

Capacitance range

June.2006

Type	0402 C1005		0603 C1608		0805 C2012		1206 C3216		1210 C3225	1812 C4532
Temp.Chara	CH/COG	SL	CH/COG	SL	CH/COG	SL	CH/COG	SL	CH/COG	CH/COG
WV	1H	1A	1H	1A	1H	1A	1H	1A	1H	1H
Cap.(pF)	50V	10V	50V	10V	50V	10V	50V	10V	50V	50V
100										
120										
150										
180										
220										
270										
330										
390										
470										
560										
680										
820										
1,000										
1,200										
1,500										
1,800										
2,200										
2,700										
3,300										
3,900										
4,700										
5,600										
6,800										
8,200										
10,000										
15,000										
22,000										
33,000										
47,000										
68,000										
100,000										
150,000										
220,000										

- 0.5 ± 0.05
- 0.6 ± 0.15
- 0.8 ± 0.15
- 0.85 ± 0.15
- 1.15 ± 0.15
- 1.25 ± 0.2
- 1.6 ± 0.2
- 2.0 ± 0.2
- 2.5 ± 0.3
- 3.2 ± 0.3

Please contact us for the other cap value availability

X5R series

June.2006

Type Cap.(μF)	C1005(0402)					C1608(0603)					C2012(0805)					C3216(1206)					C3225(1210)					C4532(1812)					C5750(2220)						
	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V		
0.01																																					
0.022																																					
0.047																																					
0.068																																					
0.1																																					
0.15																																					
0.22																																					
0.33																																					
0.47																																					
0.68																																					
1																																					
1.5																																					
2.2																																					
3.3																																					
4.7																																					
6.8																																					
10																																					
15																																					
22																																					
33																																					
47																																					
68																																					
100																																					

Please request TDK Specification for details.



Under development.

- 0.5 ± 0.05
- 0.6 ± 0.15
- 0.8 ± 0.15
- 0.85 ± 0.15
- 1.15 ± 0.15
- 1.25 ± 0.2
- 1.3 ± 0.2
- 1.6 ± 0.2
- 1.6 ^{+0.3} _{-0.1}
- 2.0 ± 0.2
- 2.3 ± 0.2
- 2.5 ± 0.3
- 2.8 ± 0.3

Please contact us for the other cap value availability



X7R series

June.2006

Type	C1005(0402)					C1608(0603)					C2012(0805)					C3216(1206)					C3225(1210)					C4532(1812)					C5750(2220)				
WV	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J
Cap.(μF)	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V
0.01																																			
0.022																																			
0.047																																			
0.068																																			
0.1																																			
0.15																																			
0.22																																			
0.33																																			
0.47																																			
0.68																																			
1																																			
1.5																																			
2.2																																			
3.3																																			
4.7																																			
6.8																																			
10																																			
15																																			
22																																			
33																																			
47																																			
68																																			
100																																			

Please request TDK Specification for details.

- 0.5 ± 0.05
- 0.6 ± 0.15
- 0.8 ± 0.15
- 0.85 ± 0.15
- 1.15 ± 0.15
- 1.25 ± 0.2
- 1.3 ± 0.2
- 1.6 ± 0.2
- 1.6 ^{+0.3}/_{-0.1}
- 2.0 ± 0.2
- 2.3 ± 0.2
- 2.5 ± 0.3
- 2.8 ± 0.3

Please contact us for the other cap value availability

Y5V series

June.2006

Type	C1005(0402)					C1608(0603)					C2012(0805)					C3216(1206)					C3225(1210)					C4532(1812)					C5750(2220)				
WV	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J
Cap.(μF)	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V
0.1																																			
0.22																																			
0.47																																			
1																																			
2.2																																			
4.7																																			
10																																			
22																																			
47																																			
100																																			
220																																			

- 0.5 ± 0.05

 0.6 ± 0.15

 0.8 ± 0.15

 0.85 ± 0.15

 1.15 ± 0.15

 1.25 ± 0.2

 1.3 ± 0.2
- 1.6 ± 0.2

 $1.6 \begin{matrix} +0.3 \\ -0.1 \end{matrix}$

 2.0 ± 0.2

 2.3 ± 0.2

 2.5 ± 0.3

 2.8 ± 0.3

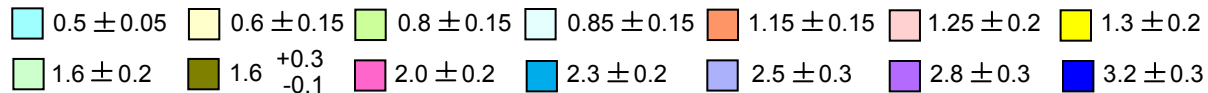
Other items with lower capacitance are also available with smaller case size or higher voltage rating.

