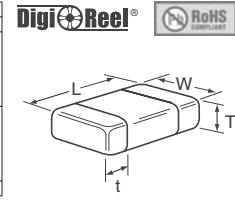


# AVX Multilayer Ceramic Chip Capacitors

**COG (NP0) Dielectric:** • EIA class I ceramic materials • COG (NP0) ceramics offer one of the most stable capacitor dielectrics available • Operating temperature range: -55°C ~ 125°C • Capacitance change with temperature is 0 ±0.3ppm/°C which is less than ±0.3% Δ C from -55°C ~ 125°C  
**X7R/X8R Dielectric:** • Formulations are called "temperature stable" ceramics and fall into EIA class II materials • Its temperature variation of capacitance is within ±15%(X7R/X8R), ±22%(X7S) from -55°C ~ 125°C from -55°C ~ 150°C (X8R)  
**X5R Dielectric:** • General purpose dielectric for ceramic capacitors • EIA Class II dielectric • Temperature variation of capacitance is within ±15% from -55°C ~ 85°C • Operating temperature range: -55°C ~ 85°C  
**Y5V Dielectric:** • Y5V formulations are for general purpose use in a limited temperature range • They have a wide temperature characteristic of +22% ~ 82% capacitance change over the operating temperature range of -30°C ~ 85°C

Size Code	Dimensions - mm		
	L	W	t
0201	0.60 ±0.03	0.30 ±0.03	0.15 ±0.05
0402	1.00 ±0.10	0.50 ±0.10	0.25 ±0.15
0603	1.60 ±0.15	0.81 ±0.15	0.35 ±0.15
0805	2.01 ±0.20	1.25 ±0.20	0.50 ±0.25
1210	3.20 ±0.20	2.50 ±0.20	0.50 ±0.25
1808	4.57 ±0.25	2.03 ±0.25	0.64 ±0.39
1812	4.50 ±0.30	3.20 ±0.20	0.61 ±0.36
1825	4.50 ±0.30	6.40 ±0.40	0.61 ±0.36
2220	5.70 ±0.40	5.00 ±0.40	0.64 ±0.39
2225	5.72 ±0.25	6.35 ±0.25	0.64 ±0.39



Size Code	Type	WV DC	Capacitance	Tolerance	Dim. T Max. (mm)	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel		AVX Part No.
							10	100	500		Qty.	Pricing	
0201	COG (NP0)	25V	.5pF	±25pF	0.33	478-1000-1-ND	1.91	11.26	32.49	478-1000-2-ND	15,000	31.19/M	02013A0R5CAT2A
	COG (NP0)	25V	1.0pF	±25pF	0.33	478-1001-1-ND	1.91	11.26	32.49	478-1001-2-ND	15,000	31.19/M	02013A1R0CAT2A
	COG (NP0)	25V	1.2pF	±25pF	0.33	478-1002-1-ND	3.43	20.27	58.48	478-1002-2-ND	15,000	56.14/M	02013A1R2CAT2A
	COG (NP0)	25V	1.8pF	±25pF	0.33	478-1004-1-ND	3.43	20.27	58.48	478-1004-2-ND	15,000	56.14/M	02013A1R8CAT2A
	COG (NP0)	25V	2.2pF	±25pF	0.33	478-1005-1-ND	3.43	20.27	58.48	478-1005-2-ND	15,000	56.14/M	02013A2R2CAT2A
	COG (NP0)	25V	2.7pF	±25pF	0.33	478-1006-1-ND	3.43	20.27	58.48	478-1006-2-ND	15,000	56.14/M	02013A2R7CAT2A
	COG (NP0)	25V	3.3pF	±25pF	0.33	478-1007-1-ND	3.43	20.27	58.48	478-1007-2-ND	15,000	56.14/M	02013A3R3CAT2A
	COG (NP0)	25V	3.9pF	±25pF	0.33	478-1008-1-ND	3.43	20.27	58.48	478-1008-2-ND	15,000	56.14/M	02013A3R9CAT2A
	COG (NP0)	25V	4.7pF	±25pF	0.33	478-1009-1-ND	3.43	20.27	58.48	478-1009-2-ND	15,000	56.14/M	02013A4R7CAT2A
	COG (NP0)	25V	5.6pF	±25pF	0.33	478-1010-1-ND	3.43	20.27	58.48	478-1010-2-ND	15,000	56.14/M	02013A5R6CAT2A
	COG (NP0)	25V	6.8pF	±25pF	0.33	478-1011-1-ND	3.43	20.27	58.48	478-1011-2-ND	15,000	56.14/M	02013A6R8CAT2A
