



CGA Series Automotive Grade General (Up to 50V)

Type: CGA1 [EIA CC0201]

CGA2 [EIA CC0402] CGA3 [EIA CC0603] CGA4 [EIA CC0805] CGA5 [EIA CC1206] CGA6 [EIA CC1210] CGA8 [EIA CC1812]

**CGA9 [EIA CC2220]** 

Issue date: Apr 2014





### REMINDERS

Please read before using this product

### SAFETY REMINDERS



### REMINDERS

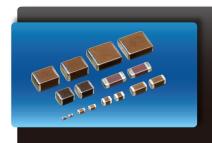
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### (Example)

Catalog Issued date	Catalog Number	Item Description (On Delivery Label)
Prior to January 2013	C1608C0G1E103J	C1608C0G1E103JT000N
January 2013 and Later	C1608C0G1E103J080AA	C1608C0G1E103JT000N





## **CGA Series**







# General (Up to 50V)

Type: CGA1 [EIA CC0201], CGA2 [EIA CC0402], CGA3 [EIA CC0603], CGA4 [EIA CC0805], CGA5 [EIA CC1206], CGA6 [EIA CC1210], CGA8 [EIA CC1812], CGA9 [EIA CC2220]

#### **Features**



- High capacitance has been achieved through precision technologies that enable the use of multiple thinner ceramic dielectric layers.
- · A monolithic structure ensures superior mechanical strength and reliability.
- · Low ESL and excellent frequency characteristics allow for a circuit design that closely conforms to theoretical values.
- · Low self-heating and high ripple resistance due to low ESR.
- · AEC-Q200 compliant.

#### **Applications**



**Dimensions** 



- Automotive engine control units

- Automotive sensor modules Automotive battery line smoothing Applications requiring higher reliability
- Switching power supply smoothing



L	Body Length
W	Body Width
Т	Body Height
В	Terminal Width
G	Terminal Spacing

### Catalog Number Construction

### 6 • P • 1 • X7S • 0J • 476 • M •

### Series Name •

#### Dimensions L x W (mm)

Code	Length	Width	Terminal
1	$0.60 \pm 0.03$	$0.30 \pm 0.03$	0.10 min.
2	1.00 ± 0.05	$0.50 \pm 0.05$	0.10 min.
3	1.60 ± 0.10	$0.80 \pm 0.10$	0.20 min.
4	$2.00 \pm 0.20$	$1.25 \pm 0.20$	0.20 min.
5	$3.20 \pm 0.20$	$1.60 \pm 0.20$	0.20 min.
6	$3.20 \pm 0.40$	$2.50 \pm 0.30$	0.20 min.
8	$4.50 \pm 0.40$	$3.20 \pm 0.40$	0.20 min.
9	$5.70 \pm 0.40$	$5.00 \pm 0.40$	0.20 min.
*Dimension to	derance are typical valu	96	

### Thickness T Code (mm)

Code	Thickness
Α	0.30 mm
В	0.50 mm
С	0.60 mm
E	0.80 mm
F	0.85 mm
Н	1.15 mm
J	1.25 mm
L	1.60 mm
M	2.00 mm
N	2.30 mm
Р	2.50 mm
Q	2.80 mm

#### Voltage Condition for Life Test

Symbol	Condition
1	1 × R.V.
2	2 × R.V.
3	15 × R V

#### Temperature Characteristics •

Characteristics	Capacitance Change	Range
C0G	0±30 ppm/°C	-55 to +125°C
X5R	±15%	-55 to + 85°C
X7R	±15%	-55 to +125°C
X7S	±22%	-55 to +125°C

#### Rated Voltage (DC)

3.20 mm

Code	Voltage (DC)
0J	6.3V
1A	10V
1C	16V
1E	25V
1V	35V
1H	50V

#### **Capacitance Tolerance**

Code	Tolerance
С	± 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.

Ex. 0R2 = 0.2pF; 103 = 10,000pF; 105 = 1,000,000pF = 1,000nF = 1µF

### Nominal Thickness

Code	Thickness
030	0.30 mm
050	0.50 mm
060	0.60 mm
125	1.25 mm

<sup>\*</sup>See Thickness T Code for complete list

#### Packaging Style

Code	Style
Α	178" Reel, 4mm Pitch
В	178" Reel, 2mm Pitch
K	178" Reel, 8mm Pitch

### Special Reserved Code

Code	Description
A, B	TDK Internal Code

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### CGA1(0603) [EIA CC0201]

### **Capacitance Range Chart**

Temperature Characteristics: C0G (0 ± 30ppm/°C), X7R (±15%) Rated Voltage: 50V (1H), 25V (1E), 16V (1C), 10V (1A), 6.3V (0J)

Capacitance (pF)	Code	Tolerance	COG		X7R				
			1H (50V)	1E (25V)	1H (50V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)
1	010	C: ± 0.25pF							
1.5	1R5	D: ± 0.50pF							
2	020	J: ± 5%							
2.2	2R2	K: ± 10%							
3	030	M: ± 20%							
3.3	3R3	= = 0 /0							
4	040								
4.7	4R7								
5	050								
6	060								
6.8	6R8								
7	070								
8	080								
9	090								
10	100								
12	120								
15	150	-							
18	180								
22	220	-							
27	270								
33	330								
39	390	-							
47	470								
56	560	-							
68	680	-							
82	820								
100	101	-							
150	151	-							
220	221								
330	331	-							
470	471	-							
680	681	-							
1000	102	1							
1500	152	1							
2200	222	1							
3300	332	†							
4700	472	1							
6800	682								
10000	103	-							
10000	100								

Standard Thickness
0.30 mm





## CGA2(1005) [EIA CC0402]

### Capacitance Range Chart

Temperature Characteristics: C0G (0 ± 30ppm/°C), X5R (±15%), X7R (±15%), X7S (±22%) Rated Voltage: 50V (1H), 35V (1V), 25V (1E), 16V (1C), 10V (1A), 6.3 (0J)

Capacitance			COG			X5R						7R			X7S	
(pF)	Code	Tolerance	1H (50V)	1H (50V)	1V (35V)	1E (25V)	1C (16V)	1A (10V)	1H (50V)	1V (35V)	1E (25V)	1C (16V)	1 A (10V)	0J (6.3V)	1C (16V)	1 A (10V)
1	010	C: ± 0.25pF														
1.5	1R5	D:±0.50pF														
2	020	J:±5%														
2.2	2R2	K:±10%														
3	030	M: ± 20%														
3.3	3R3	IVI. ± 20 /0														
4	040															
4.7	4R7															
5	050															
6	060															
6.8	6R8															
7	070															
8	080															
9	090															
10	100															
12	120															
15	150															
18	180															
22	220															
27	270															
33	330															
39	390															
47	470															
56	560															
68	680															
82	820															
100	101															
	121	_														
120																
150	151															
180	181															
220	221															
270	271															
330	331															
390	391															
470	471															
560	561															
680	681															
820	821	1														
1,000	102	1														
1,500	152	1														
2,200	222	1														
3,300	332	1														
4,700	472	-														
	682	-														
6,800		-														
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	1														
330,000	334	1														
470,000	474	1														

Standard Thickness

0.50 mm





## CGA3(1608) [EIA CC0603]

### **Capacitance Range Chart**

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

			COG
Capacitance (pF)	Code	Tolerance	1H (50V)
1	010	C: ± 0.25pF	
1.5	1R5	D: ± 0.50pF	
2	020	J: ± 5%	
2.2	2R2	K: ± 10%	
3	030	M: ± 20%	
3.3	3R3	= 2070	
4	040		
4.7	4R7		
5	050		
6	060		
6.8	6R8		
7	070		
8	080		
9	090		
10	100		
12	120		
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		

Standard Thickness
0.80 mm





### CGA3(1608) [EIA CC0603]

### **Capacitance Range Chart**

Temperature Characteristics: C0G (0 ± 30ppm/°C), X5R (±15%), X7R (±15%), X7S (±22%) Rated Voltage: 50V (1H), 35V (1V), 25V (1E), 16V (1C), 10V (1A), 6.3V (0J)

Canacitanas			COG			X	5R					X7R			X7	<b>7</b> S
Capacitance (pF)	Code	Tolerance	1H (50V)	1H (50V)	1V (35V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	1H (50V)	1V (35V)	1E (25V)	1C (16V)	0J (6.3V)	1C (16V)	1A (10V)
1,000	102	J:±5%														
1,200	122	K:±10%														
1,500	152	M: ± 20%														
1,800	182															
2,200	222	1														
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															
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															

Standard Thickness

0.80 mm





## CGA4(2012) [EIA CC0805]

### **Capacitance Range Chart**

Temperature Characteristics: C0G (0 ± 30ppm/°C), X5R (±15%), X7R (±15%), X7S (±22%) Rated Voltage: 50V (1H), 35V (1V), 25V (1E), 16V (1C), 10V (1A), 6.3V (0J)

			COG			X5R					X	7R			X7S	
Capacitance (pF)	Code	Tolerance	1H (50V)	1H (50V)	1V (35V)	1E (25V)	1C (16V)	1A (10V)	1H (50V)	1V (35V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	1C (16V)	1A (10V)
1,000	102	J:±5%														
1,200	122	K:±10%														
1,500	152	M: ± 20%														
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															
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															









## CGA5(3216) [EIA CC1206]

#### **Capacitance Range Chart**

Temperature Characteristics: C0G (0 ± 30ppm/°C), X5R (±15%), X7R (±15%) Rated Voltage: 50V (1H), 35V (1V), 25V (1E), 16V (1C), 6.3V (0J)

0			COG		X	5R				X7R			
Capacitance (pF)	Code	Tolerance	1H (50V)	1H (50V)	1V (35V)	1E (25V)	1C (16V)	1H (50V)	1V (35V)	1E (25V)	1C (16V)	0J (6.3V)	
4,700	472	J: ± 5%											
5,600	562	K: ± 10%											
6,800	682	M: ± 20%											
8,200	822												
10,000	103												
15,000	153												
22,000	223												
33,000	333												
47,000	473												
68,000	683												
100,000	104												
470,000	474												
680,000	684												
1,000,000	105												
1,500,000	155												
2,200,000	225												Standard Thickness
3,300,000	335												0.60 mm
4,700,000	475												
6,800,000	685												0.85 mm
10,000,000	106												1.15 mm
15,000,000	156												
22,000,000	226												1.60 mm



### CGA6(3225) [EIA CC1210]

### **Capacitance Range Chart**

Temperature Characteristics: C0G (0  $\pm$  30ppm/°C), X7R ( $\pm$ 15%), X7S ( $\pm$ 22%) Rated Voltage: 50V (1H), 25V (1E), 16V (1C), 6.3V (0J)

