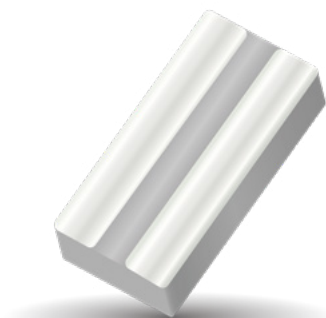


LGA Low Inductance Capacitors, KGA Series

0204/0306 Land Grid Array



Land Grid Array (LGA) capacitors are the latest family of low inductance MLCCs from KYOCERA AVX. These new LGA products are the third low inductance family developed by KYOCERA AVX. The innovative LGA technology sets a new standard for low inductance MLCC performance.

Our initial 2 terminal versions of LGA technology deliver the performance of an 8 terminal IDC low inductance MLCC with a number of advantages including:

Simplified layout of 2 large solder pads compared to 8 small pads for IDCs

Opportunity to reduce PCB or substrate contribution to system ESL by using multiple parallel vias in solder pads

Advanced FCT manufacturing process used to create uniformly flat terminations on the capacitor that resist "tombstoning"

Better solder joint reliability

APPLICATIONS

Semiconductor Packages

- Microprocessors/CPU's
- Graphics Processors/GPU's
- Chipsets
- FPGAs
- ASICs

Board Level Device Decoupling

- Frequencies of 300 MHz or more
- ICs drawing 15W or more
- Low voltages
- High speed buses

HOW TO ORDER

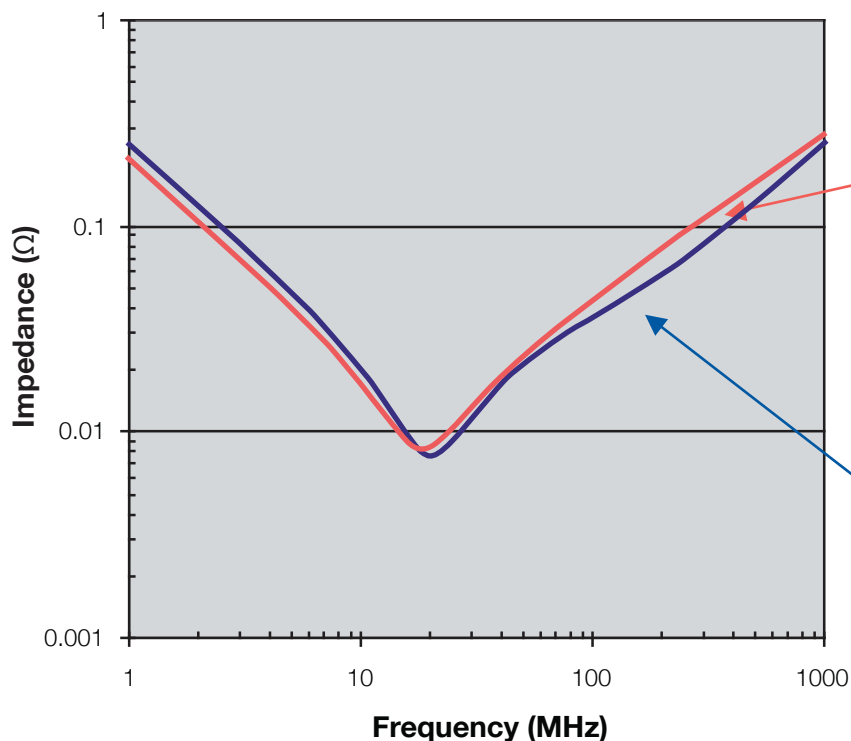
KGA	05	A	R5	0G	103	M	N
Series	Size	Thickness	Dielectric	Voltage	Capacitance Code Code (in pF)	Capacitance Tolerance	Packaging
General Purpose Low Inductance LGA Tin/ Nickel Finish	05 = 0402 15 = 0603	See Cap Chart	X5R = R5 X7S = S7 X6S = S6 X7R = R7	0G = 4.0V 0J = 6.3V 1A = 10V	2 Significant Digits +Number of zeros eg. 10µF = 106 10nF = 103 47pF = 470	M = ±20%	See Table Below

