K391K15X7RH5.H5	K391M15X7RH5.H5
470		2.5 mm (0.10")	K471K15X7RH5.L2	K471M15X7RH5.L2
470		5.0 mm (0.20")	K471K15X7RH5.H5	K471M15X7RH5.H5
560		2.5 mm (0.10")	K561K15X7RH5.L2	K561M15X7RH5.L2
560		5.0 mm (0.20")	K561K15X7RH5.H5	K561M15X7RH5.H5
680		2.5 mm (0.10")	K681K15X7RH5.L2	K681M15X7RH5.L2
680		5.0 mm (0.20")	K681K15X7RH5.H5	K681M15X7RH5.H5
820		2.5 mm (0.10")	K821K15X7RH5.L2	K821M15X7RH5.L2
820		5.0 mm (0.20")	K821K15X7RH5.H5	K821M15X7RH5.H5
1000		2.5 mm (0.10")	K102K15X7RH5.L2	K102M15X7RH5.L2
1000		5.0 mm (0.20")	K102K15X7RH5.H5	K102M15X7RH5.H5
1200		2.5 mm (0.10")	K122K15X7RH5.L2	K122M15X7RH5.L2
1200		5.0 mm (0.20")	K122K15X7RH5.H5	K122M15X7RH5.H5
1500		2.5 mm (0.10")	K152K15X7RH5.L2	K152M15X7RH5.L2
1500		5.0 mm (0.20")	K152K15X7RH5.H5	K152M15X7RH5.H5
1800		2.5 mm (0.10")	K182K15X7RH5.L2	K182M15X7RH5.L2
1800		5.0 mm (0.20")	K182K15X7RH5.H5	K182M15X7RH5.H5
2200		2.5 mm (0.10")	K222K15X7RH5.L2	K222M15X7RH5.L2
2200		5.0 mm (0.20")	K222K15X7RH5.H5	K222M15X7RH5.H5
2700		2.5 mm (0.10")	K272K15X7RH5.L2	K272M15X7RH5.L2
2700		5.0 mm (0.20")	K272K15X7RH5.H5	K272M15X7RH5.H5
3300		2.5 mm (0.10")	K332K15X7RH5.L2	K332M15X7RH5.L2
3300		5.0 mm (0.20")	K332K15X7RH5.H5	K332M15X7RH5.H5
3900		2.5 mm (0.10")	K392K15X7RH5.L2	K392M15X7RH5.L2
3900		5.0 mm (0.20")	K392K15X7RH5.H5	K392M15X7RH5.H5
4700	2.5 mm (0.10")	K472K15X7RH5.L2	K472M15X7RH5.L2	
4700	5.0 mm (0.20")	K472K15X7RH5.H5	K472M15X7RH5.H5	
5600	2.5 mm (0.10")	K562K15X7RH5.L2	K562M15X7RH5.L2	
5600	5.0 mm (0.20")	K562K15X7RH5.H5	K562M15X7RH5.H5	



<b>MONO-KAP X7R - 100 VDC CLEAR TEXT CODE</b>				
CAP (PF)	RATED VOLTAGE (Vdc)	LEAD SPACING	10 % TOLERANCE	20 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
6800	100 Vdc	2.5 mm (0.10")	K682K15X7RH5.L2	K682M15X7RH5.L2
6800		5.0 mm (0.20")	K682K15X7RH5.H5	K682M15X7RH5.H5
8200		2.5 mm (0.10")	K822K15X7RH5.L2	K822M15X7RH5.L2
8200		5.0 mm (0.20")	K822K15X7RH5.H5	K822M15X7RH5.H5
10 000		2.5 mm (0.10")	K103K15X7RH5.L2	K103M15X7RH5.L2
10 000		5.0 mm (0.20")	K103K15X7RH5.H5	K103M15X7RH5.H5
12 000		2.5 mm (0.10")	K123K15X7RH5.L2	K123M15X7RH5.L2
12 000		5.0 mm (0.20")	K123K15X7RH5.H5	K123M15X7RH5.H5
15 000		2.5 mm (0.10")	K153K15X7RH5.L2	K153M15X7RH5.L2
15 000		5.0 mm (0.20")	K153K15X7RH5.H5	K153M15X7RH5.H5
18 000		2.5 mm (0.10")	K183K15X7RH5.L2	K183M15X7RH5.L2
18 000		5.0 mm (0.20")	K183K15X7RH5.H5	K183M15X7RH5.H5
22 000		2.5 mm (0.10")	K223K15X7RH5.L2	K223M15X7RH5.L2