Canacitanas			COG		X7R		X.	7S	
Capacitance (pF)	Code	Tolerance	1H (50V)	1H (50V)	1E (25V)	1C (16V)	1H (50V)	0J (6.3V)	
22,000	223	J: ± 5%							
33,000	333	K: ± 10%							
47,000	473	M: ± 20%							
68,000	683								
100,000	104								
1,000,000	105								
1,500,000	155								
2,200,000	225								
3,300,000	335								Standard Thickness
4,700,000	475								1.25 mm
6,800,000	685								1.60 mm
10,000,000	106								
15,000,000	156								2.00 mm
22,000,000	226								2.30 mm
33,000,000	336								2.50 mm
47,000,000	476								2.50 [[[[[]





### CGA8(4532) [EIA CC1812]

#### **Capacitance Range Chart**

Temperature Characteristics: C0G (0 ± 30ppm/°C), X7R (±15%) Rated Voltage: 50V (1H), 25V (1E), 16V (1C)

			COG		X7R		
Capacitance (pF)	Code	Tolerance	1H (50V)	1H (50V)	1E (25V)	1C (16V)	
47,000	473	J: ± 5%					
68,000	683	K: ± 10%					
100,000	104	M: ± 20%					
150,000	154						
220,000	224						Standard Thickness
1,500,000	155						
2,200,000	225						1.60 mm
3,300,000	335						2.00 mm
4,700,000	475						2.30 mm
6,800,000	685						
10,000,000	106						2.50 mm
15,000,000	156						2.80 mm
22,000,000	226						
33,000,000	336						3.20 mm



CGA9(5750) [EIA CC2220]

#### **Capacitance Range Chart**

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

Consoitones				X7R		
Capacitance (pF)	Code	Tolerance	1H (50V)	1E (25V)	1C (16V)	
4,700,000	475	K: ± 10%				Otavada ad Thislanda
6,800,000	685	M: ± 20%				Standard Thickness
10,000,000	106					2.00 mm
15,000,000	156					2.30 mm
22,000,000	226					
47,000,000	476					2.50 mm





### **Class 1 (Temperature Compensating)**

Temperature Characteristics: C0G (-55 to +125°C, 0 ± 30 ppm/°C)

Capacitance	Size	Thickness (mm)	Capacitance Tolerance	Catalog Number  Pated Voltage Ede: 50V Pated Voltage Ede: 25
	0603	0.30 ± 0.03		Rated Voltage Edc: 50V Rated Voltage Edc: 25 CGA1A2C0G1H010C030BA CGA1A2C0G1E010C030B
4=			± 0.25pF	
1 pF	1005	0.50 ± 0.05	± 0.25pF	CGA2B2C0G1H010C050BA
	1608	0.80 ± 0.10	± 0.25pF	CGA3E2C0G1H010C080AA
	0603	0.30 ± 0.03	± 0.25pF	CGA1A2C0G1H1R5C030BA CGA1A2C0G1E1R5C030
1.5 pF	1005	0.50 ± 0.05	± 0.25pF	CGA2B2C0G1H1R5C050BA
	1608	$0.80 \pm 0.10$	± 0.25pF	CGA3E2C0G1H1R5C080AA
	0603	$0.30 \pm 0.03$	± 0.25pF	CGA1A2C0G1H020C030BA CGA1A2C0G1E020C030I
2 pF	1005	$0.50 \pm 0.05$	± 0.25pF	CGA2B2C0G1H020C050BA
	1608	0.80 ± 0.10	± 0.25pF	CGA3E2C0G1H020C080AA
	0603	$0.30 \pm 0.03$	± 0.25pF	CGA1A2C0G1H2R2C030BA CGA1A2C0G1E2R2C030
2.2 pF	1005	$0.50 \pm 0.05$	± 0.25pF	CGA2B2C0G1H2R2C050BA
	1608	0.80 ± 0.10	± 0.25pF	CGA3E2C0G1H2R2C080AA
	0603	$0.30 \pm 0.03$	± 0.25pF	CGA1A2C0G1H030C030BA CGA1A2C0G1E030C030I
3 pF	1005	0.50 ± 0.05	± 0.25pF	CGA2B2C0G1H030C050BA
	1608	0.80 ± 0.10	± 0.25pF	CGA3E2C0G1H030C080AA
	0603	0.30 ± 0.03	± 0.25pF	CGA1A2C0G1H3R3C030BA CGA1A2C0G1E3R3C030
3.3 pF	1005	0.50 ± 0.05	± 0.25pF	CGA2B2C0G1H3R3C050BA
о.о р.	1608	0.80 ± 0.10	± 0.25pF	CGA3E2C0G1H3R3C080AA
	0603	0.30 ± 0.03	± 0.25pF	CGA1A2C0G1H040C030BA CGA1A2C0G1E040C030B
4 pF	1005	0.50 ± 0.05	± 0.25pF ± 0.25pF	CGA2B2C0G1H040C050BA CGA1A2C0G1E040C050I
4 pi	1608	0.80 ± 0.10		CGA3E2C0G1H040C030BA  CGA3E2C0G1H040C080AA
			± 0.25pF	The state of the s
4.7	0603	0.30 ± 0.03	± 0.25pF	CGA1A2C0G1H4R7C030BA CGA1A2C0G1E4R7C030
4.7 pF	1005	0.50 ± 0.05	± 0.25pF	CGA2B2C0G1H4R7C050BA
	1608	0.80 ± 0.10	± 0.25pF	CGA3E2C0G1H4R7C080AA
	0603	$0.30 \pm 0.03$	± 0.25pF	CGA1A2C0G1H050C030BA CGA1A2C0G1E050C030I
5 pF	1005	$0.50 \pm 0.05$	± 0.25pF	CGA2B2C0G1H050C050BA
	1608	0.80 ± 0.10	± 0.25pF	CGA3E2C0G1H050C080AA
	0603	$0.30 \pm 0.03$	± 0.50pF	CGA1A2C0G1H060D030BA CGA1A2C0G1E060D030I
6 pF	1005	$0.50 \pm 0.05$	± 0.50pF	CGA2B2C0G1H060D050BA
	1608	$0.80 \pm 0.10$	± 0.50pF	CGA3E2C0G1H060D080AA
	0603	$0.30 \pm 0.03$	± 0.50pF	CGA1A2C0G1H6R8D030BA CGA1A2C0G1E6R8D030
6.8 pF	1005	$0.50 \pm 0.05$	± 0.50pF	CGA2B2C0G1H6R8D050BA
	1608	0.80 ± 0.10	± 0.50pF	CGA3E2C0G1H6R8D080AA
	0603	$0.30 \pm 0.03$	± 0.50pF	CGA1A2C0G1H070D030BA CGA1A2C0G1E070D030I
7 pF	1005	0.50 ± 0.05	± 0.50pF	CGA2B2C0G1H070D050BA
	1608	0.80 ± 0.10	± 0.50pF	CGA3E2C0G1H070D080AA
	0603	0.30 ± 0.03	± 0.50pF	CGA1A2C0G1H080D030BA CGA1A2C0G1E080D030I
8 pF	1005	0.50 ± 0.05	± 0.50pF	CGA2B2C0G1H080D050BA
-	1608	0.80 ± 0.10	± 0.50pF	CGA3E2C0G1H080D080AA
	0603	0.30 ± 0.03	± 0.50pF	CGA1A2C0G1H090D030BA CGA1A2C0G1E090D030I
9 pF	1005	0.50 ± 0.05	± 0.50pF	CGA2B2C0G1H090D050BA
эрі	1608	0.80 ± 0.10	± 0.50pF	CGA3E2C0G1H090D080AA
				<del></del>
10 nE	1005	0.30 ± 0.03	± 0.50pF	CGA1A2C0G1H100D030BA CGA1A2C0G1E100D030B
10 pF	1005	0.50 ± 0.05	± 0.50pF	CGA2E3C0C1H100D050BA
	1608	0.80 ± 0.10	± 0.50pF	CGA3E2C0G1H100D080AA
10 =	0603	0.30 ± 0.03	± 5%	CGA1A2C0G1H120J030BA CGA1A2C0G1E120J030E
12 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H120J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H120J080AA
	0603	$0.30 \pm 0.03$	± 5%	CGA1A2C0G1H150J030BA CGA1A2C0G1E150J030E
15 pF	1005	$0.50 \pm 0.05$	± 5%	CGA2B2C0G1H150J050BA
	1608	$0.80 \pm 0.10$	± 5%	CGA3E2C0G1H150J080AA
	0603	$0.30 \pm 0.03$	± 5%	CGA1A2C0G1H180J030BA CGA1A2C0G1E180J030E
18 pF	1005	$0.50 \pm 0.05$	± 5%	CGA2B2C0G1H180J050BA
	1608	$0.80 \pm 0.10$	± 5%	CGA3E2C0G1H180J080AA
	0603	0.30 ± 0.03	± 5%	CGA1A2C0G1H220J030BA CGA1A2C0G1E220J030B
22 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H220J050BA
187	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H220J080AA
	0603	$0.30 \pm 0.03$	+ 5%	- (.(5A   AZC.))(5   HZZZ),  (13B   B   C   15A   AZC.)  (15   E   ZZZ)  (17   E   ZZZ)
27 pF	0603 1005	0.30 ± 0.03 0.50 ± 0.05	± 5% ± 5%	CGA1A2C0G1H270J030BA CGA1A2C0G1E270J030E CGA2B2C0G1H270J050BA





### **Class 1 (Temperature Compensating)**

Temperature Characteristics: C0G (-55 to +125°C, 0 ± 30 ppm/°C)

