

YAGEO Surface Mount Ceramic Multilayer Chip Capacitors – 402, 0603, 0805, 1206, 1812 (Cont.)  

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Case Size	Type	WV DC	Capacitance	Tolerance	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel		Yageo Part No.		
						10	100	500		Qty.	Pricing			
1206	NPO	50	18pF	±5%	311-1152-1-ND	1.20	7.11	20.51	311-1152-2-ND	4,000	19.70/M	CC1206JRNPO9BN180		
		50	20pF	±5%	311-1153-1-ND	1.14	6.71	19.37	311-1153-2-ND	4,000	18.60/M	CC1206JRNPO9BN200		
		50	22pF	±5%	311-1154-1-ND	1.20	7.11	20.51	311-1154-2-ND	4,000	19.70/M	CC1206JRNPO9BN220		
		50	27pF	±5%	311-1155-1-ND	1.20	7.11	20.51	311-1155-2-ND	4,000	19.70/M	CC1206JRNPO9BN270		
		50	33pF	±5%	311-1156-1-ND	1.20	7.11	20.51	311-1156-2-ND	4,000	19.70/M	CC1206JRNPO9BN330		
		50	39pF	±5%	311-1157-1-ND	1.34	7.90	22.78	311-1157-2-ND	4,000	21.87/M	CC1206JRNPO9BN390		
		50	47pF	±5%	311-1158-1-ND	1.18	6.96	20.08	311-1158-2-ND	4,000	16.07/M	CC1206JRNPO9BN470		
		50	51pF	±5%	311-1219-1-ND	1.90	11.23	32.40	311-1219-2-ND	4,000	31.11/M	CC1206JRNPO9BN510		
		50	56pF	±5%	311-1159-1-ND	1.34	7.90	22.78	311-1159-2-ND	4,000	21.87/M	CC1206JRNPO9BN560		
		50	68pF	±5%	311-1160-1-ND	1.34	7.90	22.78	311-1160-2-ND	4,000	21.87/M	CC1206JRNPO9BN680		
		50	100pF	±5%	311-1161-1-ND	1.26	7.46	21.53	311-1161-2-ND	4,000	20.67/M	CC1206JRNPO9BN101		
		50	120pF	±5%	311-1162-1-ND	1.40	8.29	23.93	311-1162-2-ND	4,000	22.97/M	CC1206JRNPO9BN121		
		50	1000pF	±5%	311-1163-1-ND	1.63	9.65	27.84	311-1163-2-ND	4,000	26.73/M	CC1206JRNPO9BN102		
		1812	NPO	1KV	1000pF	±10%	311-1144-1-ND	5.05	29.84	86.06	311-1144-2-ND	3,000	82.62/M	CC1206KKX7RCBB102
	50			220pF	±10%	311-1164-1-ND	1.09	6.42	18.51	311-1164-2-ND	4,000	17.77/M	CC1206KRX7R9BB221	
	50			270pF	±10%	311-1165-1-ND	1.09	6.42	18.51	311-1165-2-ND	4,000	17.77/M	CC1206KRX7R9BB271	
	50			330pF	±10%	311-1166-1-ND	1.09	6.42	18.51	311-1166-2-ND	4,000	17.77/M	CC1206KRX7R9BB331	
	50			390pF	±10%	311-1205-1-ND	1.18	6.96	20.08	311-1205-2-ND	4,000	19.28/M	CC1206KRX7R9BB391	
	50			470pF	±10%	311-1167-1-ND	1.01	5.97	17.21	311-1167-2-ND	4,000	16.53/M	CC1206KRX7R9BB471	
	50			560pF	±10%	311-1168-1-ND	1.01	5.97	17.21	311-1168-2-ND	4,000	16.53/M	CC1206KRX7R9BB561	
	50			680pF	±10%	311-1169-1-ND	1.01	5.97	17.21	311-1169-2-ND	4,000	16.53/M	CC1206KRX7R9BB681	
	50			820pF	±10%	311-1210-1-ND	1.26	7.46	21.53	311-1210-2-ND	4,000	20.67/M	CC1206KRX7R9BB821	
	50			1000pF	±10%	311-1170-1-ND	1.01	5.97	17.21	311-1170-2-ND	4,000	16.53/M	CC1206KRX7R9BB102	
	50			1200pF	±10%	311-1197-1-ND	1.18	6.96	20.08	311-1197-2-ND	4,000	19.28/M	CC1206KRX7R9BB122	
