TDK

MULTILAYER CERAMIC CHIP CAPACITORS

CGA Series
Automotive Grade Capacitors

Type:	CGA2 [EIA CC0402] CGA3 [EIA CC0603] CGA4 [EIA CC0805] CGA5 [EIA CC1206] CGA6 [EIA CC1210]
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TDK MLCC
US Catalog

Version A10

REMINDERS

Please read before using this product

SAFETY REMINDERS

REMINDERS

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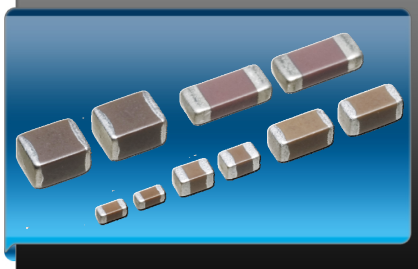


CGA Series

Automotive Grade Capacitors

Type: CGA2 (C1005), CGA3 (C1608), CGA4 (C2012), CGA5 (C3216), CGA6 (C3225)

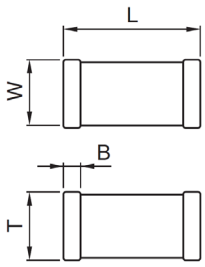
Features

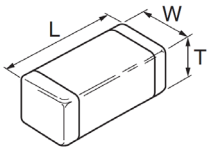
- The CGA series consists of products that can be used for the power train, safety equipment, etc. of a vehicle
- Qualified to AEC Q200 test standard
- Parts are manufactured using tested and stable manufacturing processes and are subjected to increased inspections to guarantee a higher level of reliability
- A monolithic structure ensures superior mechanical strength and reliability
- Available in X8R temperature characteristic for up to 150ºC operating temperature
- High capacitance has been achieved through precision technologies that enable the use of multiple thinner ceramic dielectric layers
- High-accuracy automatic mounting is facilitated through the maintenance of very precise dimensional tolerances
- Low stray capacitance ensures high conformity with nominal values, thereby simplifying the circuit design process

Applications

- Automotive applications
- High reliability requirement applications
- Harsh environment requirement applications
- Smart meter
- Base stations
- Noise bypass in automotive

Shape & Dimensions





L	Body Length
W	Body Width
T	Body Height
B	Terminal Width

Dimensions in mm

Part Number Construction

CGA 5 L 2 X8R 1E 105 K T XXXX

Series Name

Dimensions L x W (mm)

Symbol	Length	Width
2	1.00 ± 0.05	0.50 ± 0.05
3	1.60 ± 0.10	0.80 ± 0.10
4	2.00 ± 0.20	1.25 ± 0.20
5	3.20 ± 0.20	1.60 ± 0.20
6	3.20 ± 0.40	2.50 ± 0.30

Thickness T (mm)

Symbol	Thickness	Symbol	Thickness
B	0.50 mm	K	1.30 mm
C	0.60 mm	L	1.60 mm
E	0.80 mm	M	2.00 mm
F	0.85 mm	N	2.30 mm
H	1.15 mm	P	2.50 mm
J	1.25 mm		

Voltage Condition for Life Test

Symbol	Thickness	Symbol	Thickness
1	1 x Rated Voltage	3	1.5 x Rated Voltage
2	2 x Rated Voltage	4	1.2 x Rated Voltage

Temperature Characteristic

Temperature Characteristics	Capacitance Change	Temperature Range
C0G	0±30 ppm/ºC	-55 to +125ºC
X7R	±15%	-55 to +125ºC
X8R	±15%	-55 to +150ºC

Internal Codes

Packaging Style

Packaging Code	Style
T	Tape and Reel

Capacitance Tolerance

Tolerance Code	Tolerance
C	± 0.25pF
D	± 0.50pF
J	± 5%
K	± 10%
M	± 20%

Nominal Capacitance (pF)

The capacitance is expressed in three digit codes and in units of pico Farads (pF). The first and second digits identify the first and second significant figures of the capacitance. The third digit identifies the multiplier. R designates a decimal point.

Capacitance Code	Capacitance
0R5	0.5pF
010	1pF
102	1,000pF (1nF)
105	1,000,000pF (1µF)

Rated Voltage (DC)

Voltage Code	Voltage(DC)	Voltage Code	Voltage(DC)
1C	16V	2A	100V
1E	25V	2E	250V
1H	50V	2J	630V

• All specifications are subject to change without notice. Please read the precautions before using the product.

Capacitance Range Chart

CGA2 [EIA CC0402/JIS C1005]

Capacitance Range Chart

Temperature Characteristics: C0G (0 ± 30ppm/ºC)
Rated Voltage: 50V (1H)

Capacitance (pF)	Cap Code	Tolerance	C0G 1H (50V)
1.0	010	C: ± 0.25pF	■
1.5	1R5		■
2.0	020		■
2.2	2R2		■
3.0	030		■
3.3	3R3		■
4.0	040		■
4.7	4R7		■
5.0	050		■
6.0	060	D: ± 0.50pF	■
6.8	6R8		■
7.0	070		■
8.0	080		■
9.0	090		■
10	100		■
12	120	J: ± 5%	■
15	150		■
18	180		■
22	220		■
27	270		■
33	330		■
39	390		■
47	470		■
56	560		■
68	680		■
82	820		■
100	101		■
120	121		■
150	151		■
180	181		■
220	221		■
270	271		■
330	331		■
390	391		■
470	471		■

Capacitance Range Chart

Temperature Characteristics: X7R (± 15%), X8R (± 15%)
Rated Voltage: 50V (1H), 25V (1E), 16V (1C)

Capacitance (pF)	Cap Code	Tolerance	X7R 1H (50V)	X7R 1E (25V)	X7R 1C (16V)	X8R 1H (50V)	X8R 1E (25V)
150	151	K: ± 10%				■	
220	221					■	
330	331					■	
470	471					■	
680	681					■	
1,000	102		■			■	
1,500	152					■	
2,200	222		■			■	
3,300	332					■	
4,700	472		■			■	
6,800	682						■
10,000	103			■			■
22,000	223			■			
47,000	473			■	■		
68,000	683				■		
100,000	104				■		

Standard Thickness
■ 0.50 ± 0.05 mm

• All specifications are subject to change without notice. Please read the precautions before using the product.