Capacitance	Size	Thickness (mm)	Capacitance Tolerance	Catalog Number
·	0000			Rated Voltage Edc: 50V Rated Voltage Edc: 25V
00 - F	0603	0.30 ± 0.03	± 5%	CGA1A2C0G1H330J030BA CGA1A2C0G1E330J030BA
33 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H330J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H330J080AA
00 - F	0603	0.30 ± 0.03	± 5%	CGA1A2C0G1H390J030BA CGA1A2C0G1E390J030BA
39 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H390J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H390J080AA
47 5	0603	0.30 ± 0.03	± 5%	CGA1A2C0G1H470J030BA CGA1A2C0G1E470J030BA
47 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H470J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H470J080AA
EG pE	0603 1005	0.30 ± 0.03	± 5% ± 5%	CGA1A2C0G1H560J030BA CGA1A2C0G1E560J030BA
56 pF	1608	$0.50 \pm 0.05$ $0.80 \pm 0.10$	± 5%	CGA2B2C0G1H560J050BA CGA3E2C0G1H560J080AA
		0.30 ± 0.03		
60 pE	0603		± 5%	CGA1A2C0G1H680J030BA CGA1A2C0G1E680J030BA
68 pF	1005	$0.50 \pm 0.05$ $0.80 \pm 0.10$	± 5% ± 5%	CGA2B2C0G1H680J050BA CGA3E2C0G1H680J080AA
	0603	0.30 ± 0.03		
00 F			± 5%	CGA1A2C0G1H820J030BA CGA1A2C0G1E820J030BA
82 pF	1005	0.50 ± 0.05	± 5%	CGA2E2C0G1H820J050BA
	1608	0.80 ± 0.10	± 5%	CGA1A2C0C1H101 I020RA CCA1A2C0C1F101 I020R
100 ∞Γ	0603	0.30 ± 0.03	± 5%	CGA1A2C0G1H101J030BA CGA1A2C0G1E101J030BA
100 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H101J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H101J080AA
120 pF	1005	0.50 ± 0.05	± 5%	CGA2E2C0G1H121J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H121J080AA
150 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H151J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H151J080AA
180 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H181J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H181J080AA
220 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H221J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H221J080AA
270 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H271J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H271J080AA
330 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H331J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H331J080AA
390 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H391J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H391J080AA
470 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H471J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H471J080AA
560 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H561J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H561J080AA
680 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H681J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H681J080AA
820 pF	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H821J050BA
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H821J080AA
	1005	0.50 ± 0.05	± 5%	CGA2B2C0G1H102J050BA
1 nF	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H102J080AA
	2012	0.60 ± 0.15	± 5%	CGA4C2C0G1H102J060AA
1.2 nF	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H122J080AA
	2012	0.60 ± 0.15	± 5%	CGA4C2C0G1H122J060AA
1.5 nF	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H152J080AA
	2012	0.60 ± 0.15	± 5%	CGA4C2C0G1H152J060AA
1.8 nF	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H182J080AA
	2012	0.60 ± 0.15	± 5%	CGA4C2C0G1H182J060AA
2.2 nF	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H222J080AA
	2012	0.60 ± 0.15	± 5%	CGA4C2C0G1H222J060AA
2.7 nF	1608	$0.80 \pm 0.10$	± 5%	CGA3E2C0G1H272J080AA
	2012	0.60 ± 0.15	± 5%	CGA4C2C0G1H272J060AA
3.3 nF	1608	$0.80 \pm 0.10$	± 5%	CGA3E2C0G1H332J080AA
	2012	0.60 ± 0.15	± 5%	CGA4C2C0G1H332J060AA
3.9 nF	1608	$0.80 \pm 0.10$	± 5%	CGA3E2C0G1H392J080AA
0.0 /11	2012	$0.60 \pm 0.15$	± 5%	CGA4C2C0G1H392J060AA





### **Class 1 (Temperature Compensating)**

Temperature Characteristics: C0G (-55 to +125°C, 0 ± 30 ppm/°C)

Capacitance	Size	Thickness	Capacitance	Catalog Number	
Capacitance	SIZE	(mm)	Tolerance	Rated Voltage Edc: 50V	Rated Voltage Edc: 25V
	1608	$0.80 \pm 0.10$	± 5%	CGA3E2C0G1H472J080AA	
4.7 nF	2012	$0.60 \pm 0.15$	± 5%	CGA4C2C0G1H472J060AA	
	3216	$0.60 \pm 0.15$	± 5%	CGA5C2C0G1H472J060AA	
	1608	$0.80 \pm 0.10$	± 5%	CGA3E2C0G1H562J080AA	
5.6 nF	2012	$0.60 \pm 0.15$	± 5%	CGA4C2C0G1H562J060AA	
	3216	$0.60 \pm 0.15$	± 5%	CGA5C2C0G1H562J060AA	
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H682J080AA	
6.8 nF	2012	$0.60 \pm 0.15$	± 5%	CGA4C2C0G1H682J060AA	
	3216	0.60 ± 0.15	± 5%	CGA5C2C0G1H682J060AA	
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H822J080AA	
8.2 nF	2012	0.60 ± 0.15	± 5%	CGA4C2C0G1H822J060AA	
	3216	0.60 ± 0.15	± 5%	CGA5C2C0G1H822J060AA	
	1608	0.80 ± 0.10	± 5%	CGA3E2C0G1H103J080AA	
10 nF	2012	0.60 ± 0.15	± 5%	CGA4C2C0G1H103J060AA	
	3216	0.60 ± 0.15	± 5%	CGA5C2C0G1H103J060AA	
15 nF	2012	0.85 ± 0.15	± 5%	CGA4F2C0G1H153J085AA	
15 11F	3216	0.60 ± 0.15	± 5%	CGA5C2C0G1H153J060AA	
	2012	1.25 ± 0.20	± 5%	CGA4J2C0G1H223J125AA	
22 nF	3216	0.60 ± 0.15	± 5%	CGA5C2C0G1H223J060AA	
	3225	1.25 ± 0.20	± 5%	CGA6J2C0G1H223J125AA	
	2012	1.25 ± 0.20	± 5%	CGA4J2C0G1H333J125AA	
33 nF	3216	0.85 ± 0.15	± 5%	CGA5F2C0G1H333J085AA	
	3225	1.60 ± 0.20	± 5%	CGA6L2C0G1H333J160AA	
	3216	1.15 ± 0.15	± 5%	CGA5H2C0G1H473J115AA	
47 nF	3225	2.00 ± 0.20	± 5%	CGA6M2C0G1H473J200AA	
	4532	1.60 ± 0.20	± 5%	CGA8L2C0G1H473J160KA	
	3216	1.60 ± 0.20	± 5%	CGA5L2C0G1H683J160AA	
68 nF	3225	2.00 ± 0.20	± 5%	CGA6M2C0G1H683J200AA	
	4532	1.60 ± 0.20	± 5%	CGA8L2C0G1H683J160KA	
	3216	1.60 ± 0.20	± 5%	CGA5L2C0G1H104J160AA	
100 nF	3225	2.50 ± 0.30	± 5%	CGA6P2C0G1H104J250AA	
	4532	2.00 ± 0.20	± 5%	CGA8M2C0G1H104J200KA	
150 nF	4532	2.50 ± 0.30	± 5%	CGA8P2C0G1H154J250KA	
220 nF	4532	3.20 ± 0.30	± 5%	CGA8R2C0G1H224J320KA	

### Class 2 (Temperature Stable)

Cizo	Thickness	Capacitance	Catalog Number			
Size	(mm)	Tolerance	Rated Voltage Edc: 50V	Rated Voltage Edc: 35V	Rated Voltage Edc: 25V	Rated Voltage Edc: 16V
1005	0.50 . 0.05	± 10%	CGA2B2X5R1H221K050BA			
1005	0.50 ± 0.05	± 20%	CGA2B2X5R1H221M050BA			
1005	0.50 . 0.05	± 10%	CGA2B2X5R1H331K050BA			
1005	0.50 ± 0.05	± 20%	CGA2B2X5R1H331M050BA			
1005	0.50 . 0.05	± 10%	CGA2B2X5R1H471K050BA			
1005	0.50 ± 0.05	± 20%	CGA2B2X5R1H471M050BA			
1005	0.50 . 0.05	± 10%	CGA2B2X5R1H681K050BA			
1005	0.50 ± 0.05	± 20%	CGA2B2X5R1H681M050BA			
1005	0.50 . 0.05	± 10%	CGA2B2X5R1H102K050BA			
1005	0.50 ± 0.05	± 20%	CGA2B2X5R1H102M050BA			
1000	0.00 - 0.10	± 10%	CGA3E2X5R1H102K080AA			
1608	0.80 ± 0.10	± 20%	CGA3E2X5R1H102M080AA			
1005	0.50 . 0.05	± 10%	CGA2B2X5R1H152K050BA			
1003	0.50 ± 0.05	± 20%	CGA2B2X5R1H152M050BA			
1000	0.00 - 0.10	± 10%	CGA3E2X5R1H152K080AA			
1608	0.80 ± 0.10	± 20%	CGA3E2X5R1H152M080AA			
1005	0.50 . 0.05	± 10%	CGA2B2X5R1H222K050BA			
1005	0.50 ± 0.05	± 20%	CGA2B2X5R1H222M050BA			
1000 000 010	± 10%	CGA3E2X5R1H222K080AA				
1008	0.80 ± 0.10	± 20%	CGA3E2X5R1H222M080AA			
	1005 1005 1005 1005 1005 1005 1608 1005 1608 1005	Size (mm) $1005$ $0.50 \pm 0.05$ $1005$ $0.50 \pm 0.05$ $1005$ $0.50 \pm 0.05$ $1005$ $0.50 \pm 0.05$ $1005$ $0.50 \pm 0.05$ $1608$ $0.80 \pm 0.10$ $1608$ $0.80 \pm 0.10$ $1608$ $0.80 \pm 0.10$ $1608$ $0.80 \pm 0.10$	Size         (mm)         Tolerance $1005$ $0.50 \pm 0.05$ $\pm 10\%$ $\pm 20\%$ $\pm 20\%$ $1005$ $0.50 \pm 0.05$ $\pm 10\%$ $\pm 20\%$ $\pm 20\%$ $1005$ $0.50 \pm 0.05$ $\pm 10\%$ $\pm 20\%$ $\pm 20\%$ $1005$ $0.50 \pm 0.05$ $\pm 10\%$ $\pm 20\%$ $\pm 20\%$ $1608$ $0.80 \pm 0.10$ $\pm 10\%$ $1608$ $0.80 \pm 0.10$ $\pm 10\%$ $1005$ $0.50 \pm 0.05$ $\pm 20\%$ $1005$ $0.50 \pm 0.05$ $\pm 10\%$	Size         (mm)         Tolerance         Rated Voltage Edc: 50V           1005         0.50 ± 0.05         ± 10%         CGA2B2X5R1H221K050BA           ± 20%         CGA2B2X5R1H221M050BA           ± 20%         CGA2B2X5R1H331K050BA           ± 20%         CGA2B2X5R1H331M050BA           ± 20%         CGA2B2X5R1H471K050BA           ± 20%         CGA2B2X5R1H471M050BA           ± 20%         CGA2B2X5R1H471M050BA           ± 20%         CGA2B2X5R1H681K050BA           ± 20%         CGA2B2X5R1H681M050BA           ± 20%         CGA2B2X5R1H681M050BA           ± 20%         CGA2B2X5R1H102K050BA           ± 20%         CGA2B2X5R1H102K050BA           ± 20%         CGA3E2X5R1H102K050BA           ± 20%         CGA3E2X5R1H102K050BA           ± 20%         CGA3E2X5R1H102K050BA           ± 20%         CGA2B2X5R1H152K050BA           ± 20%         CGA2B2X5R1H152K050BA           ± 20%         CGA2B2X5R1H152K050BA           ± 20%         CGA3E2X5R1H152K050BA           ± 20%         CGA3E2X5R1H152K050BA           ± 20%         CGA3E2X5R1H152K050BA           ± 20%         CGA3E2X5R1H152K050BA           ± 20%         CGA3E2X5R1H222K050BA           ±	Size         (mm)         Tolerance         Rated Voltage Edc: 50V         Rated Voltage Edc: 35V           1005         0.50 ± 0.05         ± 10%         CGA2B2X5R1H221K050BA           ± 20%         CGA2B2X5R1H221M050BA           ± 20%         CGA2B2X5R1H331K050BA           ± 20%         CGA2B2X5R1H331M050BA           ± 20%         CGA2B2X5R1H471K050BA           ± 20%         CGA2B2X5R1H471M050BA           ± 20%         CGA2B2X5R1H471M050BA           ± 20%         CGA2B2X5R1H681K050BA           ± 20%         CGA2B2X5R1H681M050BA           ± 20%         CGA2B2X5R1H102K050BA           ± 20%         CGA2B2X5R1H102K050BA           ± 20%         CGA3B2X5R1H102K080AA           ± 20%         CGA3B2X5R1H102K080AA           ± 20%         CGA3B2X5R1H152K050BA           ± 20%         CGA2B2X5R1H152K050BA           ± 20%         CGA3B2X5R1H152K050BA           ± 20%         CGA3B2X5R1H22ZK050BA           ± 20%         CGA3B2X5R1H22ZK050B	Size         (mm)         Tolerance         Rated Voltage Edc: 50V         Rated Voltage Edc: 35V         Rated Voltage Edc: 25V           1005         0.50 ± 0.05         ± 10%         CGA2B2X5R1H221K050BA           1005         0.50 ± 0.05         ± 10%         CGA2B2X5R1H221M050BA           1005         0.50 ± 0.05         ± 10%         CGA2B2X5R1H331K050BA           1005         0.50 ± 0.05         ± 10%         CGA2B2X5R1H471K050BA           ± 20%         CGA2B2X5R1H471M050BA           ± 20%         CGA2B2X5R1H471M050BA           ± 20%         CGA2B2X5R1H681K050BA           ± 20%         CGA2B2X5R1H681M050BA           ± 20%         CGA2B2X5R1H102K050BA           ± 20%         CGA3E2X5R1H102K050BA           ± 20%         CGA3E2X5R1H102K080AA           ± 20%         CGA3E2X5R1H102K080AA           ± 20%         CGA2B2X5R1H152K050BA           ± 20%         CGA3E2X5R1H152K080AA           ± 20%         CGA3E2X5R1H152K080AA           ± 20%         CGA3E2X5R1H152K080AA           ± 20%         CGA3E2X5R1H22ZK050BA           ± 20%         CGA3E2X5R1H22ZK050BA           ± 20%         CGA2B2X5R1H22ZK050BA           ± 20%         CGA2B2X5R1H22ZK050BA





