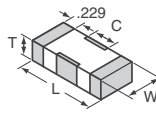


X2Y filter capacitors employ a unique, patented low inductance design featuring two balanced capacitors that are immune to temperature, voltage and aging performance differences. These components offer superior decoupling and EMI filtering performance.



Physical Characteristics — Dimensions in mm			
Series	L	W	C
0603	1.626 ±0.127	0.889 ±0.127	0.457 ±0.102
0805	2.032 ±0.203	1.270 ±0.203	0.559 ±0.127
1206	3.150 ±0.254	1.600 ±0.254	1.016 ±0.127
1210	3.175 ±0.254	2.489 ±0.254	1.143 ±0.127
1410	3.556 ±0.254	2.490 ±0.254	1.143 ±0.127
1812	4.420 ±0.254	3.175 ±0.254	1.143 ±0.127

Applications:

- FPGA/ASIC/μ-P Decoupling
- DDR Memory Decoupling
- Amplifier Filter and Decoupling
- High Speed Data Filtering
- Cellular Handsets

Size Code	Type	WV DC	Capacitance	Capacitance Tolerance	Dim. T (mm)	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel		Johanson Dielectrics Part No.
							10	100	500		Qty.	Pricing	
0603	NP0	50	5.6pF	±20%	0.660	709-1000-1-ND	5.29	31.22	90.05	709-1000-2-ND	4,000	86.40/M	500X14N5R6MV4T
		50	10pF			709-1001-1-ND	5.29	31.22	90.05	709-1001-2-ND	4,000	86.40/M	500X14N100MV4T
		50	22pF			709-1002-1-ND	5.29	31.22	90.05	709-1002-2-ND	4,000	86.40/M	500X14N220MV4T
		50	47pF			709-1003-1-ND	5.42	32.05	92.44	709-1003-2-ND	4,000	88.58/M	500X14N470MV4T
		50	100pF			709-1004-1-ND	5.60	33.08	95.44	709-1004-2-ND	4,000	91.48/M	500X14N101MV4T
	X7R	6.3	.1μF	±20%	0.660	709-1009-1-ND	7.89	46.62	134.46	709-1009-2-ND	4,000	129.23/M	6R3X14W104MV4T
		6.3	.22μF			709-1104-1-ND	7.40	43.71	126.06	709-1104-2-ND	4,000	121.25/M	6R3X14W224MV4T
		10	.1μF			709-1101-1-ND	7.89	46.62	134.46	709-1101-2-ND	4,000	129.23/M	100X14W104MV4T
		16	47,000pF			709-1088-1-ND	8.78	51.87	149.63	709-1088-2-ND	4,000	143.75/M	160X14W4711MV4T
		25	22,000pF			709-1087-1-ND	7.02	41.49	119.70	709-1087-2-ND	4,000	114.71/M	250X14W223MV4T
		50	470pF			709-1085-1-ND	5.09	30.09	86.78	709-1085-2-ND	4,000	83.49/M	500X14W4711MV4T
		50	1,000pF			709-1005-1-ND	5.10	30.10	86.84	709-1005-2-ND	4,000	83.49/M	500X14W102MV4T
		50	1,500pF			709-1006-1-ND	5.10	30.10	86.84	709-1006-2-ND	4,000	83.49/M	500X14W152MV4T
		50	2,200pF			709-1086-1-ND	5.45	32.15	92.75	709-1086-2-ND	4,000	89.30/M	500X14W222MV4T
50	4,700pF	709-1007-1-ND	5.26	31.07	89.64	709-1007-2-ND	4,000	86.40/M	500X14W472MV4T				
100	10,000pF	709-1008-1-ND	6.28	37.11	107.05	709-1008-2-ND	4,000	103.10/M	500X14W103MV4T				
100	4,700pF	709-1105-1-ND	4.79	28.30	81.63	709-1105-2-ND	4,000	78.41/M	101X14W472MV4T				
0805	X7R	10	.18μF	±20%	1.016	709-1106-1-ND	13.50	79.77	230.12	709-1106-2-ND	4,000	220.71/M	100X15W184MV4E
		50	1,000pF			709-1010-1-ND	9.88	58.41	168.48	709-1010-2-ND	4,000	161.90/M	500X15W102MV4E
		50	10,000pF			709-1011-1-ND	10.60	62.64	180.69	709-1011-2-ND	4,000	173.52/M	500X15W103MV4E
		50	47,000pF			709-1012-1-ND	22.19	131.11	378.20	709-1012-2-ND	4,000	363.00/M	500X15W473MV4E
1206	NPO	50	1000pF	±20%	1.270	709-1107-1-ND	13.18	77.91	224.76	709-1107-2-ND	3,000	215.63/M	500X18N102MV4E
	X7R	10	.47μF	±20%	1.270	709-1103-1-ND	14.55	85.97	247.98	709-1103-2-ND	3,000	238.13/M	100X18W474MV4E
		16	.22μF			709-1102-1-ND	12.14	71.75	206.97	709-1102-2-ND	3,000	198.93/M	160X18W224MV4E
50	.1μF	709-1013-1-ND	22.19	131.11	378.20	709-1013-2-ND	3,000	363.00/M	500X18W104MV4E				
1210	X7R	16	1.0μF	±20%	1.778	709-1108-1-ND	14.67	86.71	250.13	709-1108-2-ND	2,000	240.31/M	160X41W105MV4E
1410	X7R	50	.40μF	±20%	1.778	709-1017-1-ND	39.92	235.86	680.36	709-1017-2-ND	2,000	653.40/M	500X44W404MV4E
1812	X7R	50	.47μF	±20%	2.286	709-1016-1-ND	46.96	277.48	800.42	709-1016-2-ND	1,000	768.11	500X43W474MV4E