PACKAGING CODES

Code	EIA (inch)	IEC(mm)	7" Paper	7" Embossed	13" Paper	13" Embossed
05	0402	1005	H		N	
15	0603	1608		U		L



0306 2 TERMINAL LGA COMPARISON WITH 0306 8 TERMINAL IDC

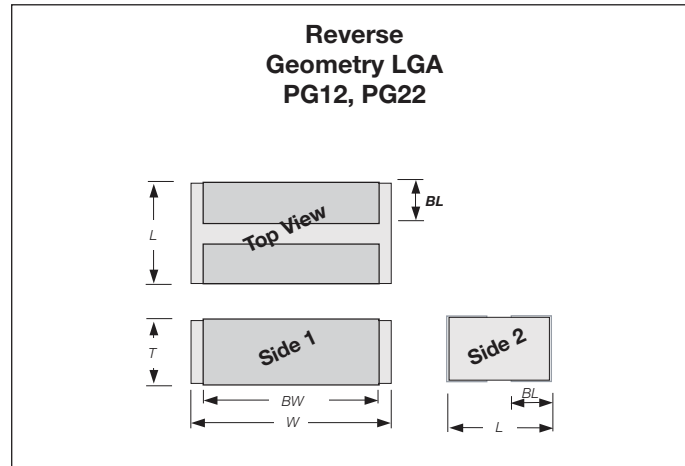


LGA Low Inductance Capacitors, KGA Series

Capacitance Range

SIZE	LG12 (05)						LG22 (15)									
Length mm (in.)	0.50 (0.020)						0.76 (0.030)									
Width mm (in.)	1.00 (0.039)						1.60 (0.063)									
Temp. Char.	X5R (R5)		X7S (S7)		X6S (S6)		X7R (R7)			X5R (R5)		X7S (S7)		X6S (S6)		
Working Voltage	6.3 (0J)	4 (0G)	6.3 (0J)	4 (0G)	6.3 (0J)	4 (0G)	10 (1A)	6.3 (0J)	4 (0G)	6.3 (0J)	4 (0G)	6.3 (0J)	4 (0G)	6.3 (0J)	4 (0G)	
Cap (μF)	0.010 (103)	A	A	A	A	A		Z	Z	Z	Z	Z	Z	Z	Z	
	0.022 (223)	A	A	A	A	A				Z	Z	Z	Z	Z	Z	
	0.047 (473)	A	A	A	A	A				Z	Z	Z	Z	Z	Z	
	0.100 (104)	A	A	A	A	A				Z	Z	Z	Z	Z	Z	
	0.220 (224)									Z	Z		Z		Z	
	0.330 (334)									Z			Z		Z	
	0.470 (474)									Z			Z		Z	
	1.000 (105)															
	2.200 (225)															

PAPER	Embossed(EMB)
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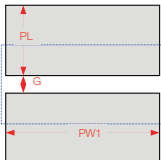
PART DIMENSIONS

MM (INCHES)

Series	L	W	T	BW	BL
LG12 (05)	0.5±0.05 (0.020±0.002)	1.00±0.10 (0.039±0.004)	0.50±0.05 (0.020±0.002)	0.80±0.10 (0.031±0.004)	0.13±0.08 (0.005±0.003)
LG22 (15)	0.76±0.10 (0.030±0.004)	1.60±0.10 (0.063±0.004)	0.50±0.05 (0.020±0.002)	1.50±0.10 (0.059±0.004)	0.28±0.08 (0.011±0.003)

RECOMMENDED SOLDER PAD DIMENSIONS

MM (INCHES)



Series	PL	PW1	G
LG12 (05)	0.50 (0.020)	1.00 (0.039)	0.20 (0.008)
LG22 (15)	0.65 (0.026)	1.50 (0.059)	0.20 (0.008)

Mouser Electronics

Authorized Distributor

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

KYOCERA AVX:

[KGA05AS70J103MH](#) [KGA05AS70J104MH](#) [KGA05AS70J223MH](#) [KGA05AS70J473MH](#) [KGA15ZR50J224MU](#)
[KGA15ZS70G224MU](#) [KGA15ZS70G334MU](#) [KGA15ZS70G474MU](#) [KGA15ZS70J104MU](#) [KGA05AR50J104MH](#)
[KGA15ZR50J104MU](#) [KGA15ZR70J103MU](#)