### Class 2 (Temperature Stable)

Capacitance	Size	Thickness	Capacitance	Catalog Number			
Capacitarice	Size	(mm)	Tolerance	Rated Voltage Edc: 50V	Rated Voltage Edc: 35V	Rated Voltage Edc: 25V	Rated Voltage Edc: 16V
	1005	0.50 ± 0.05	± 10%	CGA2B2X5R1H332K050BA			
3.3 nF	1000	0.50 ± 0.05	± 20%	CGA2B2X5R1H332M050BA			
3.3111	1600	0.80 ± 0.10	± 10%	CGA3E2X5R1H332K080AA			
	1608 0.80 =	0.60 ± 0.10	± 20%	CGA3E2X5R1H332M080AA			
	1005	0.50 . 0.05	± 10%	CGA2B2X5R1H472K050BA			
47.5	1005	$0.50 \pm 0.05$	± 20%	CGA2B2X5R1H472M050BA			
4.7 nF	1000	0.00 0.10	± 10%	CGA3E2X5R1H472K080AA			
	1608	$0.80 \pm 0.10$	± 20%	CGA3E2X5R1H472M080AA			
	1005	0.50 0.05	± 10%	CGA2B2X5R1H682K050BA			
00 5	1005	$0.50 \pm 0.05$	± 20%	CGA2B2X5R1H682M050BA			
6.8 nF			± 10%	CGA3E2X5R1H682K080AA			
	1608	$0.80 \pm 0.10$	± 20%	CGA3E2X5R1H682M080AA			
			± 10%	CGA2B3X5R1H103K050BB	CGA2B3X5R1V103K050BB	CGA2B2X5R1E103K050BA	
	1005	$0.50 \pm 0.05$	± 20%		CGA2B3X5R1V103M050BB		
10 nF			± 10%	CGA3E2X5R1H103K080AA			
	1608	$0.80 \pm 0.10$	± 20%	CGA3E2X5R1H103M080AA			
			± 10%	CGA2B3X5R1H153K050BB	CGA2B3X5R1V153K050BB	CGA2B2X5R1E153K050BA	
	1005	$0.50 \pm 0.05$	± 20%		CGA2B3X5R1V153M050BB		
15 nF			± 10%	CGA3E2X5R1H153K080AA	CAAZBOXOTTIVIOSOBB	COAZDZASITIL ISSINIOSODA	
	1608	$0.80 \pm 0.10$		CGA3E2X5R1H153M080AA			
			± 20%		004000000000000000000000000000000000000	0040000/6045000/05004	
	1005		± 10%	CGA2B3X5R1H223K050BB	CGA2B3X5R1V223K050BB	CGA2B2X5R1E223K050BA	
22 nF			± 20%		CGA2B3X5R1V223M050BB	CGA2B2X5R1E223M050BA	
	1608 0		± 10%	CGA3E2X5R1H223K080AA			
			± 20%	CGA3E2X5R1H223M080AA			
	1005	$0.50 \pm 0.05$	± 10%	CGA2B3X5R1H333K050BB	CGA2B3X5R1V333K050BB	CGA2B2X5R1E333K050BA	
33 nF			± 20%	CGA2B3X5R1H333M050BB	CGA2B3X5R1V333M050BB	CGA2B2X5R1E333M050BA	CGA2B2X5R1C333M050B
00 1	1608	0.80 ± 0.10	± 10%	CGA3E2X5R1H333K080AA			
			± 20%	CGA3E2X5R1H333M080AA			
	1005	$0.50 \pm 0.05$ $0.80 \pm 0.10$	± 10%	CGA2B3X5R1H473K050BB	CGA2B3X5R1V473K050BB	CGA2B2X5R1E473K050BA	CGA2B2X5R1C473K050BA
47 nF			± 20%	CGA2B3X5R1H473M050BB	CGA2B3X5R1V473M050BB	CGA2B2X5R1E473M050BA	CGA2B2X5R1C473M050B
47 111	1608 (		± 10%	CGA3E2X5R1H473K080AA			
	1000 0.00		± 20%	CGA3E2X5R1H473M080AA			
	1005 0.50 ± 0. 1608 0.80 ± 0.	0.50 . 0.05	± 10%	CGA2B3X5R1H683K050BB	CGA2B3X5R1V683K050BB	CGA2B3X5R1E683K050BB	CGA2B2X5R1C683K050BA
68 nF		0.50 ± 0.05	± 20%	CGA2B3X5R1H683M050BB	CGA2B3X5R1V683M050BB	CGA2B3X5R1E683M050BB	CGA2B2X5R1C683M050B
00111		0.90 + 0.10	± 10%	CGA3E2X5R1H683K080AA			
		0.60 ± 0.10	± 20%	CGA3E2X5R1H683M080AA			
	1005	0.50 0.05	± 10%	CGA2B3X5R1H104K050BB	CGA2B3X5R1V104K050BB	CGA2B3X5R1E104K050BB	CGA2B2X5R1C104K050BA
400 - F	1005	$0.50 \pm 0.05$	± 20%	CGA2B3X5R1H104M050BB	CGA2B3X5R1V104M050BB	CGA2B3X5R1E104M050BB	CGA2B2X5R1C104M050B
100 nF	1000	0.00 0.10	± 10%	CGA3E2X5R1H104K080AA		CGA3E2X5R1E104K080AA	
	1608	$0.80 \pm 0.10$	± 20%	CGA3E2X5R1H104M080AA		CGA3E2X5R1E104M080AA	
	1005	0.50 0.05	± 10%				CGA2B1X5R1C154K050B0
	1005	$0.50 \pm 0.05$	± 20%				CGA2B1X5R1C154M050B
•			± 10%	CGA3E3X5R1H154K080AB	CGA3E3X5R1V154K080AB	CGA3E2X5R1E154K080AA	
150 nF	1608	$0.80 \pm 0.10$	± 20%		CGA3E3X5R1V154M080AB		
			± 10%	CGA4J2X5R1H154K125AA			
	2012	$1.25 \pm 0.20$	± 20%	CGA4J2X5R1H154M125AA			
			± 10%	S SA CIO EXCITITIO TIVITEDAA			CGA2B1X5R1C224K050B0
	1005	$0.50 \pm 0.05$	± 10%				CGA2B1X5R1C224M050B
			± 20% ± 10%	CCV3E3A2B1F034KU0UVD	CGA3E3X5R1V224K080AB	CGA3E3Y5B1E334K000AA	
220 nF	1608	$0.80 \pm 0.10$					
			± 20%		CGA3E3X5R1V224M080AB	UGASEZASIN I EZZ4IVIU8UAA	UGASEZASIN 1UZZ4IVIU8UA.
	2012	1.25 ± 0.20	± 10%	CGA4J2X5R1H224K125AA			
			± 20%	CGA4J2X5R1H224M125AA	004050/50//50///50///50	004050/504500 ******	004050/5010001/05555
	1608	$0.80 \pm 0.10$	± 10%		CGA3E3X5R1V334K080AB		
000 5			± 20%		CGA3E3X5R1V334M080AB	CGA3E3X5R1E334M080AB	CGA3E2X5R1C334M080A
330 n⊢ ·			4.00/	CCAAIOVED1H00AV10EAA			
330 nF	2012	1.25 ± 0.20	± 10% ± 20%	CGA4J2X5R1H334K125AA CGA4J2X5R1H334M125AA			