F

MLCC Capacitors

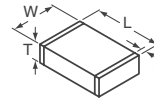
General Purpose, High Voltage and TANCERAM[®]

High Voltage Applications:

- Analog and Digital Modems
- Lighting Ballast Circuits
- Voltage Multipliers
- DC-DC Converters
- LAN/WAN Interface
- Back-lighting Inverters

TANCERAM Applications:

- Switching Power Supply Smoothing (Input/Output)
- DC/DC Converter Smoothing (Input/Output)
- Backlighting Inverters
- General Digital Circuits



Physical Characteristics — Dimensions in mm			
Series	L	W	B
0402	1.02 ±.10	0.51 ±.10	0.20 ±.10
0603	1.60 ±.20	0.81 ±.20	0.25 ±.13
0805	2.03 ±.25	1.27 ±.25	0.51 ±.25
1206	3.17 ±.25	1.57 ±.25	0.51 ±.25
1210	3.18 ±.25	2.41 ±.25	0.51 ±.25
1808	4.57 ±.25	2.03 ±.25	0.51 ±.25
1812	4.57 ±.25	3.17 ±.25	0.64 ±.38
1825	4.57 ±.25	6.35 ±.25	0.64 ±.38
2225	5.72 ±.25	6.48 ±.38	0.64 ±.38