Capacitance Range Table

CGA2 [EIA CC0402/JIS C1005]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (0 ± 30 ppm/ºC)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA2B2C0G1H010C	2 x Rated Voltage	C0G	50V	1.0	± 0.25pF	0.50 ± 0.05
CGA2B2C0G1H1R5C	2 x Rated Voltage	C0G	50V	1.5	± 0.25pF	0.50 ± 0.05
CGA2B2C0G1H020C	2 x Rated Voltage	C0G	50V	2.0	± 0.25pF	0.50 ± 0.05
CGA2B2C0G1H2R2C	2 x Rated Voltage	C0G	50V	2.2	± 0.25pF	0.50 ± 0.05
CGA2B2C0G1H030C	2 x Rated Voltage	C0G	50V	3.0	± 0.25pF	0.50 ± 0.05
CGA2B2C0G1H3R3C	2 x Rated Voltage	C0G	50V	3.3	± 0.25pF	0.50 ± 0.05
CGA2B2C0G1H040C	2 x Rated Voltage	C0G	50V	4.0	± 0.25pF	0.50 ± 0.05
CGA2B2C0G1H4R7C	2 x Rated Voltage	C0G	50V	4.7	± 0.25pF	0.50 ± 0.05
CGA2B2C0G1H050C	2 x Rated Voltage	C0G	50V	5.0	± 0.25pF	0.50 ± 0.05
CGA2B2C0G1H060D	2 x Rated Voltage	C0G	50V	6.0	± 0.50pF	0.50 ± 0.05
CGA2B2C0G1H6R8D	2 x Rated Voltage	C0G	50V	6.8	± 0.50pF	0.50 ± 0.05
CGA2B2C0G1H070D	2 x Rated Voltage	C0G	50V	7.0	± 0.50pF	0.50 ± 0.05
CGA2B2C0G1H080D	2 x Rated Voltage	C0G	50V	8.0	± 0.50pF	0.50 ± 0.05
CGA2B2C0G1H090D	2 x Rated Voltage	C0G	50V	9.0	± 0.50pF	0.50 ± 0.05
CGA2B2C0G1H100D	2 x Rated Voltage	C0G	50V	10	± 0.50pF	0.50 ± 0.05
CGA2B2C0G1H120J	2 x Rated Voltage	C0G	50V	12	± 5%	0.50 ± 0.05
CGA2B2C0G1H150J	2 x Rated Voltage	C0G	50V	15	± 5%	0.50 ± 0.05
CGA2B2C0G1H180J	2 x Rated Voltage	C0G	50V	18	± 5%	0.50 ± 0.05
CGA2B2C0G1H220J	2 x Rated Voltage	C0G	50V	22	± 5%	0.50 ± 0.05
CGA2B2C0G1H270J	2 x Rated Voltage	C0G	50V	27	± 5%	0.50 ± 0.05
CGA2B2C0G1H330J	2 x Rated Voltage	C0G	50V	33	± 5%	0.50 ± 0.05
CGA2B2C0G1H390J	2 x Rated Voltage	C0G	50V	39	± 5%	0.50 ± 0.05
CGA2B2C0G1H470J	2 x Rated Voltage	C0G	50V	47	± 5%	0.50 ± 0.05
CGA2B2C0G1H560J	2 x Rated Voltage	C0G	50V	56	± 5%	0.50 ± 0.05
CGA2B2C0G1H680J	2 x Rated Voltage	C0G	50V	68	± 5%	0.50 ± 0.05
CGA2B2C0G1H820J	2 x Rated Voltage	C0G	50V	82	± 5%	0.50 ± 0.05
CGA2B2C0G1H101J	2 x Rated Voltage	C0G	50V	100	± 5%	0.50 ± 0.05
CGA2B2C0G1H121J	2 x Rated Voltage	C0G	50V	120	± 5%	0.50 ± 0.05
CGA2B2C0G1H151J	2 x Rated Voltage	C0G	50V	150	± 5%	0.50 ± 0.05
CGA2B2C0G1H181J	2 x Rated Voltage	C0G	50V	180	± 5%	0.50 ± 0.05
CGA2B2C0G1H221J	2 x Rated Voltage	C0G	50V	220	± 5%	0.50 ± 0.05
CGA2B2C0G1H271J	2 x Rated Voltage	C0G	50V	270	± 5%	0.50 ± 0.05
CGA2B2C0G1H331J	2 x Rated Voltage	C0G	50V	330	± 5%	0.50 ± 0.05
CGA2B2C0G1H391J	2 x Rated Voltage	C0G	50V	390	± 5%	0.50 ± 0.05
CGA2B2C0G1H471J	2 x Rated Voltage	C0G	50V	470	± 5%	0.50 ± 0.05

Capacitance Range Table

CGA2 [EIA CC0402/JIS C1005]

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (± 15%), X8R (± 15%)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA2B2X7R1H102K	2 x Rated Voltage	X7R	50V	1,000	± 10%	0.50 ± 0.05
CGA2B2X7R1H222K	2 x Rated Voltage	X7R	50V	2,200	± 10%	0.50 ± 0.05
CGA2B2X7R1H472K	2 x Rated Voltage	X7R	50V	4,700	± 10%	0.50 ± 0.05
CGA2B2X7R1E103K	2 x Rated Voltage	X7R	25V	10,000	± 10%	0.50 ± 0.05
CGA2B2X7R1E223K	2 x Rated Voltage	X7R	25V	22,000	± 10%	0.50 ± 0.05
CGA2B1X7R1E473K	1 x Rated Voltage	X7R	25V	47,000	± 10%	0.50 ± 0.05
CGA2B2X7R1C473K	2 x Rated Voltage	X7R	16V	47,000	± 10%	0.50 ± 0.05
CGA2B1X7R1C683K	1 x Rated Voltage	X7R	16V	68,000	± 10%	0.50 ± 0.05
CGA2B1X7R1C104K	1 x Rated Voltage	X7R	16V	100,000	± 10%	0.50 ± 0.05
CGA2B2X8R1E682K	2 x Rated Voltage	X8R	25V	6,800	± 10%	0.50 ± 0.05
CGA2B2X8R1E103K	2 x Rated Voltage	X8R	25V	10,000	± 10%	0.50 ± 0.05
CGA2B2X8R1H151K	2 x Rated Voltage	X8R	50V	150	± 10%	0.50 ± 0.05
CGA2B2X8R1H221K	2 x Rated Voltage	X8R	50V	220	± 10%	0.50 ± 0.05
CGA2B2X8R1H331K	2 x Rated Voltage	X8R	50V	330	± 10%	0.50 ± 0.05
CGA2B2X8R1H471K	2 x Rated Voltage	X8R	50V	470	± 10%	0.50 ± 0.05
CGA2B2X8R1H681K	2 x Rated Voltage	X8R	50V	680	± 10%	0.50 ± 0.05
CGA2B2X8R1H102K	2 x Rated Voltage	X8R	50V	1,000	± 10%	0.50 ± 0.05
CGA2B2X8R1H152K	2 x Rated Voltage	X8R	50V	1,500	± 10%	0.50 ± 0.05
CGA2B2X8R1H222K	2 x Rated Voltage	X8R	50V	2,200	± 10%	0.50 ± 0.05
CGA2B2X8R1H332K	2 x Rated Voltage	X8R	50V	3,300	± 10%	0.50 ± 0.05
CGA2B2X8R1H472K	2 x Rated Voltage	X8R	50V	4,700	± 10%	0.50 ± 0.05

Capacitance Range Chart

CGA3 [EIA CC0603/JIS C1608]

Capacitance Range Chart

Temperature Characteristics: C0G (0 ± 30ppm/ºC)
Rated Voltage: 250V (2E), 100V (2A), 50V (1H)

Capacitance (pF)	Cap Code	Tolerance	C0G		
			2E (250V)	2A (100V)	1H (50V)
1	010	C: ± 0.25pF			■
2	1R5				■
2	020				■
2	2R2				■
3	030				■
3	3R3				■
4	040				■
5	4R7				■
5	050	D: ± 0.50pF			■
6	060				■
7	6R8				■
7	070				■
8	080				■
9	090				■
10	100				■
12	120	J: ± 5%			■
15	150				■
18	180				■
22	220				■
27	270				■
33	330				■
39	390				■
47	470				■
56	560				■
68	680				■
82	820				■
100	101		■	■	■
120	121		■	■	■
150	151		■	■	■
180	181		■	■	■
220	221		■	■	■
270	271		■	■	■
330	331		■	■	■
390	391		■	■	■
470	471		■	■	■
560	561		■	■	■
680	681		■	■	■
820	821			■	■
1,000	102			■	■
1,200	122			■	■
1,500	152				■
1,800	182				■
2,200	222				■
2,700	272				■
3,300	332				■

Standard Thickness

■ 0.80 ± 0.10 mm

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Capacitance Range Chart

CGA3 [EIA CC0603/JIS C1608]

Capacitance Range Chart

Temperature Characteristics: X7R (± 15%), X8R (± 15%)
Rated Voltage: 100V (2A), 50V (1H), 25V (1E), 16V (1C)