### Class 2 (Temperature Stable)

Canacitance	Size	Thickness	Capacitance	Catalog Number				
Capacitance	SIZE	(mm)	Tölerance	Rated Voltage Edc: 50V	Rated Voltage Edc: 35V	Rated Voltage Edc: 25V	Rated Voltage Edc: 16V	
	1608	0.80 ± 0.10 -	± 10%	CGA3E3X5R1H474K080AB	CGA3E3X5R1V474K080AB	CGA3E3X5R1E474K080AB	CGA3E2X5R1C474K080AA	
470 nF	1000	0.00 ± 0.10	± 20%	CGA3E3X5R1H474M080AB	CGA3E3X5R1V474M080AB	CGA3E3X5R1E474M080AB	CGA3E2X5R1C474M080AA	
	2012	1.25 ± 0.20 -	± 10%	CGA4J3X5R1H474K125AB	CGA4J3X5R1V474K125AB	CGA4J2X5R1E474K125AA		
	2012	1.25 ± 0.20	± 20%	CGA4J3X5R1H474M125AB	CGA4J3X5R1V474M125AB	CGA4J2X5R1E474M125AA		
	3216	1.60 +0.30/-0.10 -	± 10%	CGA5L2X5R1H474K160AA				
	3210	1.00 +0.30/-0.10 -	± 20%	CGA5L2X5R1H474M160AA				
	1608	0.80 ± 0.10 -	± 10%	CGA3E3X5R1V684K080AB	CGA3E3X5R1H684K080AB	CGA3E3X5R1E684K080AB	CGA3E2X5R1C684K080AA	
	1000	0.00 ± 0.10	± 20%	CGA3E3X5R1H684M080AB	CGA3E3X5R1V684M080AB	CGA3E3X5R1E684M080AB	CGA3E2X5R1C684M080AA	
680 nF	2012	1.25 ± 0.20 -	± 10%	CGA4J3X5R1H684K125AB	CGA4J3X5R1V684K125AB	CGA4J2X5R1E684K125AA	CGA4J2X5R1C684K125AA	
000 111	2012	1.23 ± 0.20	± 20%	CGA4J3X5R1H684M125AB	CGA4J3X5R1V684M125AB	CGA4J2X5R1E684M125AA	CGA4J2X5R1C684M125AA	
	3216	1.60 +0.30/-0.10 -	± 10%	CGA5L2X5R1H684K160AA				
	3210	1.00 +0.30/-0.10 -	± 20%	CGA5L2X5R1H684M160AA				
	1608	0.80 ± 0.10 -	± 10%	CGA3E3X5R1H105K080AB	CGA3E3X5R1V105K080AB	CGA3E3X5R1E105K080AB	CGA3E1X5R1C105K080AC	
_	1000	0.00 ± 0.10	± 20%	CGA3E3X5R1H105M080AB	CGA3E3X5R1V105M080AB	CGA3E3X5R1E105M080AB	CGA3E1X5R1C105M080AC	
1 µF	2012	1.25 ± 0.20 -	± 10%	CGA4J3X5R1H105K125AB	CGA4J3X5R1V105K125AB	CGA4J2X5R1E105K125AA	CGA4J2X5R1C105K125AA	
	2012	1.23 ± 0.20	± 20%	CGA4J3X5R1H105M125AB	CGA4J3X5R1V105M125AB	CGA4J2X5R1E105M125AA	CGA4J2X5R1C105M125AA	
	3216	1.60 +0.30/-0.10 -	± 10%	CGA5L2X5R1H105K160AA				
	3210	1.00 +0.30/-0.10 -	± 20%	CGA5L2X5R1H105M160AA				
	1608	1000	0.90 + 0.10 -	± 10%				CGA3E1X5R1C155K080AC
	1000	0.80 ± 0.10 -	± 20%				CGA3E1X5R1C155M080AC	
1.5 µF	2012	1.25 ± 0.20 -	± 10%	CGA4J3X5R1H155K125AB	CGA4J3X5R1V155K125AB	CGA4J3X5R1E155K125AB	CGA4J2X5R1C155K125AA	
1.5 μΕ			± 20%	CGA4J3X5R1H155M125AB	CGA4J3X5R1V155M125AB	CGA4J3X5R1E155M125AB	CGA4J2X5R1C155M125AA	
	3216	1.60 +0.30/-0.10 -	± 10%	CGA5L3X5R1H155K160AB	CGA5L3X5R1V155K160AB	CGA5L2X5R1E155K160AA		
			± 20%	CGA5L3X5R1H155M160AB	CGA5L3X5R1V155M160AB	CGA5L2X5R1E155M160AA		
	1608	0.80 ± 0.10 -	± 10%				CGA3E1X5R1C225K080AC	
2.2 µF -			± 20%				CGA3E1X5R1C225M080AC	
2.2 μι	2012	1.25 ± 0.20 -	± 10%	CGA4J3X5R1H225K125AB	CGA4J3X5R1V225K125AB	CGA4J3X5R1E225K125AB	CGA4J2X5R1C225K125AA	
			± 20%	CGA4J3X5R1H225M125AB	CGA4J3X5R1V225M125AB	CGA4J3X5R1E225M125AB	CGA4J2X5R1C225M125AA	
2.2 µF	3216	1.60 +0.30/-0.10 -	± 10%	CGA5L3X5R1H225K160AB	CGA5L3X5R1V225K160AB	CGA5L2X5R1E225K160AA		
Ζ.Ζ μι	3210	1.00 +0.30/-0.10 -	± 20%	CGA5L3X5R1H225M160AB	CGA5L3X5R1V225M160AB	CGA5L2X5R1E225M160AA		
	2012	1.25 ± 0.20 -	± 10%	CGA4J3X5R1H335K125AB	CGA4J3X5R1V335K125AB	CGA4J3X5R1E335K125AB	CGA4J3X5R1C335K125AB	
3.3 µF -	2012	1.25 ± 0.20	± 20%	CGA4J3X5R1H335M125AB	CGA4J3X5R1V335M125AB	CGA4J3X5R1E335M125AB	CGA4J3X5R1C335M125AB	
3.5 μι	3216	1.60 +0.30/-0.10 -	± 10%	CGA5L3X5R1H335K160AB	CGA5L3X5R1V335K160AB	CGA5L2X5R1E335K160AA		
	3210	1.60 +0.30/-0.10 -	± 20%	CGA5L3X5R1H335M160AB	CGA5L3X5R1V335M160AB	CGA5L2X5R1E335M160AA		
	2012	1.25 ± 0.20 -	± 10%	CGA4J3X5R1H475K125AB	CGA4J3X5R1V475K125AB	CGA4J3X5R1E475K125AB	CGA4J3X5R1C475K125AB	
47.05	2012	1.25 ± 0.20 =	± 20%	CGA4J3X5R1H475M125AB	CGA4J3X5R1V475M125AB	CGA4J3X5R1E475M125AB	CGA4J3X5R1C475M125AB	
4.7 μF -	2016	1.60 +0.30/-0.10 -	± 10%	CGA5L3X5R1H475K160AB	CGA5L3X5R1V475K160AB	CGA5L2X5R1E475K160AA	CGA5L2X5R1C475K160AA	
	3216	1.00 +0.30/-0.10 =	± 20%	CGA5L3X5R1H475M160AB	CGA5L3X5R1V475M160AB	CGA5L2X5R1E475M160AA	CGA5L2X5R1C475M160AA	
	2012	1.25 ± 0.20 -	± 10%				CGA4J1X5R1C685K125AC	
C 0E	2012	1.25 ± 0.20 =	± 20%				CGA4J1X5R1C685M125AC	
6.8 µF -	2010	1.00 .0.20/0.10	± 10%	CGA5L3X5R1H685K160AB	CGA5L3X5R1V685K160AB	CGA5L3X5R1E685K160AB	CGA5L2X5R1C685K160AA	
	3216	1.60 +0.30/-0.10 -	± 20%	CGA5L3X5R1H685M160AB	CGA5L3X5R1V685M160AB	CGA5L3X5R1E685M160AB	CGA5L2X5R1C685M160AA	
	2012	1.05 . 0.00	± 10%				CGA4J1X5R1C106K125AC	
10.05	2012	1.25 ± 0.20 -	± 20%				CGA4J1X5R1C106M125AC	
10 μF -	2010	1.00 .0.20/0.10	± 10%	CGA5L3X5R1H106K160AB	CGA5L3X5R1V106K160AB	CGA5L3X5R1E106K160AB	CGA5L1X5R1C106K160AC	
	3216	1.60 +0.30/-0.10 -	± 20%	CGA5L3X5R1H106M160AB	CGA5L3X5R1V106M160AB	CGA5L3X5R1E106M160AB	CGA5L1X5R1C106M160AC	
		1.00 0.00/0.10	± 20%				CGA5L1X5R1C156M160AC	
15 µF	3216	1.60 +0.30/-0.10	± 20%				CUASETASTITOTSONTOOAC	





#### Class 2 (Temperature Stable)

				,		
Capacitance	Size	Thickness	Capacitance	Catalog Number		
		(mm)	Tolerance	Rated Voltage Edc: 10V	Rated Voltage Edc: 6.3V	
100 nF	1005	$0.50 \pm 0.05$	± 10%	CGA2B2X5R1A104K050BA		
		0.00 = 0.00	± 20%	CGA2B2X5R1A104M050BA		
150 nF	1005	0.50 ± 0.05	± 10%	CGA2B3X5R1A154K050BB		
	1000	0.00 ± 0.00	± 20%	CGA2B3X5R1A154M050BB		
220 nF	1005	0.50 ± 0.05	± 10%	CGA2B3X5R1A224K050BB		
220111	1000	0.00 ± 0.00	± 20%	CGA2B3X5R1A224M050BB		
330 nF	1608	0.80 ± 0.10	± 10%	CGA3E2X5R1A334K080AA		
330 111	1000	0.00 ± 0.10	± 20%	CGA3E2X5R1A334M080AA		
470 nF	1608	0.80 ± 0.10	± 10%	CGA3E2X5R1A474K080AA		
470 HF	1000	0.60 ± 0.10	± 20%	CGA3E2X5R1A474M080AA		
680 nF	1000	0.80 ± 0.10	± 10%	CGA3E2X5R1A684K080AA		
080 NF	1608	0.80 ± 0.10	± 20%	CGA3E2X5R1A684M080AA		
4	1608	0.00 - 0.10	± 10%	CGA3E2X5R1A105K080AA		
1 µF		$0.80 \pm 0.10$	± 20%	CGA3E2X5R1A105M080AA		
	1608	0.00 0.10	± 10%	CGA3E3X5R1A155K080AB		
	1000	$0.80 \pm 0.10$	± 20%	CGA3E3X5R1A155M080AB		
1.5 µF	2012	1.05 0.00	± 10%	CGA4J2X5R1A155K125AA		
		1.25 ± 0.20	± 20%	CGA4J2X5R1A155M125AA		
	1608	0.00 0.10	± 10%	CGA3E3X5R1A225K080AB		
0.0		$0.80 \pm 0.10$	± 20%	CGA3E3X5R1A225M080AB		
2.2 µF	2012	1.05 0.00	± 10%	CGA4J2X5R1A225K125AA		
		$1.25 \pm 0.20$	± 20%	CGA4J2X5R1A225M125AA		
		0.00 0.10	± 10%	CGA3E1X5R1A335K080AC	CGA3E3X5R0J335K080AE	
00 5	1608	$0.80 \pm 0.10$	± 20%	CGA3E1X5R1A335M080AC	CGA3E3X5R0J335M080AE	
3.3 µF			± 10%	CGA4J2X5R1A335K125AA		
	2012	1.25 ± 0.20	± 20%	CGA4J2X5R1A335M125AA		
			± 10%		CGA3E1X5R0J475K080A0	
	1608	$0.80 \pm 0.10$	± 20%		CGA3E1X5R0J475M080A0	
4.7 μF			± 10%	CGA4J2X5R1A475K125AA		
	2012	$1.25 \pm 0.20$	± 20%	CGA4J2X5R1A475M125AA		
			± 10%	CGA4J3X5R1A685K125AB		
6.8 µF	2012	$1.25 \pm 0.20$	± 20%	CGA4J3X5R1A685M125AB		
				004410760444001440640		
10 µF	2012	1.25 ± 0.20	± 10%	CGA4J3X5R1A106K125AB		