22 000		5.0 mm (0.20")	K223K15X7RH5.H5	K223M15X7RH5.H5
27 000		2.5 mm (0.10")	K273K20X7RH5.L2	K273M20X7RH5.L2
27 000		5.0 mm (0.20")	K273K20X7RH5.H5	K273M20X7RH5.H5
33 000		2.5 mm (0.10")	K333K20X7RH5.L2	K333M20X7RH5.L2
33 000		5.0 mm (0.20")	K333K20X7RH5.H5	K333M20X7RH5.H5
39 000		2.5 mm (0.10")	K393K20X7RH5.L2	K393M20X7RH5.L2
39 000		5.0 mm (0.20")	K393K20X7RH5.H5	K393M20X7RH5.H5
47 000		2.5 mm (0.10")	K473K20X7RH5.L2	K473M20X7RH5.L2
47 000		5.0 mm (0.20")	K473K20X7RH5.H5	K473M20X7RH5.H5
56 000		2.5 mm (0.10")	K563K20X7RH5.L2	K563M20X7RH5.L2
56 000		5.0 mm (0.20")	K563K20X7RH5.H5	K563M20X7RH5.H5
68 000		2.5 mm (0.10")	K683K20X7RH5.L2	K683M20X7RH5.L2
68 000		5.0 mm (0.20")	K683K20X7RH5.H5	K683M20X7RH5.H5
82 000		2.5 mm (0.10")	K823K20X7RH5.L2	K823M20X7RH5.L2
82 000		5.0 mm (0.20")	K823K20X7RH5.H5	K823M20X7RH5.H5
100 000		2.5 mm (0.10")	K104K20X7RH5.L2	K104M20X7RH5.L2
100 000		5.0 mm (0.20")	K104K20X7RH5.H5	K104M20X7RH5.H5

<b>MONO-KAP C0G - 100 VDC CLEAR TEXT CODE</b>				
CAP (pF)	RATED VOLTAGE (Vdc)	LEAD SPACING	5 % TOLERANCE	10 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
10	100 Vdc	2.5 mm (0.10")	K100J15C0GH5.L2	K100K15C0GH5.L2
10		5.0 mm (0.20")	K100J15C0GH5.H5	K100K15C0GH5.H5
12		2.5 mm (0.10")	K120J15C0GH5.L2	K120K15C0GH5.L2
12		5.0 mm (0.20")	K120J15C0GH5.H5	K120K15C0GH5.H5
15		2.5 mm (0.10")	K150J15C0GH5.L2	K150K15C0GH5.L2
15		5.0 mm (0.20")	K150J15C0GH5.H5	K150K15C0GH5.H5
18		2.5 mm (0.10")	K180J15C0GH5.L2	K180K15C0GH5.L2
18		5.0 mm (0.20")	K180J15C0GH5.H5	K180K15C0GH5.H5



<b>MONO-KAP C0G - 100 VDC CLEAR TEXT CODE</b>				
CAP (PF)	RATED VOLTAGE (VDC)	LEAD SPACING	5 % TOLERANCE	10 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
22	100 Vdc	2.5 mm (0.10")	K220J15C0GH5.L2	K220K15C0GH5.L2
22		5.0 mm (0.20")	K220J15C0GH5.H5	K220K15C0GH5.H5
27		2.5 mm (0.10")	K270J15C0GH5.L2	K270K15C0GH5.L2
27		5.0 mm (0.20")	K270J15C0GH5.H5	K270K15C0GH5.H5
33		2.5 mm (0.10")	K330J15C0GH5.L2	K330K15C0GH5.L2
33		5.0 mm (0.20")	K330J15C0GH5.H5	K330K15C0GH5.H5
39		2.5 mm (0.10")	K390J15C0GH5.L2	K390K15C0GH5.L2
39		5.0 mm (0.20")	K390J15C0GH5.H5	K390K15C0GH5.H5
47		2.5 mm (0.10")	K470J15C0GH5.L2	K470K15C0GH5.L2
47		5.0 mm (0.20")	K470J15C0GH5.H5	K470K15C0GH5.H5
56		2.5 mm (0.10")	K560J15C0GH5.L2	K560K15C0GH5.L2
56		5.0 mm (0.20")	K560J15C0GH5.H5	K560K15C0GH5.H5
68		2.5 mm (0.10")	K680J15C0GH5.L2	K680K15C0GH5.L2
68		5.0 mm (0.20")	K680J15C0GH5.H5	K680K15C0GH5.H5