Please contact us for details and recommended TDK P/N.

COG Series

June.2006

Type	0603(C1608)			0805(C2012)			1206(C3216)			1210(C3225)			1812(C4532)			2220(C3225)		
WV	2J	2E	2A	2J	2E	2A	2J	2E	2A	2J	2E	2A	2J	2E	2A	2J	2E	2A
Cap.(pF)	630V	250V	100V	630V	250V	100V	630V	250V	100V	630V	250V	100V	630V	250V	100V	630V	250V	100V
100																		
120																		
150																		
180																		
220																		
270																		
330																		
390																		
470																		
560																		
680																		
820																		
1,000																		
1,200																		
1,500																		
1,800																		
2,200																		
2,700																		
3,300																		
3,900																		
4,700																		
5,600																		
6,800																		
8,200																		
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22,000																		
33,000																		
47,000																		
68,000																		
100,000																		

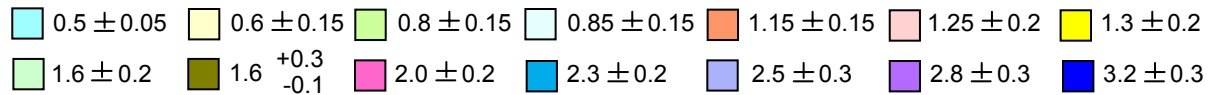


Please contact us for the other cap value availability

X5R/X7R Series

June.2006

Type	0603(C1608)			0805(C2012)			1206(C3216)			1210(C3225)			1812(C4532)			2220(C5750)		
WV Cap.(pF)	2J 630V	2E 250V	2A 100V	2J 630V	2E 250V	2A 100V	2J 630V	2E 250V	2A 100V	2J 630V	2E 250V	2A 100V	2J 630V	2E 250V	2A 100V	2J 630V	2E 250V	2A 100V
1,000																		
1,500																		
2,200																		
3,300																		
4,700																		
6,800																		
10,000																		
15,000																		
22,000																		
33,000																		
47,000																		
68,000																		
100,000																		
150,000																		
220,000																		
330,000																		
470,000																		
680,000																		
1,000,000																		
1,500,000																		
2,200,000																		
3,300,000																		
4,700,000																		



Please contact us for the other cap value availability

X5R/X7R Capacitance Range Extended Series

June.2006

Type	0603(C1608)			0805(C2012)			1206(C3216)			1210(C3225)			1812(C4532)			2220(C5750)			
wV	2J	2E	2A	2J	2E	2A	2J	2E	2A	2J	2E	2A	2J	2E	2A	2J	2E	2A	
Cap.(pF)	630V	250V	100V	630V	250V	100V	630V	250V	100V	630V	250V	100V	630V	250V	100V	630V	250V	100V	
1,000																			
1,500																			
2,200																			
3,300																			
4,700																			
6,800																			
10,000																			
15,000																			
22,000																			
33,000																			
47,000																			
68,000																			
100,000																			
150,000																			
220,000																			
330,000																			
470,000																			
680,000																			
1,000,000																			
1,500,000																			
2,200,000																			
3,300,000																			
4,700,000																			

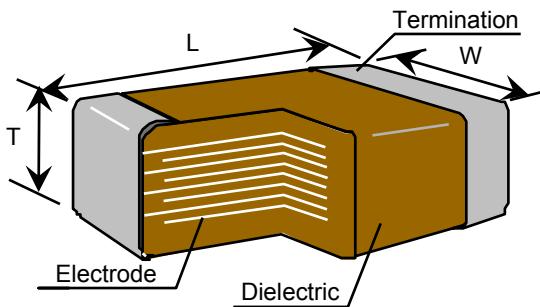
Sample These are under development products, but Samples are available

- 0.5 ± 0.05
- 0.6 ± 0.15
- 0.8 ± 0.15
- 0.85 ± 0.15
- 1.15 ± 0.15
- 1.25 ± 0.2
- 1.3 ± 0.2
- 1.6 ± 0.2
- 1.6 ^{+0.3}_{-0.1}
- 2.0 ± 0.2
- 2.3 ± 0.2
- 2.5 ± 0.3
- 2.8 ± 0.3
- 3.2 ± 0.3