### Class 2 (Temperature Stable)

Capacitance	Size	Thickness	Capacitance				· · · · · · · · · · · · · · · ·
h		(mm)	Tolerance	Rated Voltage Edc: 50V	Rated Voltage Edc: 35V	Rated Voltage Edc: 25V	Rated Voltage Edc: 16V
100 pF	0603	$0.30 \pm 0.03$	± 10%	CGA1A2X7R1H101K030BA		CGA1A2X7R1E101K030BA	CGA1A2X7R1C101K030B
			± 20%	CGA1A2X7R1H101M030BA		CGA1A2X7R1E101M030BA	CGA1A2X7R1C101M030B
150 pF	0603	$0.30 \pm 0.03$	± 10%	CGA1A2X7R1H151K030BA		CGA1A2X7R1E151K030BA	CGA1A2X7R1C151K030B
			± 20%	CGA1A2X7R1H151M030BA		CGA1A2X7R1E151M030BA	CGA1A2X7R1C151M030E
	0603	$0.30 \pm 0.03$	± 10%	CGA1A2X7R1H221K030BA		CGA1A2X7R1E221K030BA	CGA1A2X7R1C221K030E
220 pF		0.00 _ 0.00	± 20%	CGA1A2X7R1H221M030BA		CGA1A2X7R1E221M030BA	CGA1A2X7R1C221M030E
220 p.	1005	$0.50 \pm 0.05$	± 10%	CGA2B2X7R1H221K050BA			
		0.00 _ 0.00	± 20%	CGA2B2X7R1H221M050BA			
	0603	$0.30 \pm 0.03$	± 10%	CGA1A2X7R1H331K030BA		CGA1A2X7R1E331K030BA	CGA1A2X7R1C331K030E
330 pF		0.00 ± 0.00	± 20%	CGA1A2X7R1H331M030BA		CGA1A2X7R1E331M030BA	CGA1A2X7R1C331M030E
000 pi	1005	$0.50 \pm 0.05$	± 10%	CGA2B2X7R1H331K050BA	,		
		0.00 ± 0.00	± 20%	CGA2B2X7R1H331M050BA			
	0603	$0.30 \pm 0.03$	± 10%	CGA1A2X7R1H471K030BA		CGA1A2X7R1E471K030BA	CGA1A2X7R1C471K030E
470 pF		0.50 ± 0.05	± 20%	CGA1A2X7R1H471M030BA		CGA1A2X7R1E471M030BA	CGA1A2X7R1C471M030E
470 pi	1005	0.50 ± 0.05	± 10%	CGA2B2X7R1H471K050BA			
	1003	0.50 ± 0.05	± 20%	CGA2B2X7R1H471M050BA			
	0603	0.20 . 0.02	± 10%			CGA1A2X7R1E681K030BA	CGA1A2X7R1C681K030E
690 pE	0603	$0.30 \pm 0.03$	± 20%			CGA1A2X7R1E681M030BA	CGA1A2X7R1C681M030E
680 pF	1005	0.50 ± 0.05	± 10%	CGA2B2X7R1H681K050BA			
	1005	$0.50 \pm 0.05$	± 20%	CGA2B2X7R1H681M050BA			
	0000	0.20 . 0.02	± 10%			CGA1A2X7R1E102K030BA	CGA1A2X7R1C102K030E
	0603	$\begin{array}{c} 0.30 \pm 0.03 \\ 0.50 \pm 0.05 \\ 0.80 \pm 0.10 \\ \end{array}$	± 20%			CGA1A2X7R1E102M030BA	CGA1A2X7R1C102M030I
1	1005		± 10%	CGA2B2X7R1H102K050BA			
1 nF	1005		± 20%	CGA2B2X7R1H102M050BA			
	1000 0.00 0.10		± 10%	CGA3E2X7R1H102K080AA			
	1608		± 20%	CGA3E2X7R1H102M080AA			
	0000	0.20 . 0.02	± 10%			CGA1A2X7R1E152K030BA	CGA1A2X7R1C152K030E
	0603	0.30 ± 0.03	± 20%			CGA1A2X7R1E152M030BA	CGA1A2X7R1C152M030E
	1005	005 050 005	± 10%	CGA2B2X7R1H152K050BA			
1.5 nF	$1005   0.50 \pm 0.08$	$0.50 \pm 0.05$	± 20%	CGA2B2X7R1H152M050BA			
			± 10%	CGA3E2X7R1H152K080AA			
	1608	$0.80 \pm 0.10$	± 20%	CGA3E2X7R1H152M080AA			
			± 10%			CGA1A2X7R1E222K030BA	CGA1A2X7R1C222K030E
	0603	$0.30 \pm 0.03$	± 20%			CGA1A2X7R1E222M030BA	CGA1A2X7R1C222M030I
	-		± 10%	CGA2B2X7R1H222K050BA			
2.2 nF	1005	$0.50 \pm 0.05$	± 20%	CGA2B2X7R1H222M050BA			
			± 10%	CGA3E2X7R1H222K080AA			
	1608	1608 $0.80 \pm 0.10$	± 20%	CGA3E2X7R1H222M080AA			
			± 10%			CGA1A2X7R1E332K030BA	CGA1A2X7R1C332K030E
	0603	$0.30 \pm 0.03$	± 20%			CGA1A2X7R1E332M030BA	CGA1A2X7R1C332M030I
			± 10%	CGA2B2X7R1H332K050BA		Cartification	- CG/ (1/ (Z// 1/17000ZIVI000I
3.3 nF	1005	$0.50 \pm 0.05$	± 10%	CGA2B2X7R1H332M050BA			
			± 10%	CGA3E2X7R1H332K080AA			
	1608	$0.80 \pm 0.10$	± 10% ± 20%	CGA3E2X7R1H332M080AA			
			± 20% ± 10%	OGAGEZATTTI IOOZIVIOOUAA			CGA1A2X7R1C472K030B
	0603	$0.30 \pm 0.03$	± 10%				CGA1A2X7R1C472R030I
				CC A ODOVZD41 1470/OFOD A			- CGATAZA/11/104/2010300
4.7 nF	1005	$0.50 \pm 0.05$	± 10%	CGA2B2X7R1H472K050BA			
			± 20%	CGA2B2X7R1H472M050BA			
	1608	$0.80 \pm 0.10$	± 10%	CGA3E2X7R1H472K080AA			
			± 20%	CGA3E2X7R1H472M080AA			
	0603	$0.30 \pm 0.03$	± 10%				CGA1A2X7R1C682K030E
			± 20%	001000000000000000000000000000000000000			CGA1A2X7R1C682M030
6.8 nF	1005	$0.50 \pm 0.05$	± 10%	CGA2B2X7R1H682K050BA			
			± 20%	CGA2B2X7R1H682M050BA			
	1608	0.80 ± 0.10	± 10%	CGA3E2X7R1H682K080AA			
	1000	0.00 ± 0.10	± 20%	CGA3E2X7R1H682M080AA			
	1005	0.50 ± 0.05	± 10%	CGA2B3X7R1H103K050BB	CGA2B3X7R1V103K050BB	CGA2B2X7R1E103K050BA	
10 nF	1000	0.50 ± 0.05	± 20%	CGA2B3X7R1H103M050BB	CGA2B3X7R1V103M050BB	CGA2B2X7R1E103M050BA	
TOTIF	1600	0.00 - 0.10	± 10%	CGA3E2X7R1H103K080AA			
	1608	$0.80 \pm 0.10$	± 20%	CGA3E2X7R1H103M080AA			