	X7R			50	1500pF	±10%	311-1200-1-ND	1.18	6.96	20.08	311-1200-2-ND	4,000	19.28/M	CC1206KRX7R9BB152
				50	1800pF	±10%	311-1201-1-ND	1.18	6.96	20.08	311-1201-2-ND	4,000	19.28/M	CC1206KRX7R9BB182
				50	2200pF	±10%	311-1171-1-ND	1.09	6.42	18.51	311-1171-2-ND	4,000	17.77/M	CC1206KRX7R9BB222
			50	2700pF	±10%	311-1203-1-ND	1.18	6.96	20.08	311-1203-2-ND	4,000	19.28/M	CC1206KRX7R9BB272	
			50	3300pF	±10%	311-1172-1-ND	1.09	6.42	18.51	311-1172-2-ND	4,000	17.77/M	CC1206KRX7R9BB332	
			50	3900pF	±10%	311-1206-1-ND	1.18	6.96	20.08	311-1206-2-ND	4,000	19.28/M	CC1206KRX7R9BB392	
			50	4700pF	±10%	311-1173-1-ND	1.01	5.97	17.21	311-1173-2-ND	4,000	16.53/M	CC1206KRX7R9BB472	
			50	5600pF	±10%	311-1208-1-ND	1.26	7.46	21.53	311-1208-2-ND	4,000	20.67/M	CC1206KRX7R9BB562	
			50	6800pF	±10%	311-1209-1-ND	1.26	7.46	21.53	311-1209-2-ND	4,000	20.67/M	CC1206KRX7R9BB682	
			50	8200pF	±10%	311-1211-1-ND	1.35	7.96	22.95	311-1211-2-ND	4,000	22.04/M	CC1206KRX7R9BB822	
			50	10000pF	±10%	311-1174-1-ND	1.01	5.97	17.21	311-1174-2-ND	4,000	16.53/M	CC1206KRX7R9BB103	
			50	12000pF	±10%	311-1198-1-ND	1.43	8.42	24.30	311-1198-2-ND	4,000	23.33/M	CC1206KRX7R9BB123	
			50	15000pF	±10%	311-1175-1-ND	1.09	6.42	18.51	311-1175-2-ND	4,000	17.77/M	CC1206KRX7R9BB153	
			50	18000pF	±10%	311-1202-1-ND	1.43	8.42	24.30	311-1202-2-ND	4,000	23.33/M	CC1206KRX7R9BB183	
			50	22000pF	±10%	311-1176-1-ND	1.17	6.91	19.93	311-1176-2-ND	4,000	19.14/M	CC1206KRX7R9BB223	
			50	27000pF	±10%	311-1204-1-ND	1.43	8.42	24.30	311-1204-2-ND	4,000	23.33/M	CC1206KRX7R9BB273	
			50	33000pF	±10%	311-1177-1-ND	1.09	6.42	18.51	311-1177-2-ND	4,000	17.77/M	CC1206KRX7R9BB333	
			50	39000pF	±10%	311-1207-1-ND	1.68	9.95	28.69	311-1207-2-ND	4,000	27.54/M	CC1206KRX7R9BB393	
			50	47000pF	±10%	311-1178-1-ND	1.25	7.41	21.38	311-1178-2-ND	4,000	20.52/M	CC1206KRX7R9BB473	
			50	1.0µF	±10%	311-1179-1-ND	.77	4.55	13.13	311-1179-2-ND	4,000	12.60/M	CC1206KRX7R9BB104	
			Y5V	16	3.3µF	±20%	311-1180-1-ND	3.27	19.35	55.82	311-1180-2-ND	3,000	53.59/M	CC1206KKX7R8BB334
				16	1.0µF	±10%	311-1181-1-ND	3.27	19.31	55.69	311-1181-2-ND	3,000	53.46/M	CC1206KKX7R7BB105
				10	1.2µF	±10%	311-1199-1-ND	4.83	28.56	82.39	311-1199-2-ND	4,000	57.13/M	CC1206KRX7R6BB125
				16	3.3µF	±20% / +80%	311-1196-1-ND	2.50	14.77	42.62	311-1196-2-ND	3,000	40.92/M	CC1206ZKY5V7BB335
				NPO	3KV	220pF	±5%	311-1182-1-ND	15.62	92.30	266.25	311-1182-2-ND	1,500	255.60/M
	X7R			1KV	1000pF	±10%	311-1183-1-ND	11.61	68.62	197.94	311-1183-2-ND	1,000	190.03	CC1812KKX7RCBB102