Please contact us for the other cap value availability

Specification

Dimensions



(Unit : mm)

Size	C4520(1808)	C4532(1812)
Dimension		
L	4.50 ± 0.40	4.50 ± 0.40
W	2.00 ± 0.30	3.20 ± 0.40

*** IT IS RECOMMENDED TO PROVIDE A SLIT ON THE BOARD UNDER THE COMPONENTS.**

DWV AND IMPULSE CAPABILITY (LAN APPLICATION)

- 1500Vrms (50Hz and 60Hz) for 60s.
- 1.2 times rated voltage for 60s.
- Ten 2400V(1.2/ 50us) impulses of alternating polarity

Capacitance range

June.2006

Type	1808 (C4520)	1812 (C4532)	Type
T.C	COG		T.C
WV	3F 3kV	3F 3kV	WV
Cap(pF)			Cap(pF)
10			10
12			12
15			15
18			18
22			22
27			27
33			33
39			39
47			47
56			56
68			68
82			82
100			100
120			120
150			150
180			180
220			220
270			270
330			330

- 0.85 ± 0.15
- 1.10 ± 0.20
- 1.60 ± 0.20
- 2.00 ± 0.20
- 2.30 ± 0.20
- 2.50 ± 0.30

Please contact us for the other cap value availability

Cap.Range

Per Table2.Cap.Range

June.2006

Type WV Cap(pF)	1808(C4520)		1812(C4532)	
	3D 2kV	3A 1kV	3D 2kV	3A 1kV
470				
1,000				
2,200				
4,700				
10,000				

1.30 ± 0.20
 1.60 ± 0.20
 2.00 ± 0.20

Please contact us for the other cap value availability

Features

Per Table3.Features

	Limits	Unit	Measuring Conditions	
			Frequency	Voltage
Capacitance	Per Table 2		1kHz	1Vrms
C.T.I.	10	%		
R.V	3D:2,000,3A:1,000	Vdc		
D.F	3	%MAX	1kHz	1Vrms
IR	4,000	MΩ MIN	DC	500V
C/C	15	%	1kHz	1Vrms
Temp.Range	-55~125	C		

Test Voltage	WV x 1.2,1,500Vrms - 60sec (Based on IEEE802.3)	
Life	1,500Vrms - 60sec	→ 125C - 2,000Vdc(1,000hr) 3D
Sequence+Condition	1,500Vrms - 60sec	→ 125C - 1,000Vdc(1,000hr) 3A

Capacitance range

June.2006

Single

TYPE	CKG32K						CKG45K						CKG57K						
Temp.Chara	X5R/X7R						X5R/X7R						X5R/X7R						
WV	2J	2E	2A	1H	1E	1C	2J	2E	2A	1H	1E	1C	2J	2E	2A	1H	1E	1C	
Cap.(μF)	630V	250V	100V	50V	25V	16V	630V	250V	100V	50V	25V	16V	630V	250V	100V	50V	25V	16V	
0.01																			
0.022																			
0.047	■																		
0.1	■	■					■												
0.22		■						■					■						
0.47			■	■					■					■	■				
1				■	■					■					■	■			
2.2											■								
4.7										■	■					■	■		
10												■					■	■	
22													■					■	
47																			■
100																			

Double

TYPE	CKG45N						CKG57N							
Temp.Chara	X5R/X7R						X5R/X7R							
WV	2J	2E	2A	1H	1E	1C	2J	2E	2A	1H	1E	1C		
Cap.(μF)	630V	250V	100V	50V	25V	16V	630V	250V	100V	50V	25V	16V		
0.01														
0.022														
0.047														
0.1														
0.22	■													
0.47		■					■							
1			■					■						
2.2				■					■					
4.7					■					■				
10						■					■			
22												■		
47													■	
100														■