82		2.5 mm (0.10")	K820J15C0GH5.L2	K820K15C0GH5.L2
82		5.0 mm (0.20")	K820J15C0GH5.H5	K820K15C0GH5.H5
100		2.5 mm (0.10")	K101J15C0GH5.L2	K101K15C0GH5.L2
100		5.0 mm (0.20")	K101J15C0GH5.H5	K101K15C0GH5.H5
120		2.5 mm (0.10")	K121J15C0GH5.L2	K121K15C0GH5.L2
120		5.0 mm (0.20")	K121J15C0GH5.H5	K121K15C0GH5.H5
150		2.5 mm (0.10")	K151J15C0GH5.L2	K151K15C0GH5.L2
150		5.0 mm (0.20")	K151J15C0GH5.H5	K151K15C0GH5.H5
180		2.5 mm (0.10")	K181J15C0GH5.L2	K181K15C0GH5.L2
180		5.0 mm (0.20")	K181J15C0GH5.H5	K181K15C0GH5.H5
220		2.5 mm (0.10")	K221J15C0GH5.L2	K221K15C0GH5.L2
220		5.0 mm (0.20")	K221J15C0GH5.H5	K221K15C0GH5.H5
270		2.5 mm (0.10")	K271J15C0GH5.L2	K271K15C0GH5.L2
270		5.0 mm (0.20")	K271J15C0GH5.H5	K271K15C0GH5.H5
330		2.5 mm (0.10")	K331J15C0GH5.L2	K331K15C0GH5.L2
330		5.0 mm (0.20")	K331J15C0GH5.H5	K331K15C0GH5.H5
390		2.5 mm (0.10")	K391J15C0GH5.L2	K391K15C0GH5.L2
390		5.0 mm (0.20")	K391J15C0GH5.H5	K391K15C0GH5.H5
470		2.5 mm (0.10")	K471J15C0GH5.L2	K471K15C0GH5.L2
470		5.0 mm (0.20")	K471J15C0GH5.H5	K471K15C0GH5.H5
560		2.5 mm (0.10")	K561J15C0GH5.L2	K561K15C0GH5.L2
560		5.0 mm (0.20")	K561J15C0GH5.H5	K561K15C0GH5.H5
680		2.5 mm (0.10")	K681J15C0GH5.L2	K681K15C0GH5.L2
680		5.0 mm (0.20")	K681J15C0GH5.H5	K681K15C0GH5.H5
820		2.5 mm (0.10")	K821J15C0GH5.L2	K821K15C0GH5.L2
820		5.0 mm (0.20")	K821J15C0GH5.H5	K821K15C0GH5.H5
1000	2.5 mm (0.10")	K102J20C0GH5.L2	K102K20C0GH5.L2	
1000	5.0 mm (0.20")	K102J20C0GH5.H5	K102K20C0GH5.H5	
1200	2.5 mm (0.10")	K122J20C0GH5.L2	K122K20C0GH5.L2	
1200	5.0 mm (0.20")	K122J20C0GH5.H5	K122K20C0GH5.H5	



<b>MONO-KAP C0G - 100 VDC CLEAR TEXT CODE</b>				
CAP (pF)	RATED VOLTAGE (Vdc)	LEAD SPACING	5 % TOLERANCE	10 % TOLERANCE
		MM (INCH-REF)	13TH DIGIT T = REEL; U = AMMO; 3 = BULK	13TH DIGIT T = REEL; U = AMMO; 3 = BULK
1500	100 Vdc	2.5 mm (0.10")	K152J20C0GH5.L2	K152K20C0GH5.L2
1500		5.0 mm (0.20")	K152J20C0GH5.H5	K152K20C0GH5.H5
1800		2.5 mm (0.10")	K182J20C0GH5.L2	K182K20C0GH5.L2
1800		5.0 mm (0.20")	K182J20C0GH5.H5	K182K20C0GH5.H5
2200		2.5 mm (0.10")	K222J20C0GH5.L2	K222K20C0GH5.L2
2200		5.0 mm (0.20")	K222J20C0GH5.H5	K222K20C0GH5.H5
2700		2.5 mm (0.10")	K272J20C0GH5.L2	K272K20C0GH5.L2
2700		5.0 mm (0.20")	K272J20C0GH5.H5	K272K20C0GH5.H5
3300		2.5 mm (0.10")	K332J20C0GH5.L2	K332K20C0GH5.L2
3300		5.0 mm (0.20")	K332J20C0GH5.H5	K332K20C0GH5.H5
3900		2.5 mm (0.10")	K392J20C0GH5.L2	K392K20C0GH5.L2
3900		5.0 mm (0.20")	K392J20C0GH5.H5	K392K20C0GH5.H5