Capacitance (pF)	Cap Code	Tolerance	X7R				X8R		
			2A (100V)	1H (50V)	1E (25V)	1C (16V)	2A (100V)	1H (50V)	1E (25V)
1,000	102	K: ± 10%	■	■			■	■	
1,500	152		■				■	■	
2,200	222		■	■			■	■	
3,300	332		■				■	■	
4,700	472		■	■			■	■	
6,800	682		■				■	■	
10,000	103		■	■			■	■	
15,000	153		■				■	■	
22,000	223		■	■				■	
33,000	333							■	
47,000	473			■				■	
68,000	683			■					■
100,000	104			■	■				■
150,000	154				■				
220,000	224				■	■			
330,000	334					■			
470,000	474					■			
680,000	684					■			

Standard Thickness

■ 0.80 ± 0.10 mm

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Capacitance Range Table

CGA3 [EIA CC0603/JIS C1608]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (0 ± 30 ppm/ºC)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA3E2C0G1H010C	2 x Rated Voltage	C0G	50V	1.0	± 0.25pF	0.80 ± 0.10
CGA3E2C0G1H1R5C	2 x Rated Voltage	C0G	50V	1.5	± 0.25pF	0.80 ± 0.10
CGA3E2C0G1H020C	2 x Rated Voltage	C0G	50V	2.0	± 0.25pF	0.80 ± 0.10
CGA3E2C0G1H2R2C	2 x Rated Voltage	C0G	50V	2.2	± 0.25pF	0.80 ± 0.10
CGA3E2C0G1H030C	2 x Rated Voltage	C0G	50V	3.0	± 0.25pF	0.80 ± 0.10
CGA3E2C0G1H3R3C	2 x Rated Voltage	C0G	50V	3.3	± 0.25pF	0.80 ± 0.10
CGA3E2C0G1H040C	2 x Rated Voltage	C0G	50V	4.0	± 0.25pF	0.80 ± 0.10
CGA3E2C0G1H4R7C	2 x Rated Voltage	C0G	50V	4.7	± 0.25pF	0.80 ± 0.10
CGA3E2C0G1H050C	2 x Rated Voltage	C0G	50V	5.0	± 0.25pF	0.80 ± 0.10
CGA3E2C0G1H060D	2 x Rated Voltage	C0G	50V	6.0	± 0.50pF	0.80 ± 0.10
CGA3E2C0G1H6R8D	2 x Rated Voltage	C0G	50V	6.8	± 0.50pF	0.80 ± 0.10
CGA3E2C0G1H070D	2 x Rated Voltage	C0G	50V	7.0	± 0.50pF	0.80 ± 0.10
CGA3E2C0G1H080D	2 x Rated Voltage	C0G	50V	8.0	± 0.50pF	0.80 ± 0.10
CGA3E2C0G1H090D	2 x Rated Voltage	C0G	50V	9.0	± 0.50pF	0.80 ± 0.10
CGA3E2C0G1H100D	2 x Rated Voltage	C0G	50V	10	± 0.50pF	0.80 ± 0.10
CGA3E2C0G1H120J	2 x Rated Voltage	C0G	50V	12	± 5%	0.80 ± 0.10
CGA3E2C0G1H150J	2 x Rated Voltage	C0G	50V	15	± 5%	0.80 ± 0.10
CGA3E2C0G1H180J	2 x Rated Voltage	C0G	50V	18	± 5%	0.80 ± 0.10
CGA3E2C0G1H220J	2 x Rated Voltage	C0G	50V	22	± 5%	0.80 ± 0.10
CGA3E2C0G1H270J	2 x Rated Voltage	C0G	50V	27	± 5%	0.80 ± 0.10
CGA3E2C0G1H330J	2 x Rated Voltage	C0G	50V	33	± 5%	0.80 ± 0.10
CGA3E2C0G1H390J	2 x Rated Voltage	C0G	50V	39	± 5%	0.80 ± 0.10
CGA3E2C0G1H470J	2 x Rated Voltage	C0G	50V	47	± 5%	0.80 ± 0.10
CGA3E2C0G1H560J	2 x Rated Voltage	C0G	50V	56	± 5%	0.80 ± 0.10
CGA3E2C0G1H680J	2 x Rated Voltage	C0G	50V	68	± 5%	0.80 ± 0.10
CGA3E2C0G1H820J	2 x Rated Voltage	C0G	50V	82	± 5%	0.80 ± 0.10
CGA3E2C0G1H101J	2 x Rated Voltage	C0G	50V	100	± 5%	0.80 ± 0.10
CGA3E2C0G1H121J	2 x Rated Voltage	C0G	50V	120	± 5%	0.80 ± 0.10
CGA3E2C0G1H151J	2 x Rated Voltage	C0G	50V	150	± 5%	0.80 ± 0.10
CGA3E2C0G1H181J	2 x Rated Voltage	C0G	50V	180	± 5%	0.80 ± 0.10
CGA3E2C0G1H221J	2 x Rated Voltage	C0G	50V	220	± 5%	0.80 ± 0.10
CGA3E2C0G1H271J	2 x Rated Voltage	C0G	50V	270	± 5%	0.80 ± 0.10
CGA3E2C0G1H331J	2 x Rated Voltage	C0G	50V	330	± 5%	0.80 ± 0.10
CGA3E2C0G1H391J	2 x Rated Voltage	C0G	50V	390	± 5%	0.80 ± 0.10
CGA3E2C0G1H471J	2 x Rated Voltage	C0G	50V	470	± 5%	0.80 ± 0.10
CGA3E2C0G1H561J	2 x Rated Voltage	C0G	50V	560	± 5%	0.80 ± 0.10
CGA3E2C0G1H681J	2 x Rated Voltage	C0G	50V	680	± 5%	0.80 ± 0.10
CGA3E2C0G1H821J	2 x Rated Voltage	C0G	50V	820	± 5%	0.80 ± 0.10
CGA3E2C0G1H102J	2 x Rated Voltage	C0G	50V	1,000	± 5%	0.80 ± 0.10
CGA3E2C0G1H122J	2 x Rated Voltage	C0G	50V	1,200	± 5%	0.80 ± 0.10
CGA3E2C0G1H152J	2 x Rated Voltage	C0G	50V	1,500	± 5%	0.80 ± 0.10
CGA3E2C0G1H182J	2 x Rated Voltage	C0G	50V	1,800	± 5%	0.80 ± 0.10
CGA3E2C0G1H222J	2 x Rated Voltage	C0G	50V	2,200	± 5%	0.80 ± 0.10
CGA3E2C0G1H272J	2 x Rated Voltage	C0G	50V	2,700	± 5%	0.80 ± 0.10
CGA3E2C0G1H332J	2 x Rated Voltage	C0G	50V	3,300	± 5%	0.80 ± 0.10
CGA3E2C0G2A101J	2 x Rated Voltage	C0G	100V	100	± 5%	0.80 ± 0.10
CGA3E2C0G2A121J	2 x Rated Voltage	C0G	100V	120	± 5%	0.80 ± 0.10
CGA3E2C0G2A151J	2 x Rated Voltage	C0G	100V	150	± 5%	0.80 ± 0.10
CGA3E2C0G2A181J	2 x Rated Voltage	C0G	100V	180	± 5%	0.80 ± 0.10
CGA3E2C0G2A221J	2 x Rated Voltage	C0G	100V	220	± 5%	0.80 ± 0.10
CGA3E2C0G2A271J	2 x Rated Voltage	C0G	100V	270	± 5%	0.80 ± 0.10
CGA3E2C0G2A331J	2 x Rated Voltage	C0G	100V	330	± 5%	0.80 ± 0.10
CGA3E2C0G2A391J	2 x Rated Voltage	C0G	100V	390	± 5%	0.80 ± 0.10
CGA3E2C0G2A471J	2 x Rated Voltage	C0G	100V	470	± 5%	0.80 ± 0.10
CGA3E2C0G2A561J	2 x Rated Voltage	C0G	100V	560	± 5%	0.80 ± 0.10

• All specifications are subject to change without notice. Please read the precautions before using the product.