### Class 2 (Temperature Stable)

Capacitance	Size	Thickness	Capacitance	Catalog Number				
Сараспапсе	Size	(mm)	Tolerance	Rated Voltage Edc: 50V	Rated Voltage Edc: 35V	Rated Voltage Edc: 25V	Rated Voltage Edc: 16V	
	1005	0.50 ± 0.05	± 10%	CGA2B3X7R1H153K050BB	CGA2B3X7R1V153K050BB	CGA2B2X7R1E153K050BA		
15 nF			± 20%	CGA2B3X7R1H153M050BB	CGA2B3X7R1V153M050BB	CGA2B2X7R1E153M050BA		
10111	1608	$0.80 \pm 0.10$	± 10%	CGA3E2X7R1H153K080AA				
			± 20%	CGA3E2X7R1H153M080AA				
	1005	$0.50 \pm 0.05$	± 10%	CGA2B3X7R1H223K050BB	CGA2B3X7R1V223K050BB	CGA2B2X7R1E223K050BA		
22 nF			± 20%	CGA2B3X7R1H223M050BB	CGA2B3X7R1V223M050BB	CGA2B2X7R1E223M050BA		
	1608	$0.80 \pm 0.10$	± 10%	CGA3E2X7R1H223K080AA				
			± 20%	CGA3E2X7R1H223M080AA				
	1005	$0.50 \pm 0.05$	± 10%	CGA2B3X7R1H333K050BB	CGA2B3X7R1V333K050BB	CGA2B1X7R1E333K050BC	CGA2B2X7R1C333K050BA	
33 nF			± 20%	CGA2B3X7R1H333M050BB	CGA2B3X7R1V333M050BB	CGA2B1X7R1E333M050BC	CGA2B2X7R1C333M050BA	
	1608	$0.80 \pm 0.10$	± 10%	CGA3E2X7R1H333K080AA	,		,	
			± 20%	CGA3E2X7R1H333M080AA	004000/704/470/05000	00 4 00 4)/30 45 430//05000	004000/7040470/05004	
	1005	$0.50 \pm 0.05$	± 10%	CGA2B3X7R1H473K050BB	CGA2B3X7R1V473K050BB	CGA2B1X7R1E473K050BC	CGA2B2X7R1C473K050BA	
47 nF			± 20%	CGA2B3X7R1H473M050BB	CGA2B3X7R1V473M050BB	CGA2B1X7R1E473M050BC	CGA2B2X7R1C473M050BA	
	1608	$0.80 \pm 0.10$	± 10%	CGA3E2X7R1H473K080AA				
			± 20%	CGA3E2X7R1H473M080AA			001000000000000000000000000000000000000	
	1005	$0.50 \pm 0.05$	± 10%	CGA2B3X7R1H683K050BB	CGA2B3X7R1V683K050BB	CGA2B3X7R1E683K050BB	CGA2B1X7R1C683K050BC	
68 nF			± 20%	CGA2B3X7R1H683M050BB	CGA2B3X7R1V683M050BB	CGA2B3X7R1E683M050BB	CGA2B1X7R1C683M050BC	
	1608	$0.80 \pm 0.10$	± 10%	CGA3E2X7R1H683K080AA				
	-		± 20%	CGA3E2X7R1H683M080AA	004000/704/404/05000	00 4 00 00/30 15 10 1/05 00 0	0040047304040470500	
	1005	1005	$0.50 \pm 0.05$	± 10%	CGA2B3X7R1H104K050BB	CGA2B3X7R1V104K050BB	CGA2B3X7R1E104K050BB	CGA2B1X7R1C104K050BC
100 5			± 20%	CGA2B3X7R1H104M050BB	CGA2B3X7R1V104M050BB	CGA2B3X7R1E104M050BB	CGA2B1X7R1C104M050B0	
100 nF	1608	$0.80 \pm 0.10$	± 10%	CGA3E2X7R1H104K080AA		CGA3E2X7R1E104K080AA		
		1.05 0.00	± 20%	CGA3E2X7R1H104M080AA		CGA3E2X7R1E104M080AA		
	2012	1.25 ± 0.20	± 10%	CGA4J2X7R1H104K125AA	004004777047454705000	00 4 00 00/30 15 15 17 05 00 0	004000/7040454/05004	
	1005	$0.50 \pm 0.05$	± 10%		CGA2B1X7R1V154K050BC	CGA2B3X7R1E154K050BB	CGA2B2X7R1C154K050BA	
			± 20%	004050VZD4LI454V0004D	CGA2B1X7R1V154M050BC	CGA2B3X7R1E154M050BB	CGA2B2X7R1C154M050BA	
150 nF	1608	$0.80 \pm 0.10$	± 10%	CGA3E3X7R1H154K080AB	CGA3E3X7R1V154K080AB	CGA3E2X7R1E154K080AA		
			± 20%	CGA3E3X7R1H154M080AB	CGA3E3X7R1V154M080AB	CGA3E2X7R1E154M080AA		
	2012	$1.25 \pm 0.20$	± 10%	CGA4J2X7R1H154K125AA				
			± 20%	CGA4J2X7R1H154M125AA	CC 4 0D 1 V 7 D 1 V 00 4 V 0 E 0 D C	CC 4 0D 0 V 7 D 1 E 0 0 4 V 0 E 0 D D	CC 4 0D0V7D1C004K0F0D 4	
	1005	0.50 ± 0.05	± 10%		CGA2B1X7R1V224K050BC	CGA2B3X7R1E224K050BB	CGA2B2X7R1C224K050BA	
			± 20%	OCA2E2VZD4LI024V000AD	CGA2B1X7R1V224M050BC	CGA2B3X7R1E224M050BB	CGA2B2X7R1C224M050BA	
220 nF	1608	0.80 ± 0.10	± 10%	CGA3E3X7R1H224K080AB	CGA3E3X7R1V224K080AB	CGA3E1X7R1E224K080AC	CGA3E2X7R1C224K080AA	
			± 20%	CGA3E3X7R1H224M080AB	CGA3E3X7R1V224M080AB	CGA3E1X7R1E224M080AC	CGA3E2X7R1C224M080AA	
	2012	$1.25 \pm 0.20$	± 10%	CGA4J2X7R1H224K125AA		CGA4J2X7R1E224K125AA		
			± 20%	CGA4J2X7R1H224M125AA	00 40547754700 41000 40	00405077545004700045	00405477540004700040	
	1608	$0.80 \pm 0.10$	± 10%	CGA3E3X7R1H334K080AB	CGA3E1X7R1V334K080AC	CGA3E3X7R1E334K080AB	CGA3E1X7R1C334K080AC	
330 nF			± 20%	CGA3E3X7R1H334M080AB	CGA3E1X7R1V334M080AC	CGA3E3X7R1E334M080AB	CGA3E1X7R1C334M080AC	
	2012	$1.25 \pm 0.20$	± 10%	CGA4J2X7R1H334K125AA				
			± 20%	CGA4J2X7R1H334M125AA	CC 4 2 E 1 V 7 D 1 V 4 7 4 V 0 0 0 4 C	CGA3E3X7R1E474K080AB	OCA0E1V7D1C474V000AC	
	1608	1608	$0.80 \pm 0.10$	± 10% ± 20%	CGA3E3X7R1H474K080AB CGA3E3X7R1H474M080AB	CGA3E1X7R1V474K080AC CGA3E1X7R1V474M080AC	CGA3E3X7R1E474K080AB	CGA3E1X7R1C474K080AC
470 nF	2012	$1.25 \pm 0.20$	± 10%	CGA4J3X7R1H474K125AB	CGA4J3X7R1V474K125AB	CGA4J2X7R1E474K125AA	CGA4J2X7R1C474K125AA	
			± 20%	CGA4J3X7R1H474M125AB CGA5L2X7R1H474K160AA	CGA4J3X7R1V474M125AB	CGA4J2X7R1E474M125AA		
	3216	1.60 +0.30/-0.10	± 10%					
	-		± 20%	CGA5L2X7R1H474M160AA	CC 42E1V7D1V694K0904C	CC 42E1V7D1E694V0904C	CC 42E1V7D1C694V0904C	
	1608	$0.80 \pm 0.10$	± 10%		CGA3E1X7R1V684K080AC	CGA3E1X7R1E684K080AC	CGA3E1X7R1C684K080AC	
			± 20%	CC A 4 IOVZD41 ICO 41/4 05 A D	CGA3E1X7R1V684M080AC	CGA3E1X7R1E684M080AC	CGA3E1X7R1C684M080AC	
680 nF	2012	$1.25 \pm 0.20$	± 10%	CGA4J3X7R1H684K125AB	CGA4J3X7R1V684K125AB	CGA4J3X7R1E684K125AB	CGA4J2X7R1C684K125AA	
			± 20%	CGA4J3X7R1H684M125AB	CGA4J3X7R1V684M125AB	CGA4J3X7R1E684M125AB	CGA4J2X7R1C684M125AA	
	3216	1.60 +0.30/-0.10	± 10%	CGA5L2X7R1H684K160AA				
	-		± 20%	CGA5L2X7R1H684M160AA	CCA9E1V7D4V40EV00040	OO A 2 E 1 V 7 D 1 E 1 0 E V 0 0 0 1 0	CCA9E4V7D4O40E1/0004	
	1608	$0.80 \pm 0.10$	± 10%		CGA3E1X7R1V105K080AC	CGA3E1X7R1E105K080AC	CGA3E1X7R1C105K080AC	
			± 20%	00 44 10 77 041 140 5174 05 15	CGA3E1X7R1V105M080AC	CGA3E1X7R1E105M080AC	CGA3E1X7R1C105M080A0	
	2012	1.25 ± 0.20	± 10%	CGA4J3X7R1H105K125AB	CGA4J3X7R1V105K125AB	CGA4J3X7R1E105K125AB	CGA4J2X7R1C105K125AA	
1 μF			± 20%	CGA4J3X7R1H105M125AB	CGA4J3X7R1V105M125AB	CGA4J3X7R1E105M125AB	CGA4J2X7R1C105M125AA	
•	3216	1.60 +0.30/-0.10	± 10%	CGA5L3X7R1H105K160AB		CGA5L2X7R1E105K160AA		
			± 20%	CGA5L3X7R1H105M160AB		CGA5L2X7R1E105M160AA		
	3225	1.60 ± 0.20	± 10%	CGA6L2X7R1H105K160AA				
			± 20%	CGA6L2X7R1H105M160AA				