4700		2.5 mm (0.10")	K472J20C0GH5.L2	K472K20C0GH5.L2
4700		5.0 mm (0.20")	K472J20C0GH5.H5	K472K20C0GH5.H5
5600		2.5 mm (0.10")	K562J20C0GH5.L2	K562K20C0GH5.L2
5600		5.0 mm (0.20")	K562J20C0GH5.H5	K562K20C0GH5.H5



## Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Vishay:

[K105K20X7RF53H5](#) [K271K15X7RH53L2](#) [K471J15C0GF53H5](#) [K180J15C0GF53L2](#) [K224K20X7RF5TH5](#)  
[K224M20X7RF5TH5](#) [K330J15C0GH53L2](#) [K102J15C0GF53H5](#) [K100J15C0GF5TL2](#) [K332K15X7RF5TL2](#)  
[K180J15C0GF5TH5](#) [K472J20C0GF53L2](#) [K222K15X7RF5TK2](#) [K331K15X7RF5TL2](#) [K222K15X7RF53H5](#)  
[K154K20X7RF53H5](#) [K222J15C0GF53L2](#) [K102J15C0GF5TH5](#) [K122J15C0GF5TL2](#) [K560J15C0GF5TH5](#)  
[K102K15X7RH5TH5](#) [K103K15X7RF5TH5](#) [K472K15X7RF5TL2](#) [K681J15C0GF53L2](#) [K391J15C0GF53L2](#)  
[K181J15C0GF53L2](#) [K102K15X7RH53L2](#) [K222K15X7RH53L2](#) [K104K20X7RH5TH5](#) [K104K20X7RH5TL2](#)  
[K104K20X7RF53H5](#) [K471J15C0GF53L2](#) [K103M15Z5UF53L2](#) [K101K15C0GF53L2](#) [K221K15C0GH53L2](#)  
[K104K20X7RH53H5](#) [K104K15X7RF5TK2](#) [K104K15X7RF5TH5](#) [K104M20X7RH53L2](#) [K221K15X7RF53L2](#)  
[K102K15X7RF53L2](#) [K101K15C0GH53L2](#) [K150J15C0GH53L2](#) [K103K15X7RH5TH5](#) [K104M15X7RF5TH5](#)  
[K224M20X7RF53H6-X2](#) [K181J15C0GH5TH5](#) [K102K15X7RK5TH5](#) [K224K20X7RH5WH5](#) [K270J15C0GF5TL2](#)  
[K103K20X7RL5TH5](#) [225232514473](#) [K105M20X7RF53H5](#) [K102M15X7RF5UL2](#) [K102K15X7RH5TL2](#)  
[K102J20C0GH53L2](#) [K101J15C0GH53L2](#) [K102J15C0GF53L2](#) [K103M15X7RF53L2](#) [K334M20X7RF53H5](#)  
[K103K15X7RF53L2](#) [K104M15X7RF53L2](#) [K104M15X7RF53K2](#) [K102K20C0GH53L2](#) [K220K15C0GH53L2](#)  
[K100K15C0GH53L2](#) [K180J15C0GFVBWA](#) [K100J15C0GF53L2](#) [K220J15C0GF53L2](#) [K104K15X7RF53L2](#)  
[K103K15X7RH53L2](#) [K100K15C0GF53L2](#) [K102K15X7RF5TL2](#) [K105Z20Y5VF5TH5](#) [K151J15C0GF5TH5](#)  
[K104Z15Y5VF5TL2](#) [K561J15C0GF5TL2](#) [K683K15X7RF5TL2](#) [K331J15C0GF5TH5](#) [K101J15C0GF5TL2](#)  
[K104Z15Y5VE5TH5](#) [K474Z20Y5VF5TH5](#) [K680J15C0GF5TL2](#) [K270J15C0GF5TH5](#) [K681K15X7RF5TL2](#)  
[K104Z15Y5VF5TH5](#) [K471J15C0GF5TL2](#) [K821J15C0GF5TL2](#) [K221J15C0GH5TL2](#) [K101J15C0GH5TH5](#)  
[K103K15X7RH5TL2](#) [K103Z15Y5VF5TH5](#) [K221J15C0GH5TH5](#) [K102K15X7RF5TH5](#) [K180J15C0GF5TL2](#)  
[K105Z20Y5VF5TL2](#) [K473K15X7RF5TL2](#) [K103Z15Y5VE5TH5](#) [K100J15C0GH5TL2](#) [K220J15C0GH5TL2](#)