Capacitance Range Table

CGA3 [EIA CC0603/JIS C1608]

Class 1 (Temperature Compensating) (Continued)

Temperature Characteristics: C0G (0 ± 30 ppm/ºC)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA3E2C0G2A681J	2 x Rated Voltage	C0G	100V	680	± 5%	0.80 ± 0.10
CGA3E2C0G2A821J	2 x Rated Voltage	C0G	100V	820	± 5%	0.80 ± 0.10
CGA3E2C0G2A102J	2 x Rated Voltage	C0G	100V	1,000	± 5%	0.80 ± 0.10
CGA3E2C0G2A122J	2 x Rated Voltage	C0G	100V	1,200	± 5%	0.80 ± 0.10
CGA3E3C0G2E101J	1.5 x Rated Voltage	C0G	250V	100	± 5%	0.80 ± 0.10
CGA3E3C0G2E121J	1.5 x Rated Voltage	C0G	250V	120	± 5%	0.80 ± 0.10
CGA3E3C0G2E151J	1.5 x Rated Voltage	C0G	250V	150	± 5%	0.80 ± 0.10
CGA3E3C0G2E181J	1.5 x Rated Voltage	C0G	250V	180	± 5%	0.80 ± 0.10
CGA3E3C0G2E221J	1.5 x Rated Voltage	C0G	250V	220	± 5%	0.80 ± 0.10
CGA3E3C0G2E271J	1.5 x Rated Voltage	C0G	250V	270	± 5%	0.80 ± 0.10
CGA3E3C0G2E331J	1.5 x Rated Voltage	C0G	250V	330	± 5%	0.80 ± 0.10
CGA3E3C0G2E391J	1.5 x Rated Voltage	C0G	250V	390	± 5%	0.80 ± 0.10
CGA3E3C0G2E471J	1.5 x Rated Voltage	C0G	250V	470	± 5%	0.80 ± 0.10
CGA3E3C0G2E561J	1.5 x Rated Voltage	C0G	250V	560	± 5%	0.80 ± 0.10
CGA3E3C0G2E681J	1.5 x Rated Voltage	C0G	250V	680	± 5%	0.80 ± 0.10

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (± 15%), X8R (± 15%)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA3E2X7R1H102K	2 x Rated Voltage	X7R	50V	1,000	± 10%	0.80 ± 0.10
CGA3E2X7R1H222K	2 x Rated Voltage	X7R	50V	2,200	± 10%	0.80 ± 0.10
CGA3E2X7R1H472K	2 x Rated Voltage	X7R	50V	4,700	± 10%	0.80 ± 0.10
CGA3E2X7R1H103K	2 x Rated Voltage	X7R	50V	10,000	± 10%	0.80 ± 0.10
CGA3E2X7R1H223K	2 x Rated Voltage	X7R	50V	22,000	± 10%	0.80 ± 0.10
CGA3E2X7R1H473K	2 x Rated Voltage	X7R	50V	47,000	± 10%	0.80 ± 0.10
CGA3E2X7R1H683K	2 x Rated Voltage	X7R	50V	68,000	± 10%	0.80 ± 0.10
CGA3E2X7R1H104K	2 x Rated Voltage	X7R	50V	100,000	± 10%	0.80 ± 0.10
CGA3E2X7R1E104K	2 x Rated Voltage	X7R	25V	100,000	± 10%	0.80 ± 0.10
CGA3E2X7R1E154K	2 x Rated Voltage	X7R	25V	150,000	± 10%	0.80 ± 0.10
CGA3E1X7R1E224K	1 x Rated Voltage	X7R	25V	220,000	± 10%	0.80 ± 0.10
CGA3E2X7R1C224K	2 x Rated Voltage	X7R	16V	220,000	± 10%	0.80 ± 0.10
CGA3E1X7R1C334K	1 x Rated Voltage	X7R	16V	330,000	± 10%	0.80 ± 0.10
CGA3E1X7R1C474K	1 x Rated Voltage	X7R	16V	470,000	± 10%	0.80 ± 0.10
CGA3E1X7R1C684K	1 x Rated Voltage	X7R	16V	680,000	± 10%	0.80 ± 0.10
CGA3E2X7R2A102K	2 x Rated Voltage	X7R	100V	1,000	± 10%	0.80 ± 0.10
CGA3E2X7R2A152K	2 x Rated Voltage	X7R	100V	1,500	± 10%	0.80 ± 0.10
CGA3E2X7R2A222K	2 x Rated Voltage	X7R	100V	2,200	± 10%	0.80 ± 0.10
CGA3E2X7R2A332K	2 x Rated Voltage	X7R	100V	3,300	± 10%	0.80 ± 0.10
CGA3E2X7R2A472K	2 x Rated Voltage	X7R	100V	4,700	± 10%	0.80 ± 0.10
CGA3E2X7R2A682K	2 x Rated Voltage	X7R	100V	6,800	± 10%	0.80 ± 0.10
CGA3E2X7R2A103K	2 x Rated Voltage	X7R	100V	10,000	± 10%	0.80 ± 0.10
CGA3E2X7R2A153K	2 x Rated Voltage	X7R	100V	15,000	± 10%	0.80 ± 0.10
CGA3E2X7R2A223K	2 x Rated Voltage	X7R	100V	22,000	± 10%	0.80 ± 0.10
CGA3E2X8R1E683K	2 x Rated Voltage	X8R	25V	68,000	± 10%	0.80 ± 0.10
CGA3E2X8R1E104K	2 x Rated Voltage	X8R	25V	100,000	± 10%	0.80 ± 0.10
CGA3E2X8R1H102K	2 x Rated Voltage	X8R	50V	1,000	± 10%	0.80 ± 0.10
CGA3E2X8R1H152K	2 x Rated Voltage	X8R	50V	1,500	± 10%	0.80 ± 0.10
CGA3E2X8R1H222K	2 x Rated Voltage	X8R	50V	2,200	± 10%	0.80 ± 0.10
CGA3E2X8R1H332K	2 x Rated Voltage	X8R	50V	3,300	± 10%	0.80 ± 0.10
CGA3E2X8R1H472K	2 x Rated Voltage	X8R	50V	4,700	± 10%	0.80 ± 0.10
CGA3E2X8R1H682K	2 x Rated Voltage	X8R	50V	6,800	± 10%	0.80 ± 0.10
CGA3E2X8R1H103K	2 x Rated Voltage	X8R	50V	10,000	± 10%	0.80 ± 0.10
CGA3E2X8R1H153K	2 x Rated Voltage	X8R	50V	15,000	± 10%	0.80 ± 0.10
CGA3E2X8R1H223K	2 x Rated Voltage	X8R	50V	22,000	± 10%	0.80 ± 0.10

• All specifications are subject to change without notice. Please read the precautions before using the product.