### Class 2 (Temperature Stable)

Capacitance	Size	Thickness	Capacitance	Catalog Number					
Сараспансе	Size	(mm)	Tolerance	Rated Voltage Edc: 50V	Rated Voltage Edc: 35V	Rated Voltage Edc: 25V	Rated Voltage Edc: 16V		
	2012	1.25 ± 0.20	± 10%	CGA4J3X7R1H155K125AB	CGA4J1X7R1V155K125AC	CGA4J3X7R1E155K125AB	CGA4J3X7R1C155K125AB		
		1.20 ± 0.20	± 20%	CGA4J3X7R1H155M125AB	CGA4J1X7R1V155M125AC	CGA4J3X7R1E155M125AB	CGA4J3X7R1C155M125AB		
	3216	1.60 +0.30/-0.10	± 10%	CGA5L3X7R1H155K160AB	CGA5L3X7R1V155K160AB	CGA5L2X7R1E155K160AA			
1.5 µF			± 20%	CGA5L3X7R1H155M160AB	CGA5L3X7R1V155M160AB	CGA5L2X7R1E155M160AA			
	3225	2.00 ± 0.20	± 10%	CGA6M2X7R1H155K200AA					
			± 20%	CGA6M2X7R1H155M200AA					
	4532	1.60 ± 0.20	± 10%	CGA8L2X7R1H155K160KA		00111075015005710515			
	2012	1.25 ± 0.20	± 10%	CGA4J3X7R1H225K125AB	CGA4J1X7R1V225K125AC	CGA4J3X7R1E225K125AB	CGA4J3X7R1C225K125AB		
			± 20%	CGA4J3X7R1H225M125AB	CGA4J1X7R1V225M125AC	CGA4J3X7R1E225M125AB	CGA4J3X7R1C225M125AB		
0.0	3216	1.60 +0.30/-0.10	± 10%	CGA5L3X7R1H225K160AB	CGA5L3X7R1V225K160AB	CGA5L2X7R1E225K160AA			
2.2 µF			± 20%	CGA5L3X7R1H225M160AB	CGA5L3X7R1V225M160AB	CGA5L2X7R1E225M160AA			
	3225	$2.00 \pm 0.20$	± 10%	CGA6M3X7R1H225K200AB					
	4532	1.60 ± 0.20	± 20% ± 10%	CGA6M3X7R1H225M200AB CGA8L2X7R1H225K160KA			,		
	4002	1.00 ± 0.20		CGAOLZA/ H I H Z Z SK I BUKA	CC	CC	CCA4 I2VZD1C22EK12EAD		
	2012	1.25 ± 0.20	± 10% ± 20%		CGA4J1X7R1V335K125AC CGA4J1X7R1V335M125AC	CGA4J1X7R1E335K125AC CGA4J1X7R1E335M125AC	CGA4J3X7R1C335K125AB CGA4J3X7R1C335M125AB		
			± 10%	CGA5L3X7R1H335K160AB	CGA401X/HTV353IVITZSAC	CGA43 IA/H IE333WIIZ3AC	CGA4J3A/HTCJSJWITZJAB		
		$1.60 \pm 0.20$	± 10%	CGA5L3X7R1H335M160AB					
3.3 µF	3216		± 10%	CGASESA/H II ISSSIVI TOUAB	CGA5L1X7R1V335K160AC	CGA5L1X7R1E335K160AC			
3.5 μι		1.60 +0.30/-0.10	± 10%		CGA5L1X7R1V335M160AC	CGA5L1X7R1E335M160AC			
			± 10%	CGA6P3X7R1H335K250AB	Cartelixititiveesiviteeric	Carteetxriiiedddiiiiodd			
	3225	$2.50 \pm 0.30$	± 10%	CGA6P3X7R1H335M250AB					
	4532	2.00 ± 0.20	± 10%	CGA8M2X7R1H335K200KA					
			± 10%	OG/10WEX/TTTT100511200171	CGA4J1X7R1V475K125AC	CGA4J1X7R1E475K125AC	CGA4J3X7R1C475K125AB		
	2012	1.25 ± 0.20	± 20%		CGA4J1X7R1V475M125AC	CGA4J1X7R1E475M125AC	CGA4J3X7R1C475M125AB		
	3216		± 10%	CGA5L3X7R1H475K160AB	CG/ (10 1X/11/1 ) // CM/126/ (C	Od/ (10 1) (11112 17 olivi 120) (10	CG/(100/(1110 170IVI120/12		
		1.60 ± 0.20	± 20%	CGA5L3X7R1H475M160AB					
			+ 10%	<u> </u>	CGA5L1X7R1V475K160AC	CGA5L1X7R1E475K160AC	CGA5L3X7R1C475K160AB		
		1.60 +0.30/-0.10	± 20%		CGA5L1X7R1V475M160AC	CGA5L1X7R1E475M160AC	CGA5L3X7R1C475M160AB		
4.7 µF	3225		± 10%	CGA6P3X7R1H475K250AB					
		$2.50 \pm 0.30$	± 20%	CGA6P3X7R1H475M250AB					
	4532		± 10%			CGA8L2X7R1E475K160KA			
		1.60 ± 0.20	± 20%			CGA8L2X7R1E475M160KA			
		2.00 ± 0.20	± 10%	CGA8M3X7R1H475K200KB					
	5750	2.00 ± 0.20	± 10%	CGA9M2X7R1H475K200KA					
		1.00 - 0.00	± 10%		CGA5L1X7R1V685K160AC				
	3216	1.60 ± 0.20	± 20%		CGA5L1X7R1V685M160AC				
	3210	1.60 +0.30/-0.10	± 10%			CGA5L1X7R1E685K160AC	CGA5L1X7R1C685K160AC		
6.8 µF		1.00 +0.30/-0.10	± 20%			CGA5L1X7R1E685M160AC	CGA5L1X7R1C685M160AC		
0.0 μι	3225	2.50 ± 0.30	± 10%			CGA6P3X7R1E685K250AB			
		2.00 ± 0.00	± 20%			CGA6P3X7R1E685M250AB			
	4532	2.50 ± 0.20	± 10%	CGA8P3X7R1H685K250KB					
	5750	2.50 ± 0.30	± 10%	CGA9P2X7R1H685K250KA					
		1.60 ± 0.20	± 10%		CGA5L1X7R1V106K160AC				
	3216		± 20%		CGA5L1X7R1V106M160AC		00451-0755-1511		
	0210	3210	32.0	1.60 +0.30/-0.10	± 10%			CGA5L1X7R1E106K160AC	CGA5L1X7R1C106K160AC
			± 20%			CGA5L1X7R1E106M160AC	CGA5L1X7R1C106M160AC		
=		2.00 ± 0.20	± 10%				CGA6M3X7R1C106K200AB		
10 μF	3225		± 20%				CGA6M3X7R1C106M200AB		
		2.50 ± 0.30	± 10%			CGA6P1X7R1E106K250AC			
			± 20%			CGA6P1X7R1E106M250AC			
	4532	2.50 ± 0.20	± 10%			CGA8P2X7R1E106K250KA			
	5750	2.00 ± 0.20	± 20%	CC AONOVZD4LI400V000VD		CGA9M2X7R1E106M200KA			
	2005	2.30 ± 0.20	± 10%	CGA9N3X7R1H106K230KB			CGA6P3X7R1C156M250AB		
15 µF	3225 4532	2.50 ± 0.30 2.80 ± 0.30	± 20%			CGA8Q3X7R1E156M280KB	COMOLOVIU IC IDDINISONAR		
ιο μΓ	5750	2.80 ± 0.30 2.30 ± 0.20	± 20% ± 20%			CGA9N2X7R1E156M230KA			
	3225	2.50 ± 0.20	± 20% ± 20%			OGASINZATI TE TOUINIZOUNA	CGA6P1X7R1C226M250AC		
		2.30 ± 0.30	± 20%				CGA8N3X7R1C226M230KB		
22 µF	4532	2.50 ± 0.20	± 20%			CGA8P1X7R1E226M250KC	OG. NOTNOZZINIZOUND		
	5750	2.50 ± 0.20	± 20%			CGA9P2X7R1E226M250KC			
33 µF	4532	2.50 ± 0.20	± 20%	,	,	3 37 101 EXTENDED ON A	CGA8P1X7R1C336M250KC		
47 μF	5750	2.30 ± 0.20	± 20%				CGA9N3X7R1C476M230KB		
				,					





### Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%)

	Capacitance	Size	Thickness	Capacitance	Catalog Number	
	Capacitarice	Size	(mm)	Tolerance	Rated Voltage Edc: 10V	Rated Voltage Edc: 6.3V
	40 - F	0603	0.30 ± 0.03	± 10%	CGA1A2X7R1A103K030BA	CGA1A2X7R0J103K030BA
	10 nF	0003	0.30 ± 0.03	± 20%	CGA1A2X7R1A103M030BA	CGA1A2X7R0J103M030BA
	150 nF	1005	0.50 ± 0.05	± 10%	CGA2B1X7R1A154K050BC	CGA2B3X7R0J154K050BB
	130 111	1005	0.50 ± 0.05	± 20%	CGA2B1X7R1A154M050BC	CGA2B3X7R0J154M050BB
_	220 nF 100	1005	0.50 ± 0.05	± 10%	CGA2B1X7R1A224K050BC	CGA2B3X7R0J224K050BB
		1005	0.50 ± 0.05	± 20%	CGA2B1X7R1A224M050BC	CGA2B3X7R0J224M050BB
	1.5 µF	1608	0.80 ± 0.10	± 10%		CGA3E1X7R0J155K080AC
	1.5 μΕ		0.00 ± 0.10	± 20%		CGA3E1X7R0J155M080AC
	22.45	1608	0.80 ± 0.10	± 10%		CGA3E1X7R0J225K080AC
	2.2 µF	1000	0.00 ± 0.10	± 20%		CGA3E1X7R0J225M080AC
_	3.3 µF	2012	1.25 ± 0.20	± 10%	CGA4J3X7R1A335K125AB	
_	4.7 μF	2012	1.25 ± 0.20	± 10%	CGA4J3X7R1A475K125AB	
_	6.8 µF	2012	1.25 ± 0.20	± 10%		CGA4J1X7R0J685K125AC
	0.6 μι	2012	1.25 ± 0.20	± 20%		CGA4J1X7R0J685M125AC
_	10 uE	2012	1.25 ± 0.20	± 10%		CGA4J1X7R0J106K125AC
	10 µF	2012	1.20 ± 0.20	± 20%		CGA4J1X7R0J106M125AC
_	22 µF	3216	1.60 +0.30/-0.10	± 20%		CGA5L1X7R0J226M160AC

#### Class 2 (Temperature Stable)

Temperature Characteristics: X7S (-55 to +125°C, ±22%)

Capacitance	Size	Thickness	Capacitance	Catalog Number						
Сараспапсе	Size	(mm)	Tolerance	Rated Voltage Edc: 50V	Rated Voltage Edc: 16V	Rated Voltage Edc: 10V	Rated Voltage Edc: 6.3V			
220 5	1005	0.50 . 0.05	± 10%		CGA2B1X7S1C334K050BC	CGA2B3X7S1A334K050BB				
330 nF	1005	$0.50 \pm 0.05$	± 20%		CGA2B1X7S1C334M050BC	CGA2B3X7S1A334M050BB				
470nF	1005	0.50 . 0.05	± 10%		CGA2B1X7S1C474K050BC	CGA2B3X7S1A474K050BB				
470111 1003	1005	$0.50 \pm 0.05$	± 20%		CGA2B1X7S1C474M050BC	CGA2B3X7S1A474M050BB				
1.55	1000	0.00 . 0.10	± 10%		CGA3E1X7S1C155K080AC	CGA3E3X7S1A155K080AB				
1.5 µF 1608	1608	$0.80 \pm 0.10$	± 20%		CGA3E1X7S1C155M080AC	CGA3E3X7S1A155M080AB				
0.0	4000	1608	0.00 . 0.10	± 10%		CGA3E1X7S1C225K080AC	CGA3E3X7S1A225K080AB			
2.2 µF	1608	0.80 ± 0.10	$0.80 \pm 0.10$	0.80 ± 0.10	0.80 ± 0.10	± 20%		CGA3E1X7S1C225M080AC	CGA3E3X7S1A225M080AB	
4.7 µF	3225	2.30 ± 0.20	± 10%	CGA6N3X7S1H475K230AB						
	2012	1.25 ± 0.20	± 10%		CGA4J1X7S1C685K125AC	CGA4J3X7S1A685K125AB				
6.8 µF	2012		± 20%		CGA4J1X7S1C685M125AC	CGA4J3X7S1A685M125AB				
6.8 µF	2005	2.50 ± 0.30	± 10%	CGA6P3X7S1H685K250AB						
	3225		± 20%	CGA6P3X7S1H685M250AB						
	0010	1.05 . 0.00	± 10%		CGA4J1X7S1C106K125AC	CGA4J3X7S1A106K125AB				
10	2012	2012	1.25 ± 0.20	± 20%		CGA4J1X7S1C106M125AC	CGA4J3X7S1A106M125AB			
10 μF	0005	0.50 0.00	± 10%	CGA6P3X7S1H106K250AB						
	3225	$2.50 \pm 0.30$	± 20%	CGA6P3X7S1H106M250AB						
33 µF	3225	2.50 ± 0.30	± 20%				CGA6P1X7S0J336M250AC			
47 μF	3225	2.50 ± 0.30	± 20%				CGA6P1X7S0J476M250AC			