	COG (NP0)	25V	8.2pF	±25pF	0.33	478-1012-1-ND	3.43	20.27	58.48	478-1012-2-ND	15,000	56.14/M	02013A8R2CAT2A
	COG (NP0)	25V	10pF	±5%	0.33	478-1014-1-ND	1.91	11.26	32.49	478-1014-2-ND	15,000	31.19/M	02013A100JAT2A
	COG (NP0)	25V	12pF	±5%	0.33	478-1015-1-ND	1.91	11.26	32.49	478-1015-2-ND	15,000	31.19/M	02013A120JAT2A
	COG (NP0)	25V	15pF	±5%	0.33	478-1016-1-ND	1.91	11.26	32.49	478-1016-2-ND	15,000	31.19/M	02013A150JAT2A
	COG (NP0)	25V	18pF	±5%	0.33	478-1017-1-ND	1.91	11.26	32.49	478-1017-2-ND	15,000	31.19/M	02013A180JAT2A
	COG (NP0)	25V	22pF	±2%	0.33	478-6017-1-ND	.35	2.03	5.85	478-6017-2-ND	15,000	5.55/M	02013A220GAT2A
	COG (NP0)	25V	22pF	±5%	0.33	478-1018-1-ND	1.91	11.26	32.49	478-1018-2-ND	15,000	31.19/M	02013A220JAT2A
	COG (NP0)	25V	27pF	±5%	0.33	478-1019-1-ND	1.91	11.26	32.49	478-1019-2-ND	15,000	31.19/M	02013A270JAT2A
	COG (NP0)	25V	33pF	±5%	0.33	478-1020-1-ND	1.91	11.26	32.49	478-1020-2-ND	15,000	31.19/M	02013A330JAT2A
	COG (NP0)	16V	39pF	±5%	0.33	478-1021-1-ND	1.91	11.26	32.49	478-1021-2-ND	15,000	31.19/M	0201YA390JAT2A
	COG (NP0)	16V	47pF	±5%	0.33	478-1022-1-ND	1.91	11.26	32.49	478-1022-2-ND	15,000	31.19/M	0201YA470JAT2A
	COG (NP0)	16V	56pF	±5%	0.33	478-1023-1-ND	1.91	11.26	32.49	478-1023-2-ND	15,000	31.19/M	0201YA560JAT2A
	COG (NP0)	16V	68pF	±5%	0.33	478-1024-1-ND	1.91	11.26	32.49	478-1024-2-ND	15,000	31.19/M	0201YA680JAT2A
	COG (NP0)	10V	82pF	±5%	0.33	478-1025-1-ND	1.91	11.26	32.49	478-1025-2-ND	15,000	31.19/M	0201Z820JAT2A
	COG (NP0)	10V	100pF	±5%	0.33	478-1026-1-ND	3.81	22.52	64.97	478-1026-2-ND	15,000	62.37/M	0201Z101JAT2A
	X7R	16V	100pF	±10%	0.33	478-1027-1-ND	3.43	20.27	58.48	478-1027-2-ND	15,000	56.14/M	0201YC101KAT2A
	X7R	16V	120pF	±10%	0.33	478-1028-1-ND	3.43	20.27	58.48	478-1028-2-ND	15,000	56.14/M	0201YC121KAT2A
	X7R	16V	150pF	±10%	0.33	478-1029-1-ND	1.91	11.26	32.49	478-1029-2-ND	15,000	31.19/M	0201YC151KAT2A
	X7R	16V	180pF	±10%	0.33	478-1030-1-ND	3.43	20.27	58.48	478-1030-2-ND	15,000	56.14/M	0201YC181KAT2A
	X7R	16V	220pF	±10%	0.33	478-1031-1-ND	1.91	11.26	32.49	478-1031-2-ND	15,000	31.19/M	0201YC221KAT2A
	X7R	16V	270pF	±10%	0.33	478-1032-1-ND	3.43	20.27	58.48	478-1032-2-ND	15,000	56.14/M	0201YC271KAT2A
	X7R	16V	330pF	±10%	0.33	478-1033-1-ND	1.91	11.26	32.49	478-1033-2-ND	15,000	31.19/M	0201YC331KAT2A
	X7R	16V	390pF	±10%	0.33	478-1034-1-ND	3.43	20.27	58.48	478-1034-2-ND	15,000	56.14/M	0201YC391KAT2A
	X7R	16V	470pF	±10%	0.33	478-1035-1-ND	1.91	11.26	32.49	478-1035-2-ND	15,000	31.19/M	0201YC471KAT2A
	X7R	16V	560pF	±10%	0.33	478-1036-1-ND	3.66	21.62	62.37	478-1036-2-ND	15,000	59.60/M	0201Y561KAT2A
	X7R	16V	680pF	±10%	0.33	478-1037-1-ND	1.91	11.26	32.49	478-1037-2-ND	15,000	31.19/M	0201Y681KAT2A
	X7R	16V	820pF	±10%	0.33	478-1038-1-ND	3.66	21.62	62.37	478-1038-2-ND	15,000	59.60/M	0201Y821KAT2A