Capacitance Range Table

CGA3 [EIA CC0603/JIS C1608]

Class 2 (Temperature Stable) (Continued)

Temperature Characteristics: X8R (± 15%)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA3E2X8R1H333K	2 x Rated Voltage	X8R	50V	33,000	± 10%	0.80 ± 0.10
CGA3E2X8R1H473K	2 x Rated Voltage	X8R	50V	47,000	± 10%	0.80 ± 0.10
CGA3E2X8R2A102K	2 x Rated Voltage	X8R	100V	1,000	± 10%	0.80 ± 0.10
CGA3E2X8R2A152K	2 x Rated Voltage	X8R	100V	1,500	± 10%	0.80 ± 0.10
CGA3E2X8R2A222K	2 x Rated Voltage	X8R	100V	2,200	± 10%	0.80 ± 0.10
CGA3E2X8R2A332K	2 x Rated Voltage	X8R	100V	3,300	± 10%	0.80 ± 0.10
CGA3E2X8R2A472K	2 x Rated Voltage	X8R	100V	4,700	± 10%	0.80 ± 0.10
CGA3E2X8R2A682K	2 x Rated Voltage	X8R	100V	6,800	± 10%	0.80 ± 0.10
CGA3E2X8R2A103K	2 x Rated Voltage	X8R	100V	10,000	± 10%	0.80 ± 0.10
CGA3E2X8R2A153K	2 x Rated Voltage	X8R	100V	15,000	± 10%	0.80 ± 0.10

Capacitance Range Chart

CGA4 [EIA CC0805/JIS C2012]

Capacitance Range Chart

Temperature Characteristics: C0G (0 ± 30ppm/ºC)
Rated Voltage: 250V (2E), 100V (2A), 50V (1H)

Capacitance (pF)	Cap Code	Tolerance	C0G		
			2E (250V)	2A (100V)	1H (50V)
820	821	J: ± 5%			
1,000	102				
1,200	122				
1,500	152				
1,800	182				
2,200	222				
2,700	272				
3,300	332				
3,900	392				
4,700	472				
5,600	562				
6,800	682				
8,200	822				
10,000	103				

Capacitance Range Chart

Temperature Characteristics: X7R (± 15%), X8R (± 15%)
Rated Voltage: 250V (2E), 100V (2A), 50V (1H), 25V (1E), 16V (1C)

Capacitance (pF)	Cap Code	Tolerance	X7R					X8R		
			2E (250V)	2A (100V)	1H (50V)	1E (25V)	1C (16V)	2A (100V)	1H (50V)	1E (25V)
1,000	102	K: ± 10%								
1,500	152									
2,200	222									
3,300	332									
4,700	472									
6,800	682									
10,000	103									
15,000	153									
22,000	223									
33,000	333									
47,000	473									
68,000	683									
100,000	104									
150,000	154									
220,000	224									
330,000	334									
470,000	474									
680,000	684									
1,000,000	105									
1,500,000	155									
2,200,000	225									

Standard Thickness

0.60 ± 0.15 mm 0.85 ± 0.15 mm 1.25 ± 0.20 mm

Capacitance Range Table

CGA4 [EIA CC0805/JIS C2012]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (0 ± 30 ppm/ºC)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA4C2C0G1H272J	2 x Rated Voltage	C0G	50V	2,700	± 5%	0.60 ± 0.15
CGA4C2C0G1H332J	2 x Rated Voltage	C0G	50V	3,300	± 5%	0.60 ± 0.15
CGA4F2C0G1H392J	2 x Rated Voltage	C0G	50V	3,900	± 5%	0.85 ± 0.15
CGA4F2C0G1H472J	2 x Rated Voltage	C0G	50V	4,700	± 5%	0.85 ± 0.15
CGA4F2C0G1H562J	2 x Rated Voltage	C0G	50V	5,600	± 5%	0.85 ± 0.15
CGA4J2C0G1H682J	2 x Rated Voltage	C0G	50V	6,800	± 5%	1.25 ± 0.20
CGA4J2C0G1H822J	2 x Rated Voltage	C0G	50V	8,200	± 5%	1.25 ± 0.20
CGA4J2C0G1H103J	2 x Rated Voltage	C0G	50V	10,000	± 5%	1.25 ± 0.20
CGA4C2C0G2A102J	2 x Rated Voltage	C0G	100V	1,000	± 5%	0.60 ± 0.15
CGA4C2C0G2A122J	2 x Rated Voltage	C0G	100V	1,200	± 5%	0.60 ± 0.15
CGA4C2C0G2A152J	2 x Rated Voltage	C0G	100V	1,500	± 5%	0.60 ± 0.15
CGA4F2C0G2A182J	2 x Rated Voltage	C0G	100V	1,800	± 5%	0.85 ± 0.15
CGA4F2C0G2A222J	2 x Rated Voltage	C0G	100V	2,200	± 5%	0.85 ± 0.15
CGA4J2C0G2A272J	2 x Rated Voltage	C0G	100V	2,700	± 5%	1.25 ± 0.20
CGA4J2C0G2A332J	2 x Rated Voltage	C0G	100V	3,300	± 5%	1.25 ± 0.20
CGA4J2C0G2A392J	2 x Rated Voltage	C0G	100V	3,900	± 5%	1.25 ± 0.20
CGA4J2C0G2A472J	2 x Rated Voltage	C0G	100V	4,700	± 5%	1.25 ± 0.20
CGA4C3C0G2E821J	1.5 x Rated Voltage	C0G	250V	820	± 5%	0.60 ± 0.15
CGA4F3C0G2E102J	1.5 x Rated Voltage	C0G	250V	1,000	± 5%	0.85 ± 0.15
CGA4F3C0G2E122J	1.5 x Rated Voltage	C0G	250V	1,200	± 5%	0.85 ± 0.15
CGA4F3C0G2E152J	1.5 x Rated Voltage	C0G	250V	1,500	± 5%	0.85 ± 0.15
CGA4J3C0G2E182J	1.5 x Rated Voltage	C0G	250V	1,800	± 5%	1.25 ± 0.20
CGA4J3C0G2E222J	1.5 x Rated Voltage	C0G	250V	2,200	± 5%	1.25 ± 0.20
CGA4J3C0G2E272J	1.5 x Rated Voltage	C0G	250V	2,700	± 5%	1.25 ± 0.20

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (± 15%)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA4J2X7R1H154K	2 x Rated Voltage	X7R	50V	150,000	± 10%	1.25 ± 0.20
CGA4J2X7R1H224K	2 x Rated Voltage	X7R	50V	220,000	± 10%	1.25 ± 0.20
CGA4J2X7R1H334K	2 x Rated Voltage	X7R	50V	330,000	± 10%	1.25 ± 0.20
CGA4J2X7R1E474K	2 x Rated Voltage	X7R	25V	470,000	± 10%	1.25 ± 0.20
CGA4J3X7R1E684K	1.5 x Rated Voltage	X7R	25V	680,000	± 10%	1.25 ± 0.20
CGA4J3X7R1E105K	1.5 x Rated Voltage	X7R	25V	1,000,000	± 10%	1.25 ± 0.20
CGA4J2X7R1C684K	2 x Rated Voltage	X7R	16V	680,000	± 10%	1.25 ± 0.20
CGA4J2X7R1C105K	2 x Rated Voltage	X7R	16V	1,000,000	± 10%	1.25 ± 0.20
CGA4J3X7R1C155K	1.5 x Rated Voltage	X7R	16V	1,500,000	± 10%	1.25 ± 0.20
CGA4J3X7R1C225K	1.5 x Rated Voltage	X7R	16V	2,200,000	± 10%	1.25 ± 0.20
CGA4F2X7R2A102K	2 x Rated Voltage	X7R	100V	1,000	± 10%	0.85 ± 0.15
CGA4F2X7R2A152K	2 x Rated Voltage	X7R	100V	1,500	± 10%	0.85 ± 0.15
CGA4F2X7R2A222K	2 x Rated Voltage	X7R	100V	2,200	± 10%	0.85 ± 0.15
CGA4F2X7R2A332K	2 x Rated Voltage	X7R	100V	3,300	± 10%	0.85 ± 0.15
CGA4F2X7R2A472K	2 x Rated Voltage	X7R	100V	4,700	± 10%	0.85 ± 0.15
CGA4F2X7R2A682K	2 x Rated Voltage	X7R	100V	6,800	± 10%	0.85 ± 0.15
CGA4F2X7R2A103K	2 x Rated Voltage	X7R	100V	10,000	± 10%	0.85 ± 0.15
CGA4J2X7R2A153K	2 x Rated Voltage	X7R	100V	15,000	± 10%	1.25 ± 0.20
CGA4J2X7R2A223K	2 x Rated Voltage	X7R	100V	22,000	± 10%	1.25 ± 0.20
CGA4J2X7R2A333K	2 x Rated Voltage	X7R	100V	33,000	± 10%	1.25 ± 0.20
CGA4J2X7R2A473K	2 x Rated Voltage	X7R	100V	47,000	± 10%	1.25 ± 0.20
CGA4F2X7R2A683K	2 x Rated Voltage	X7R	100V	68,000	± 10%	0.85 ± 0.15
CGA4J2X7R2A104K	2 x Rated Voltage	X7R	100V	100,000	± 10%	1.25 ± 0.20
CGA4F3X7R2E102K	1.5 x Rated Voltage	X7R	250V	1,000	± 10%	0.85 ± 0.15
CGA4F3X7R2E152K	1.5 x Rated Voltage	X7R	250V	1,500	± 10%	0.85 ± 0.15
CGA4F3X7R2E222K	1.5 x Rated Voltage	X7R	250V	2,200	± 10%	0.85 ± 0.15

• All specifications are subject to change without notice. Please read the precautions before using the product.