Please contact us for the other cap value availability

X8R series

June.2006

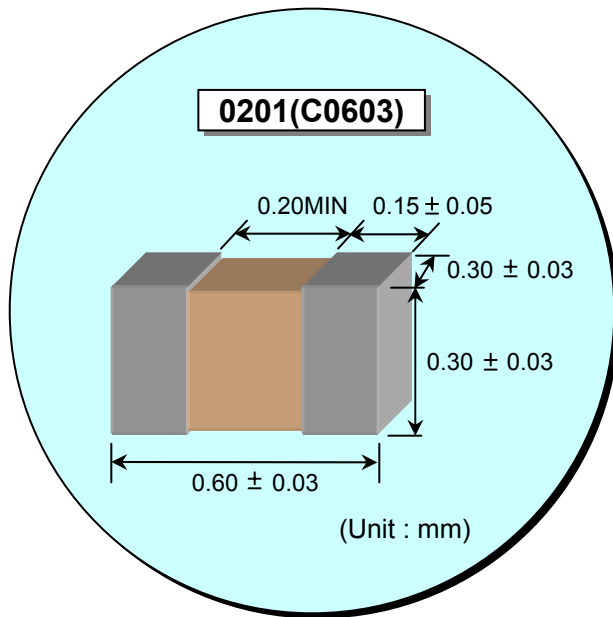
Type	0402 C1005		0603 C1608			0805 C2012			1206 C3216			1210 C3225
WV Cap.(pF)	1H 50V	1E 25V	2A 100V	1H 50V	1E 25V	2A 100V	1H 50V	1E 25V	2A 100V	1H 50V	1E 25V	1E 25V
100												
150												
220												
330												
470												
680												
1,000												
1,500												
2,200												
3,300												
4,700												
6,800												
10,000												
15,000												
22,000												
33,000												
47,000												
68,000												
100,000												
150,000												
220,000												
330,000												
470,000												
680,000												
1,000,000												
1,500,000												
2,200,000												
3,300,000												
4,700,000												

- 0.5 ± 0.05
- 0.8 ± 0.15
- 0.85 ± 0.15
- 1.15 ± 0.15
- 1.25 ± 0.2
- 1.6 ± 0.2
- 2.0 ± 0.15
- 2.5 ± 0.15

Please contact us for the other cap value availability

Contents might be changed without notice

Dimensions & Capacitance range



June.2006

Temp.Chara	C0G	X5R					Y5V	
		1H/1E 50V/25V	1H 50V	1E 25V	1C 16V	1A 10V		0J 6.3V
Cap.(pF)								
0.2~0.5								
1								
1.5								
2								
2.2								
3								
3.3								
4								
4.7								
5								
6								
6.8								
7								
8								
9								
10								
12								
15								
18								
22								
27								
33								
39								
47								
56								
68								
82								
100								
220								
470								
1,000								
2,200								
4,700								
10,000								
22,000								
47,000								
100,000								

Items inside of ☆ have different specification. Please contact us before using them.

0.30 ± 0.03

Please contact us for the other cap value availability

Cap range

CKCM25 SERIES

June.2006

Temp.chara	COG
WV	1H
Cap.(pF)	50V
10	
15	
22	
33	
47	
68	
100	

Temp.chara	X7R			X5R		
WV	1H	1E	1C	1A	0J	
Cap.(pF)	50V	25V	16V	10V	6.3V	
1,000						
2,200						
4,700						
10,000						
22,000						
47,000						
100,000						
220,000						
470,000						
1,000,000						

CKCL22 SERIES

Temp.chara	COG
WV	1H
Cap.(pF)	50V
10	
15	
22	
33	
47	
68	
100	
150	
220	
470	

Temp.chara	X7R			X5R		
WV	1H	1E	1C	1A	0J	
Cap.(pF)	50V	25V	16V	10V	6.3V	
1,000						
2,200						
4,700						
10,000						
22,000						
47,000						
100,000						
220,000						
470,000						
1,000,000						
2,200,000						

Thickness: 0.66MAX

Thickness: 0.90MAX

Thickness: 1.0MAX

Please contact us for the other cap value availability

Cap range

CKCL44 SERIES

June.2006

Temp.Chara	C0G
WV	1H
Cap.(pF)	50V
10	
15	
22	
33	
39	
47	
68	
100	
150	

Temp.Chara	X7R			X5R	
WV	1H	1E	1C	1A	0J
Cap.(pF)	50V	25V	16V	10V	6.3V
220					
470					
1,000					
2,200					
4,700					
10,000					
22,000					
47,000					
100,000					

Thickness: 1.0 MAX

CKCA43 SERIES

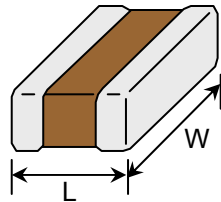
Temp.Chara	C0G
WV	1H
Cap.(pF)	50V
10	
15	
22	
33	
47	
68	
100	
150	
220	
330	
470	
680	
1,000	