	X7R	16V	1000pF	±10%	0.33	478-1039-1-ND	1.91	11.26	32.49	478-1039-2-ND	15,000	31.19/M	0201Y1002KAT2A
	X5R	10V	1200pF	±10%	0.33	478-1040-1-ND	4.19	24.77	71.47	478-1040-2-ND	15,000	68.61/M	0201Z122KAT2A
	X5R	10V	1500pF	±10%	0.33	478-1041-1-ND	4.19	24.77	71.47	478-1041-2-ND	15,000	68.61/M	0201Z152KAT2A
	X5R	10V	1800pF	±10%	0.33	478-1042-1-ND	3.81	22.52	64.97	478-1042-2-ND	15,000	62.37/M	0201Z182KAT2A
	X5R	10V	2200pF	±10%	0.33	478-1043-1-ND	4.57	27.03	77.96	478-1043-2-ND	15,000	74.85/M	0201Z222KAT2A
	X5R	10V	3300pF	±10%	0.33	478-1045-1-ND	1.91	11.26	32.49	478-1045-2-ND	15,000	31.19/M	0201Z332KAT2A
	X5R	10V	3900pF	±10%	0.33	478-1046-1-ND	4.57	27.03	77.96	478-1046-2-ND	15,000	74.85/M	0201Z392KAT2A
	X5R	10V	5600pF	±10%	0.33	478-1048-1-ND	4.95	29.28	84.46	478-1048-2-ND	15,000	81.09/M	0201Z562KAT2A
	X5R	10V	6800pF	±10%	0.33	478-1049-1-ND	1.91	11.26	32.49	478-1049-2-ND	15,000	31.19/M	0201Z682KAT2A
	X5R	10V	8200pF	±10%	0.33	478-1050-1-ND	5.34	31.53	90.96	478-1050-2-ND	15,000	87.32/M	0201Z822KAT2A
	X5R	10V	10000pF	±10%	0.33	478-1051-1-ND	.76	4.50	12.99	478-1051-2-ND	15,000	12.48/M	0201Z103KAT2A
	X5R	6.3V	0.1µF	±10%	0.33	478-5266-1-ND	1.52	9.01	25.99	478-5266-2-ND	15,000	24.95/M	02016D104KAT2A
	Y5V	10V	10000pF	+80 -20%	0.33	478-1052-1-ND	5.72	33.78	97.46	478-1052-2-ND	15,000	93.56/M	0201G103ZAT2A
	Y5V	6.3V	15000pF	+80 -20%	0.33	478-1053-1-ND	5.72	33.78	97.46	478-1053-2-ND	15,000	93.56/M	02016G153ZAT2A
	Y5V	6.3V	22000pF	+80 -20%	0.33	478-1054-1-ND	5.72	33.78	97.46	478-1054-2-ND	15,000	93.56/M	02016G223ZAT2A
	Y5V	6.3V	33000pF	+80 -20%	0.33	478-1055-1-ND	5.72	33.78	97.46	478-1055-2-ND	15,000	93.56/M	02016G333ZAT2A
	Y5V	6.3V	47000pF	+80 -20%	0.33	478-1056-1-ND	4.57	27.03	77.96	478-1056-2-ND	15,000	74.85/M	02016G473ZAT2A
	COG (NP0)	50V	.5pF	±25pF	0.56	478-1057-1-ND	2.29	13.51	38.98	478-1057-2-ND	10,000	37.43/M	04025A0R5CAT2A
	COG (NP0)	50V	.5pF	±10pF	0.56	478-3656-1-ND	2.52	14.86	42.88	478-3656-2-ND	10,000	36.73/M	04025A0R5BAT2A
	COG (NP0)	50V	1.0pF	±25pF	0.56	478-1058-1-ND	.76	4.50	12.99	478-1058-2-ND	10,000	12.48/M	04025A1R0CAT2A
	COG (NP0)	50V	1.0pF	±10pF	0.56	478-3659-1-ND	2.52	14.86	42.88	478-3659-2-ND	10,000	36.73/M	04025A1R0BAT2A
	COG (NP0)	50V	1.2pF	±25pF	0.56	478-1059-1-ND	3.05	18.02	51.98	478-1059-2-ND	10,000	49.90/M	04025A1R2CAT2A
	COG (NP0)	50V	1.5pF	±25pF	0.56	478-1060-1-ND	.76	4.50	12.99	478-1060-2-ND	10,000	12.48/M	04025A1R5CAT2A
	COG (NP0)	50V	1.8pF	±25pF	0.56	478-1061-1-ND	2.29	13.51	38.98	478-1061-2-ND	10,000	37.43/M	04025A1R8CAT2A
	COG (NP0)	50V	2.2pF	±25pF	0.56	478-1062-1-ND	2.29	13.51	38.98	478-1062-2-ND	10,000	37.43/M	04025A2R2CAT2A
	COG (NP0)	50V	2.7pF	±25pF	0.56	478-1063-1-ND	2.29	13.51	38.98	478-1063-2-ND	10,000	37.43/M	04025A2R7CAT2A
	COG (NP0)	50V	3.3pF	±25pF	0.56	478-1064-1-ND	2.29	13.51	38.98	478-1064-2-ND	10,000	37.43/M	04025A3R3CAT2A
	COG (NP0)	50V	3.9pF	±10pF									