X2Y® Series Surface Mount Ceramic EMI Filter Capacitors



Features: • Broadband Filtering and Decoupling: Effective up to 10 GHz and frequencies beyond • Ultra Low ESL: Noise cancellation makes ESL reduce from nanoHenry to picohenry levels • Bypass: Unlike feedthrough capacitors, X2Y is in bypass, so no DC current limitations • Matched Y-caps: Two tightly matched line to ground capacitors in one device • Superior Balance: Temperature and voltage variations balanced of two Y-caps • Aging Reliability: Aging effects are equal on two Y-caps **Benefits:** • Fewer Component in Filtering: Can replace multiple inductors and/or capacitors • Superior Performance in Filtering: Can eliminate both differential and common mode noises • Fewer Component in Decoupling: Up to 1:7 replacement of MLCC in power delivering system bypass networks • Superior Performance in Decoupling: Large or small, X2Y components exhibit ultra low ESL • Total Cost Savings: Assembly cost savings through reduced component count and placement costs • Board Level Design Advantages: Dramatically reduces via drills, which blocks routing **Applications:** • EMI filtering on DC motors • Filtered connectors (airbag connectors, RJ-45 connectors) • High speed data-line filtering • Decoupling of supply-lines in high speed digital circuits • Broadband filtering • Amplifier decoupling and EMI suppression • IC Decoupling, on-package, on PCB • DC power line filtering • Data line filtering • EMI suppression for DC motors • Sensors • Audio

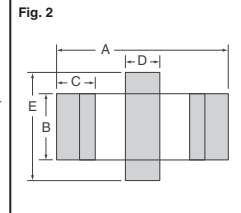
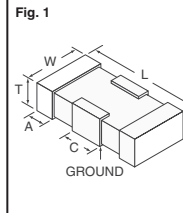


Fig. 1 — Dimensions in Inch (mm)

Case Size	L	W	T		A		C
			Min.	Max.	Min.	Max.	Min.
0603	0.063 (1.6)	0.033 (0.85)	0.022 (0.55)	0.030 (0.75)	0.010 (0.25)	0.022 (0.55)	0.016 (0.40)
0805	0.079 (2.0)	0.049 (1.25)	0.030 (0.75)	0.037 (0.95)	0.010 (0.25)	0.022 (0.55)	0.028 (0.70)
1206	0.126 (3.2)	0.065 (1.65)	0.043 (1.10)	0.055 (1.40)	0.010 (0.25)	0.026 (0.65)	0.047 (1.20)
1210	0.126 (3.2)	0.098 (2.5)	0.043 (1.10)	0.067 (1.70)	0.010 (0.25)	0.026 (0.65)	0.047 (1.20)

Fig. 2 — Reflow Soldering

Case Size	Footprint Dimensions - mm					Placement Accuracy (mm)
	A	B	C	D	E	
0603	2.30	0.75	0.64	0.51	1.52	±0.20
0805	3.05	1.27	0.89	0.56	2.03	±0.20
1206	4.06	1.65	1.00	1.02	3.05	±0.25
1210	4.57	2.55	1.00	1.14	4.06	±0.25

Case Size	Type	WV DC	Capacitance	Tolerance	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel		Yageo Part No.
						10	100	500		Qty.	Pricing	
0603	X5R	10	.22µF	±20%	311-1248-1-ND	14.55	86.00	248.06	311-1248-2-ND	4,000	238.00/M	CX0603MRX5R6BB224
		10	.33µF	±20%	311-1255-1-ND	14.55	86.00	248.06	311-1255-2-ND	4,000	238.00/M	CX0603MRX5R6BB334
	X7R	100	1000pF	±20%	311-1259-1-ND	6.47	38.22	110.25	311-1259-2-ND	4,000	106.00/M	CX0603MRX7R0BB102
		100	1500pF	±20%	311-1260-1-ND	6.47	38.22	110.25	311-1260-2-ND	4,000	106.00/M	CX0603MRX7R0BB152
		100	2200pF	±20%	311-1249-1-ND	6.47	38.22	110.25	311-1249-2-ND	4,000	106.00/M	CX0603MRX7R0BB222
		100	4700pF	±20%	311-1250-1-ND	6.47	38.22	110.25	311-1250-2-ND	4,000	106.00/M	CX0603MRX7R0BB472
		50/63	10000pF	±20%	311-1233-1-ND	8.09	47.78	137.81	311-1233-2-ND	4,000	132.00/M	CX0603MRX7R9BB103
		25	22000pF	±20%	311-1234-1-ND	8.09	47.78	137.81	311-1234-2-ND	4,000	132.00/M	CX0603MRX7R8BB223
		16	47000pF	±20%	311-1235-1-ND	9.70	57.33	165.38	311-1235-2-ND	4,000	159.00/M	CX0603MRX7R7BB473
		16	56000pF	±20%	311-1236-1-ND	9.70	57.33	165.38	311-1236-2-ND	4,000	159.00/M	CX0603MRX7R7BB563
10	1µF	±20%	311-1237-1-ND	11.32	66.89	192.94	311-1237-2-ND	4,000	185.00/M	CX0603MRX7R6BB104		
0805	X7R	100	4700pF	±20%	311-1238-1-ND	8.09	47.78	137.81	311-1238-2-ND	4,000	132.00/M	CX0805MRX7R0BB472
		100	10000pF	±20%	311-1239-1-ND	8.09	47.78	137.81	311-1239-2-ND	4,000	132.00/M	CX0805MRX7R0BB103

(Continued)

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