Temp.Chara	X7R			X5R	
WV	1H	1E	1C	1A	0J
Cap.(pF)	50V	25V	16V	10V	6.3V
470					
1,000					
2,200					
4,700					
10,000					
22,000					
47,000					
100,000					
220,000					
470,000					
1,000,000					

Thickness: 1.1 MAX

Please contact us for the other cap value availability

Dimensions



(Unit : mm)

	C0816(0306)	C1220(0508)	C1632(0612)
L	0.80 ± 0.10	1.25 ± 0.20	1.60 ± 0.20
W	1.60 ± 0.10	2.00 ± 0.20	3.20 ± 0.20

Cap values & Thickness

June.2006

Type		0306(C0816)					0508(C1220)					0612(C1632)				
Temp.chara		X7R			X5R		X7R			X5R		X7R			X5R	
Cap. 3digit	WV (μF)	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J
		50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V
103	0.01															
223	0.022															
473	0.047															
104	0.1															
224	0.22															
474	0.47															
105	1															
225	2.2															
475	4.7															

■ 0.5 ± 0.1
 ■ 0.7 ± 0.1
 ■ 0.85 ± 0.15
 ■ 1.15 ± 0.15
 ■ 1.30 ± 0.15

Please contact us for the other cap value availability

CKD SERIES FOR SIGNAL LINE

Cap.range

June.2006

C	Cap(pF)	CKD510JB (0805)	CKD110JB (1205)	
220	22	50V,400mA 500mΩ	25V,200mA 600mΩ	
470	47			
101	100			
221	220			
471	470			
102	1,000			
222	2,200			
472	4,700			
103	10,000			25V,500mA 300mΩ
223	22,000			
473	47,000			
104	100,000			

CAP.TOL S : +50,-20%

NOTE:()CHIP SIZE

Please contact us for the other cap value availability

CKD SERIES FOR POWER LINE

Cap.range

June.2006

C	Cap(pF)	CKD61BJB (0603)	CKD610JB (0603)	CKD510JB (0805)	CKD310JB (1206)
103	10,000				
223	22,000			25V,1A	
473	47,000			80mΩ	
104	100,000				16V,2A 40mΩ
224	220,000				
474	470,000	6.3V,2A,30mΩ			
105	1,000,000		6.3V,2A	10V,2A,12mΩ	
225	2,200,000		12mΩ		
475	4,700,000				

CAP.TOL S : +50,-20%

NOTE:()CHIP SIZE

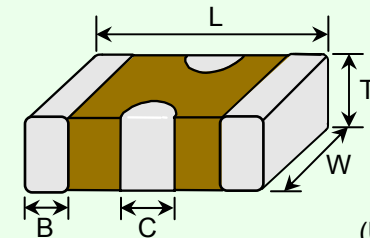
Please contact us for the other cap value availability

Temp.range

Operation temp range /
Storage temp range -25 ~ 85 C

Dimensions

CKD610JB
CKD510JB
CKD310JB

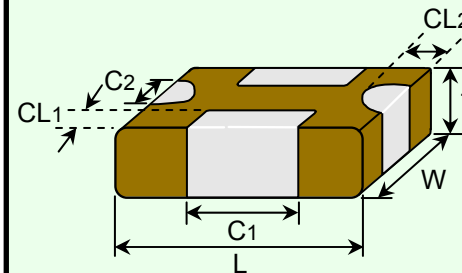


(Unit : mm)

Dimensions	CKD610JB	CKD510JB	CKD310JB
L	1.60 ± 0.20	2.00 ± 0.20	3.20 ± 0.20
W	0.80 ± 0.10	1.25 ± 0.20	1.60 ± 0.20
T	0.80 ± 0.10	0.85 ± 0.15	1.60MAX
B	0.10 MIN	0.30 ± 0.20	0.40 ± 0.30
C	0.40 ± 0.10	0.40 +0.30/ -0.20	0.95 ± 0.30

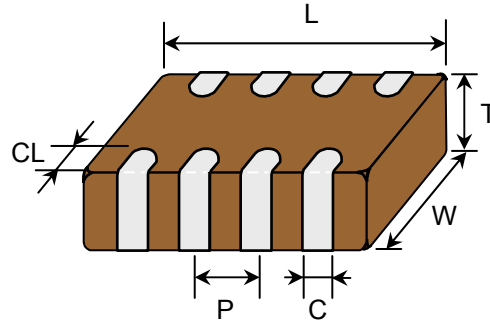
CKD61BJB

(Unit : mm)