Size Code	Type	WV DC	Capacitance	Capacitance Tolerance	Dim. T (mm)	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel		Johanson Dielectrics Part No.
							10	100	500		Qty.	Pricing	
High Voltage													
0805	NP0	500	100pF	±10%	1.27	709-1019-1-ND	1.01	5.95	17.16	709-1019-2-ND	4,000	16.70/M	501R15N101KV4T
		250	22,000pF	±10%	1.27	709-1018-1-ND†	1.41	8.31	23.96	709-1018-2-ND†	3,000	23.24/M	251R15W223KV4E
	500	1,000pF	±10%	709-1020-1-ND		1.04	6.13	17.70	709-1020-2-ND	3,000	16.70/M	501R15W102KV4E	
	500	10,000pF	±10%	709-1021-1-ND	1.84	10.85	31.31	709-1021-2-ND	3,000	29.77/M	501R15W103KV4E		
	X7R	500	100pF	±10%	1.27	709-1022-1-ND	1.23	7.27	20.97	709-1022-2-ND	3,000	20.33/M	501R18N101JV4E
500		220pF	±5%	709-1023-1-ND		1.44	8.49	24.50	709-1023-2-ND	3,000	23.24/M	501R18N221JV4E	
500		470pF	±5%	709-1024-1-ND		1.84	10.85	31.31	709-1024-2-ND	3,000	29.77/M	501R18N471JV4E	
2,000		100pF	±5%	709-1033-1-ND		2.23	13.17	37.98	709-1033-2-ND	3,000	36.30/M	202R18N101JV4E	
2,000		220pF	±5%	709-1034-1-ND		2.32	13.69	39.48	709-1034-2-ND	3,000	37.76/M	202R18N221JV4E	
500		1,000pF	±10%	709-1025-1-ND		1.19	7.03	20.28	709-1025-2-ND	3,000	19.61/M	501R18W102KV4E	
500		4,700pF	±10%	709-1026-1-ND		2.24	13.21	38.12	709-1026-2-ND	3,000	36.30/M	501R18W472KV4E	
500		10,000pF	±10%	709-1027-1-ND		1.56	9.21	26.54	709-1027-2-ND	3,000	25.41/M	501R18W103KV4E	
500		22,000pF	±10%	709-1028-1-ND		2.24	13.21	38.12	709-1028-2-ND	2,000	36.30/M	501R18W223KV4E	
1,000		1,000pF	±10%	709-1029-1-ND		1.57	9.25	26.68	709-1029-2-ND	3,000	25.41/M	102R18W102KV4E	
1,000	4,700pF	±10%	709-1031-1-ND	2.42	14.35	41.38	709-1031-2-ND	3,000	39.93/M	102R18W472KV4E			
2,000	470pF	±10%	709-1035-1-ND	1.61	9.53	27.50	709-1035-2-ND	3,000	26.14/M	202R18W471KV4E			
2,000	1,000pF	±10%	709-1036-1-ND	2.00	11.85	34.17	709-1036-2-ND	3,000	32.67/M	202R18W102KV4E			
1210	NP0	1,000	680pF	±10%	1.65	709-1038-1-ND	4.31	25.48	73.51	709-1038-2-ND	2,000	70.42/M	102S41N681KV4E
		500	47,000pF	±10%	709-1037-1-ND	6.96	41.15	118.70	709-1037-2-ND	2,000	113.98/M	501S41W473KV4E	
	1,000	10,000pF	±10%	709-1039-1-ND	5.43	32.09	92.57	709-1039-2-ND	2,000	88.57/M	102S41W103KV4E		
	2,000	1,000pF	±10%	709-1040-1-ND	3.73	22.04	63.57	709-1040-2-ND	2,000	60.99/M	202S41W102KV4E		
	2,000	2,700pF	±10%	709-1041-1-ND	6.00	35.44	102.23	709-1041-2-ND	2,000	98.01/M	202S41W272KV4E		
1808	NP0	2,000	470pF	±10%	2.03	709-1043-1-ND	12.53	74.04	213.58	709-1043-2-ND	2,000	204.73/M	202R29N471KV4E
		3,000	330pF	±10%	709-1044-1-ND	5.90	34.88	100.59	709-1044-2-ND	2,000	96.56/M	302R29N331KV4E	
	2,000	150pF	±10%	709-1042-1-ND	3.53	20.86	60.17	709-1042-2-ND	2,000	58.08/M	202R29W151KV4E		
	2,000	470pF	±10%	709-1045-1-ND	3.75	22.14	63.84	709-1045-2-ND	2,000	60.99/M	202R29W471KV4E		
	2,000	1,000pF	±10%	709-1046-1-ND	3.99	23.60	68.06	709-1046-2-ND	2,000	65.34/M	202R29W102KV4E		
	3,000	1,000pF	±10%	709-1047-1-ND	5.18	30.58	88.21	709-1047-2-ND	2,000	84.94/M	302R29W102KV4E		
1812	X7R	500	.1μF	±10%	2.80	709-1049-1-ND	13.47	79.56	—	709-1049-2-ND	500	109.99	501S43W104KV4E
		500	22,000pF	±10%	709-1050-1-ND	7.96	47.00	—	709-1050-2-ND	1,000	129.95	501S43W223KV4E	

† Tip and Ring Chip

(Continued)

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