Capacitance Range Table

CGA4 [EIA CC0805/JIS C2012]

Class 2 (Temperature Stable) (Continued)

Temperature Characteristics: X7R (± 15%), X8R (± 15%)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA4F3X7R2E332K	1.5 x Rated Voltage	X7R	250V	3,300	± 10%	0.85 ± 0.15
CGA4F3X7R2E472K	1.5 x Rated Voltage	X7R	250V	4,700	± 10%	0.85 ± 0.15
CGA4J3X7R2E682K	1.5 x Rated Voltage	X7R	250V	6,800	± 10%	1.25 ± 0.20
CGA4J3X7R2E103K	1.5 x Rated Voltage	X7R	250V	10,000	± 10%	1.25 ± 0.20
CGA4J3X7R2E153K	1.5 x Rated Voltage	X7R	250V	15,000	± 10%	1.25 ± 0.20
CGA4J3X7R2E223K	1.5 x Rated Voltage	X7R	250V	22,000	± 10%	1.25 ± 0.20
CGA4F2X8R1E154K	2 x Rated Voltage	X8R	25V	150,000	± 10%	0.85 ± 0.15
CGA4J2X8R1E224K	2 x Rated Voltage	X8R	25V	220,000	± 10%	1.25 ± 0.20
CGA4J2X8R1E334K	2 x Rated Voltage	X8R	25V	330,000	± 10%	1.25 ± 0.20
CGA4J2X8R1H683K	2 x Rated Voltage	X8R	50V	68,000	± 10%	1.25 ± 0.20
CGA4J2X8R1H104K	2 x Rated Voltage	X8R	50V	100,000	± 10%	1.25 ± 0.20
CGA4J2X8R2A223K	2 x Rated Voltage	X8R	100V	22,000	± 10%	1.25 ± 0.20

Capacitance Range Chart

CGA5 [EIA CC1206/JIS C3216]

Capacitance Range Chart

Temperature Characteristics: C0G (0 ± 30ppm/ºC)
Rated Voltage: 630V (2J), 250V (2E), 100V (2A), 50V (1H)

Capacitance (pF)	Cap Code	Tolerance	C0G			
			2J (630V)	2E (250V)	2A (100V)	1H (50V)
100	101	J: ± 5%				
120	121					
150	151					
180	181					
220	221					
270	271					
330	331					
390	391					
470	471					
560	561					
680	681					
820	821					
1,000	102					
1,200	122					
1,500	152					
1,800	182					
2,200	222					
2,700	272					
3,300	332					
3,900	392					
4,700	472					
5,600	562					
6,800	682					
8,200	822					
10,000	103					
15,000	153					
22,000	223					
33,000	333					

Standard Thickness

0.60 ± 0.15 mm 0.85 ± 0.15 mm 1.15 ± 0.15 mm 1.60 ± 0.20 mm

Capacitance Range Chart

CGA5 [EIA CC1206/JIS C3216]

Capacitance Range Chart

Temperature Characteristics: X7R (± 15%), X8R (± 15%)

Rated Voltage: 630V (2J), 250V (2E), 100V (2A), 50V (1H), 25V (1E), 16V (1C)

Capacitance (pF)	Cap Code	Tolerance	X7R						X8R		
			2J (630V)	2E (250V)	2A (100V)	1H (50V)	1E (25V)	1C (16V)	2A (100V)	1H (50V)	1E (25V)
1,000	102	K: ± 10%									
1,500	152										
2,200	222										
3,300	332										
4,700	472										
6,800	682										
10,000	103										
15,000	153										
22,000	223										
33,000	333										
47,000	473										
68,000	683										
100,000	104										
150,000	154										
220,000	224										
330,000	334										
470,000	474										
680,000	684										
1,000,000	105										
1,500,000	155										
2,200,000	225										
3,300,000	335										
4,700,000	475										
6,800,000	685										

Standard Thickness

0.85 ± 0.15 mm 1.15 ± 0.15 mm 1.30 ± 0.20 mm 1.60 ± 0.20 mm

• All specifications are subject to change without notice. Please read the precautions before using the product.

Capacitance Range Table

CGA5 [EIA CC1206/JIS C3216]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (0 ± 30 ppm/ºC)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA5C2C0G1H472J	2 x Rated Voltage	C0G	50V	4,700	± 5%	0.60 ± 0.15
CGA5C2C0G1H562J	2 x Rated Voltage	C0G	50V	5,600	± 5%	0.60 ± 0.15
CGA5C2C0G1H682J	2 x Rated Voltage	C0G	50V	6,800	± 5%	0.60 ± 0.15
CGA5F2C0G1H822J	2 x Rated Voltage	C0G	50V	8,200	± 5%	0.85 ± 0.15
CGA5F2C0G1H103J	2 x Rated Voltage	C0G	50V	10,000	± 5%	0.85 ± 0.15
CGA5H2C0G1H153J	2 x Rated Voltage	C0G	50V	15,000	± 5%	1.15 ± 0.15
CGA5H2C0G1H223J	2 x Rated Voltage	C0G	50V	22,000	± 5%	1.15 ± 0.15
CGA5L2C0G1H333J	2 x Rated Voltage	C0G	50V	33,000	± 5%	1.60 ± 0.20
CGA5C2C0G2A392J	2 x Rated Voltage	C0G	100V	3,900	± 5%	0.60 ± 0.15
CGA5F2C0G2A472J	2 x Rated Voltage	C0G	100V	4,700	± 5%	0.85 ± 0.15
CGA5F2C0G2A562J	2 x Rated Voltage	C0G	100V	5,600	± 5%	0.85 ± 0.15
CGA5H2C0G2A682J	2 x Rated Voltage	C0G	100V	6,800	± 5%	1.15 ± 0.15
CGA5H2C0G2A822J	2 x Rated Voltage	C0G	100V	8,200	± 5%	1.15 ± 0.15
CGA5H2C0G2A103J	2 x Rated Voltage	C0G	100V	10,000	± 5%	1.15 ± 0.15
CGA5F3C0G2E332J	1.5 x Rated Voltage	C0G	250V	3,300	± 5%	0.85 ± 0.15
CGA5H3C0G2E392J	1.5 x Rated Voltage	C0G	250V	3,900	± 5%	1.15 ± 0.15
CGA5H3C0G2E472J	1.5 x Rated Voltage	C0G	250V	4,700	± 5%	1.15 ± 0.15
CGA5H3C0G2E562J	1.5 x Rated Voltage	C0G	250V	5,600	± 5%	1.15 ± 0.15
CGA5L3C0G2E682J	1.5 x Rated Voltage	C0G	250V	6,800	± 5%	1.60 ± 0.20
CGA5L3C0G2E822J	1.5 x Rated Voltage	C0G	250V	8,200	± 5%	1.60 ± 0.20
CGA5C4C0G2J101J	1.2 x Rated Voltage	C0G	630V	100	± 5%	0.60 ± 0.15
CGA5C4C0G2J121J	1.2 x Rated Voltage	C0G	630V	120	± 5%	0.60 ± 0.15
CGA5C4C0G2J151J	1.2 x Rated Voltage	C0G	630V	150	± 5%	0.60 ± 0.15
CGA5C4C0G2J181J	1.2 x Rated Voltage	C0G	630V	180	± 5%	0.60 ± 0.15
CGA5C4C0G2J221J	1.2 x Rated Voltage	C0G	630V	220	± 5%	0.60 ± 0.15
CGA5C4C0G2J271J	1.2 x Rated Voltage	C0G	630V	270	± 5%	0.60 ± 0.15
CGA5C4C0G2J331J	1.2 x Rated Voltage	C0G	630V	330	± 5%	0.60 ± 0.15
CGA5C4C0G2J391J	1.2 x Rated Voltage	C0G	630V	390	± 5%	0.60 ± 0.15
CGA5F4C0G2J471J	1.2 x Rated Voltage	C0G	630V	470	± 5%	0.85 ± 0.15
CGA5F4C0G2J561J	1.2 x Rated Voltage	C0G	630V	560	± 5%	0.85 ± 0.15
CGA5F4C0G2J681J	1.2 x Rated Voltage	C0G	630V	680	± 5%	0.85 ± 0.15
CGA5F4C0G2J821J	1.2 x Rated Voltage	C0G	630V	820	± 5%	0.85 ± 0.15
CGA5F4C0G2J102J	1.2 x Rated Voltage	C0G	630V	1,000	± 5%	0.85 ± 0.15
CGA5F4C0G2J122J	1.2 x Rated Voltage	C0G	630V	1,200	± 5%	0.85 ± 0.15
CGA5H4C0G2J152J	1.2 x Rated Voltage	C0G	630V	1,500	± 5%	1.15 ± 0.15
CGA5H4C0G2J182J	1.2 x Rated Voltage	C0G	630V	1,800	± 5%	1.15 ± 0.15
CGA5H4C0G2J222J	1.2 x Rated Voltage	C0G	630V	2,200	± 5%	1.15 ± 0.15
CGA5L4C0G2J272J	1.2 x Rated Voltage	C0G	630V	2,700	± 5%	1.60 ± 0.20
CGA5L4C0G2J332J	1.2 x Rated Voltage	C0G	630V	3,300	± 5%	1.60 ± 0.20