Dimensions	CKD61BJB
L	1.60 ± 0.10
W	0.80 ± 0.10
T	0.60 ± 0.10
C1	0.80 +0.20/ -0.10
C2	0.40 ± 0.10
CL1	0.15 ± 0.10
CL2	0.15 ± 0.10

Dimensions



(Unit: mm)

	CLLC1A SERIES	CLLE1A SERIES
L	1.60 ± 0.10	2.00 ± 0.15
W	0.80 ± 0.10	1.25 ± 0.15
C	0.25 ± 0.10	0.25+0.15/-0.10
CL	0.15 ± 0.10	0.20+0.15/-0.10
P	0.40 ± 0.10	0.50 ± 0.10

Cap Range

CLLC1A SERIES

Cap. (pF)	Thickness (mm)
	0.55Max
330,000	X7S/4V
470,000	X7S/4V
680,000	X7S/4V
1,000,000	X7S/4V

CLLE1A SERIES

June.2006

Cap. (pF)	Thickness (mm)	
	0.55Max	0.95Max
100,000	X7R/10V	
150,000	X7R/10V	
220,000	X7R/10V	
330,000	X7R/10V	
470,000	X7R/6.3V	
680,000	X7R/6.3V	
1,000,000	X7S/4V	X7R/6.3V
1,500,000	X7S/4V	X7R/6.3V
2,200,000	X7S/4V	X7S/4V
4,700,000		X7S/4V

C0G series

June.2006

Type					FK18,FK28				FK14,FK24				FK26				FK16,FK26				FK20				FK11,FK20				FK22						
Type	WV	2J	2E	2A	1H	2J	2E	2A	1H	2J	2E	2A	1H	2J	2E	2A	1H	2J	2E	2A	1H	2J	2E	2A	1H	2J	2E	2A	1H	2J	2E	2A	1H		
Cap.(pF)	630V	250V	100V	50V	630V	250V	100V	50V	630V	250V	100V	50V	630V	250V	100V	50V	630V	250V	100V	50V	630V	250V	100V	50V	630V	250V	100V	50V	630V	250V	100V	50V			
10																																			
12																																			
15																																			
18																																			
22																																			
27																																			
33																																			
39																																			
47																																			
56																																			
68																																			
82																																			
100																																			
120																																			
150																																			
180																																			
220																																			
270																																			
330																																			
390																																			
470																																			
560																																			
680																																			
820																																			

Please contact us for the other cap value availability

X5R series

June.2006

Type	FK18,FK28					FK14,FK24					FK16,FK26					FK11,FK20					FK22					
WV Cap.(μF)	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	
220pF																										
0.01																										
0.022																										
0.047																										
0.1																										
0.15																										
0.22																										
0.33																										
0.47																										
0.68																										
1																										
1.5					*																					
2.2					*																					
3.3																										
4.7									*																	
6.8									*																	
10									*																	
15																										
22																										
33																										
47																										
68																										
100																										

Items inside of ☆ have different specification. Please contact us before using them.

Sample These are under development products, but Samples are available

Please contact us for the other cap value availability

Y5V series

June.2006

Type	FK18,FK28					FK14,FK24					FK16,FK26					FK11,FK20					FK22					
WV	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	1H	1E	1C	1A	0J	
Cap.(μF)	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	50V	25V	16V	10V	6.3V	
0.1	■																									
0.22	■																									
0.47		■																								
1			■																							
2.2				■																						
4.7					■																					
10																										
22																										
47																										
100																										

Please contact us for the other cap value availability

EX. 2012/X5R/25V/1 μ F/T=0.50mm

CGB4B1X5R1E105M

Item category	Case size		Nominal thickness		Internal CD	
CGB	3	1608	B	0.50	1	S.T.D.
	4	2012	S	0.45		

Type W.V. Cap(μ F)	CGB3xx (1608)						CGB4xx (2012)						Type W.V. Cap(μ F)
	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	0G 4.0V	1H 50V	1E 25V	1C 16V	1A 10V	0J 6.3V	0G 4.0V	
0.1													0.1
0.15													0.15
0.22													0.22
0.33													0.33
0.47		■											0.47
0.68													0.68
1			■					■					1
1.5													1.5
2.2				■				■	■				2.2
3.3									■	■			3.3
4.7											■		4.7
6.8													6.8
10													10
15													15
22													22

■ T=0.55mm Max

■ T=0.50mm Max

Life:85C/WVx1.0