• All specifications are subject to change without notice. Please read the precautions before using the product.

Capacitance Range Table

CGA5 [EIA CC1206/JIS C3216]

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (± 15%), X8R (± 15%)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA5L2X7R1H474K	2 x Rated Voltage	X7R	50V	470,000	± 10%	1.60 ± 0.20
CGA5L2X7R1H684K	2 x Rated Voltage	X7R	50V	680,000	± 10%	1.60 ± 0.20
CGA5L3X7R1H105K	1.5 x Rated Voltage	X7R	50V	1,000,000	± 10%	1.60 ± 0.20
CGA5L2X7R1E155K	2 x Rated Voltage	X7R	25V	1,500,000	± 10%	1.60 ± 0.20
CGA5L2X7R1E225K	2 x Rated Voltage	X7R	25V	2,200,000	± 10%	1.60 ± 0.20
CGA5L1X7R1E335K	1 x Rated Voltage	X7R	25V	3,300,000	± 10%	1.60 ± 0.20
CGA5L1X7R1E475K	1 x Rated Voltage	X7R	25V	4,700,000	± 10%	1.60 ± 0.20
CGA5L1X7R1C685K	1 x Rated Voltage	X7R	16V	6,800,000	± 10%	1.60 ± 0.20
CGA5H2X7R2A333K	2 x Rated Voltage	X7R	100V	33,000	± 10%	1.15 ± 0.15
CGA5H2X7R2A473K	2 x Rated Voltage	X7R	100V	47,000	± 10%	1.15 ± 0.15
CGA5L2X7R2A683K	2 x Rated Voltage	X7R	100V	68,000	± 10%	1.60 ± 0.20
CGA5L2X7R2A104K	2 x Rated Voltage	X7R	100V	100,000	± 10%	1.60 ± 0.20
CGA5L2X7R2A154K	2 x Rated Voltage	X7R	100V	150,000	± 10%	1.60 ± 0.20
CGA5H2X7R2A224K	2 x Rated Voltage	X7R	100V	220,000	± 10%	1.15 ± 0.15
CGA5K2X7R2A334K	2 x Rated Voltage	X7R	100V	330,000	± 10%	1.30 ± 0.20
CGA5L2X7R2A474K	2 x Rated Voltage	X7R	100V	470,000	± 10%	1.60 ± 0.20
CGA5L2X7R2A105K	2 x Rated Voltage	X7R	100V	1,000,000	± 10%	1.60 ± 0.20
CGA5H3X7R2E153K	1.5 x Rated Voltage	X7R	250V	15,000	± 10%	1.15 ± 0.15
CGA5H3X7R2E223K	1.5 x Rated Voltage	X7R	250V	22,000	± 10%	1.15 ± 0.15
CGA5L3X7R2E333K	1.5 x Rated Voltage	X7R	250V	33,000	± 10%	1.60 ± 0.20
CGA5L3X7R2E473K	1.5 x Rated Voltage	X7R	250V	47,000	± 10%	1.60 ± 0.20
CGA5L3X7R2E683K	1.5 x Rated Voltage	X7R	250V	68,000	± 10%	1.60 ± 0.20
CGA5L3X7R2E104K	1.5 x Rated Voltage	X7R	250V	100,000	± 10%	1.60 ± 0.20
CGA5H4X7R2J102K	1.2 x Rated Voltage	X7R	630V	1,000	± 10%	1.15 ± 0.15
CGA5H4X7R2J152K	1.2 x Rated Voltage	X7R	630V	1,500	± 10%	1.15 ± 0.15
CGA5H4X7R2J222K	1.2 x Rated Voltage	X7R	630V	2,200	± 10%	1.15 ± 0.15
CGA5H4X7R2J332K	1.2 x Rated Voltage	X7R	630V	3,300	± 10%	1.15 ± 0.15
CGA5H4X7R2J472K	1.2 x Rated Voltage	X7R	630V	4,700	± 10%	1.15 ± 0.15
CGA5H4X7R2J682K	1.2 x Rated Voltage	X7R	630V	6,800	± 10%	1.15 ± 0.15
CGA5H4X7R2J103K	1.2 x Rated Voltage	X7R	630V	10,000	± 10%	1.15 ± 0.15
CGA5K4X7R2J153K	1.2 x Rated Voltage	X7R	630V	15,000	± 10%	1.30 ± 0.20
CGA5K4X7R2J223K	1.2 x Rated Voltage	X7R	630V	22,000	± 10%	1.30 ± 0.20
CGA5L4X7R2J333K	1.2 x Rated Voltage	X7R	630V	33,000	± 10%	1.60 ± 0.20
CGA5F2X8R1E334K	2 x Rated Voltage	X8R	25V	330,000	± 10%	0.85 ± 0.15
CGA5F2X8R1E474K	2 x Rated Voltage	X8R	25V	470,000	± 10%	0.85 ± 0.15
CGA5H2X8R1E684K	2 x Rated Voltage	X8R	25V	680,000	± 10%	1.15 ± 0.15
CGA5L2X8R1E105K	2 x Rated Voltage	X8R	25V	1,000,000	± 10%	1.60 ± 0.20
CGA5F2X8R1H154K	2 x Rated Voltage	X8R	50V	150,000	± 10%	0.85 ± 0.15
CGA5H2X8R1H224K	2 x Rated Voltage	X8R	50V	220,000	± 10%	1.15 ± 0.15
CGA5L2X8R1H334K	2 x Rated Voltage	X8R	50V	330,000	± 10%	1.60 ± 0.20
CGA5L2X8R1H474K	2 x Rated Voltage	X8R	50V	470,000	± 10%	1.60 ± 0.20
CGA5F2X8R2A333K	2 x Rated Voltage	X8R	100V	33,000	± 10%	0.85 ± 0.15
CGA5F2X8R2A473K	2 x Rated Voltage	X8R	100V	47,000	± 10%	0.85 ± 0.15
CGA5H2X8R2A683K	2 x Rated Voltage	X8R	100V	68,000	± 10%	1.15 ± 0.15
CGA5H2X8R2A104K	2 x Rated Voltage	X8R	100V	100,000	± 10%	1.15 ± 0.15
CGA5L2X8R2A154K	2 x Rated Voltage	X8R	100V	150,000	± 10%	1.60 ± 0.20

Capacitance Range Chart

CGA6 [EIA CC1210/JIS C3225]

Capacitance Range Chart

Temperature Characteristics: C0G (0 ± 30ppm/ºC)
Rated Voltage: 630V (2J), 250V (2E), 100V (2A), 50V (1H)

Capacitance (pF)	Cap Code	Tolerance	C0G			
			2J (630V)	2E (250V)	2A (100V)	1H (50V)
3,900	392	J: ± 5%				
4,700	472					
5,600	562					
6,800	682					
10,000	103					
15,000	153					
22,000	223					
33,000	333					
47,000	473					
68,000	683					
100,000	104					

Capacitance Range Chart

Temperature Characteristics: X7R (± 15%), X8R (± 15%)
Rated Voltage: 630V (2J), 250V (2E), 100V (2A), 50V (1H), 25V (1E), 16V (1C)

Capacitance (pF)	Cap Code	Tolerance	X7R						X8R
			2J (630V)	2E (250V)	2A (100V)	1H (50V)	1E (25V)	1C (16V)	1E (25V)
47,000	473	K: ± 10%							
68,000	683								
100,000	104								
150,000	154								
220,000	224								
330,000	334								
470,000	474								
680,000	684								
1,000,000	105								
1,500,000	155								
2,200,000	225								
3,300,000	335								
4,700,000	475								
6,800,000	685								
10,000,000	106	M: ± 20%							
15,000,000	156								
22,000,000	226								

Standard Thickness

1.25 ± 0.20 mm 1.60 ± 0.20 mm 2.00 ± 0.20 mm 2.30 ± 0.20 mm 2.50 ± 0.30 mm

• All specifications are subject to change without notice. Please read the precautions before using the product.

Capacitance Range Table

CGA6 [EIA CC1210/JIS C3225]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (0 ± 30 ppm/ºC)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA6J2C0G1H223J	2 x Rated Voltage	C0G	50V	22,000	± 5%	1.25 ± 0.20
CGA6L2C0G1H333J	2 x Rated Voltage	C0G	50V	33,000	± 5%	1.60 ± 0.20
CGA6M2C0G1H473J	2 x Rated Voltage	C0G	50V	47,000	± 5%	2.00 ± 0.20
CGA6M2C0G1H683J	2 x Rated Voltage	C0G	50V	68,000	± 5%	2.00 ± 0.20
CGA6P2C0G1H104J	2 x Rated Voltage	C0G	50V	100,000	± 5%	2.50 ± 0.30
CGA6J2C0G2A153J	2 x Rated Voltage	C0G	100V	15,000	± 5%	1.25 ± 0.20
CGA6L2C0G2A223J	2 x Rated Voltage	C0G	100V	22,000	± 5%	1.60 ± 0.20
CGA6M2C0G2A333J	2 x Rated Voltage	C0G	100V	33,000	± 5%	2.00 ± 0.20
CGA6N2C0G2A473J	2 x Rated Voltage	C0G	100V	47,000	± 5%	2.30 ± 0.20
CGA6L3C0G2E103J	1.5 x Rated Voltage	C0G	250V	10,000	± 5%	1.60 ± 0.20
CGA6M3C0G2E153J	1.5 x Rated Voltage	C0G	250V	15,000	± 5%	2.00 ± 0.20
CGA6J4C0G2J392J	1.2 x Rated Voltage	C0G	630V	3,900	± 5%	1.25 ± 0.20
CGA6L4C0G2J472J	1.2 x Rated Voltage	C0G	630V	4,700	± 5%	1.60 ± 0.20
CGA6L4C0G2J562J	1.2 x Rated Voltage	C0G	630V	5,600	± 5%	1.60 ± 0.20
CGA6M4C0G2J682J	1.2 x Rated Voltage	C0G	630V	6,800	± 5%	2.00 ± 0.20

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (± 15%), X8R (± 15%)

TDK Part Number (Ordering Code)	Voltage Condition in Life Test	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
CGA6L2X7R1H105K	2 x Rated Voltage	X7R	50V	1,000,000	± 10%	1.60 ± 0.20
CGA6M2X7R1H155K	2 x Rated Voltage	X7R	50V	1,500,000	± 10%	2.00 ± 0.20
CGA6M3X7R1H225K	1.5 x Rated Voltage	X7R	50V	2,200,000	± 10%	2.00 ± 0.20
CGA6P3X7R1H335K	1.5 x Rated Voltage	X7R	50V	3,300,000	± 10%	2.50 ± 0.30
CGA6L2X7R1E335K	2 x Rated Voltage	X7R	25V	3,300,000	± 10%	1.60 ± 0.20
CGA6M2X7R1E475K	2 x Rated Voltage	X7R	25V	4,700,000	± 10%	2.00 ± 0.20
CGA6P3X7R1E685K	1.5 x Rated Voltage	X7R	25V	6,800,000	± 10%	2.50 ± 0.30
CGA6P1X7R1E106K	1 x Rated Voltage	X7R	25V	10,000,000	± 10%	2.50 ± 0.30
CGA6M3X7R1C106K	1.5 x Rated Voltage	X7R	16V	10,000,000	± 10%	2.00 ± 0.20
CGA6P3X7R1C156M	1.5 x Rated Voltage	X7R	16V	15,000,000	± 20%	2.50 ± 0.30
CGA6P1X7R1C226M	1 x Rated Voltage	X7R	16V	22,000,000	± 20%	2.50 ± 0.30
CGA6M2X7R2A334K	2 x Rated Voltage	X7R	100V	330,000	± 10%	2.00 ± 0.20
CGA6M2X7R2A474K	2 x Rated Voltage	X7R	100V	470,000	± 10%	2.00 ± 0.20
CGA6L2X7R2A684K	2 x Rated Voltage	X7R	100V	680,000	± 10%	1.60 ± 0.20
CGA6M2X7R2A105K	2 x Rated Voltage	X7R	100V	1,000,000	± 10%	2.00 ± 0.20
CGA6N3X7R2A225K	1.5 x Rated Voltage	X7R	100V	2,200,000	± 10%	2.30 ± 0.20
CGA6M3X7R2E104K	1.5 x Rated Voltage	X7R	250V	100,000	± 10%	2.00 ± 0.20
CGA6M3X7R2E154K	1.5 x Rated Voltage	X7R	250V	150,000	± 10%	2.00 ± 0.20
CGA6M3X7R2E224K	1.5 x Rated Voltage	X7R	250V	220,000	± 10%	2.00 ± 0.20
CGA6M4X7R2J473K	1.2 x Rated Voltage	X7R	630V	47,000	± 10%	2.00 ± 0.20
CGA6M4X7R2J683K	1.2 x Rated Voltage	X7R	630V	68,000	± 10%	2.00 ± 0.20
CGA6L2X8R1E155K	2 x Rated Voltage	X8R	25V	1,500,000	± 10%	1.60 ± 0.20
CGA6M2X8R1E225K	2 x Rated Voltage	X8R	25V	2,200,000	± 10%	2.00 ± 0.20
CGA6P2X8R1E335K	2 x Rated Voltage	X8R	25V	3,300,000	± 10%	2.50 ± 0.30

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