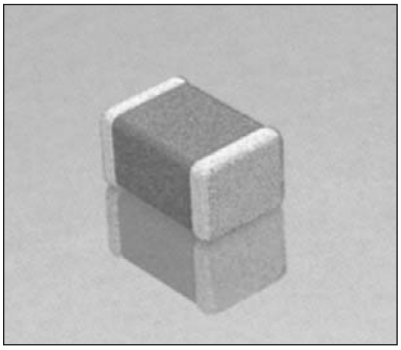
Standard X7R MLCC

Standard X7R Dielectric



X7R formulations are called “temperature stable” ceramics and fall into EIA Class II materials. X7R is the most popular of these intermediate dielectric constant materials. Its temperature variation of capacitance is within ±15% from -55°C to +125°C. This capacitance change is non-linear.

Capacitance for X7R varies under the influence of electrical operating conditions such as voltage and frequency.

X7R dielectric chip usage covers the broad spectrum of industrial applications where known changes in capacitance due to applied voltages are acceptable.

Check for up-to-date CV Tables at
http://www.avx.com/docs/catalogs/cx7r.pdf

HOW TO ORDER

0805	5	C	103	M	A	T	2	A
Size (L" x W")	**Voltage** 4V = 4, 6.3V = 6, 10V = Z, 16V = Y, 25V = 3, 50V = 5, 100V = 1, 200V = 2, 500V = 7	**Dielectric** X7R = C	**Capacitance Code (In pF)** 2 Sig. Digits + Number of Zeros	**Capacitance Tolerance** J = ± 5%, K = ±10%, M = ± 20%	**Failure Rate** A = Not Applicable	**Terminations** T = Plated Ni and Sn, 7 = Gold Plated*, Z= FLEXITERM™**	**Packaging** 2 = 7" Reel, 4 = 13" Reel, 7 = Bulk Cass., 9 = Bulk	**Special Code** A = Std. Product

*Optional termination

**See FLEXITERM™ X7R section

Contact Factory For Multiples

NOTE: Contact factory for availability of Termination and Tolerance Options for Specific Part Numbers.
Contact factory for non-specified capacitance values.

SIZE		0201		0402			0603							0805							1206								1210								1812				1825		2220				2225	
	WVDC	10	16	16	25	50	6.3	10	16	25	50	100	200	6.3	10	16	25	50	100	200	6.3	10	16	25	50	100	200	500	6.3	10	16	25	50	100	200	500	50	100	200	500	50	100	6.3	50	100	200	50	100
Cap (pF)	100	A	A																																														
	150	A	A																																														
	220	A	A			C																																											
	330	A	A			C					G	G	G		J	J	J	J	J	J								K																					
	470	A	A			C					G	G	G		J	J	J	J	J	J								K																					
	680	A	A			C					G	G	G		J	J	J	J	J	J								K																					
	1000	A	A			C					G	G	G		J	J	J	J	J	J								K																					
	1500	A				C					G	G			J	J	J	J	J	J		J	J	J	J	J	J	M		J	J	J	J	J	J	M													
	2200	A				C					G	G			J	J	J	J	J	J		J	J	J	J	J	J	M		J	J	J	J	J	J	M													
	3300	A			C	C					G	G			J	J	J	J	J	J		J	J	J	J	J	J	M		J	J	J	J	J	J	M													
	4700	A			C						G	G			J	J	J	J	J	J		J	J	J	J	J	J	M		J	J	J	J	J	J	M													
	6800	A		C	C						G	G			J	J	J	J	J	J		J	J	J	J	J	J	P		J	J	J	J	J	J	M													
Cap (µF)	0.010	A		C							G	G			J	J	J	J	J	J		J	J	J	J	J	J	P		J	J	J	J	J	J	M	K	K	K	K	M	M	X	X	X	X	M	P
	0.015			C						G	G				J	J	J	J	J	J		J	J	J	J	J	M			J	J	J	J	J	J	P	K	K	K	P	M	M	X	X	X	X	M	P
	0.022			C						G	G				J	J	J	J	J	N		J	J	J	J	J	M			J	J	J	J	J	J	Q	K	K	K	P	M	M	X	X	X	X	M	P
	0.033									G	G				J	J	J	J	N			J	J	J	J	J	M			J	J	J	J	J	J		K	K	K	X	M	M	X	X	X	X	M	P
	0.047								G	G	G				J	J	J	J	N			J	J	J	J	J	M			J	J	J	J	J	J		K	K	K	Z	M	M	X	X	X	X	M	P
	0.068								G	G	G				J	J	J	J	N			J	J	J	J	J	P			J	J	J	J	J	M		K	K	K		M	M	X	X	X	X	M	P
	0.10							G	G	G	G				J	J	J	J	N			J	J	J	J	M				J	J	J	J	J	M		K	K	K		M	M	X	X	X	X	M	P
	0.15							G							J	J	J	N				J	J	J	J	Q				J	J	J	J	M			K	K	P		M	M	X	X	X	X	M	P
	0.22							G							J	J	N	N				J	J	J	J	Q				J	J	J	J	P			K	K	P		M	M	X	X	X		M	P
	0.33														N	N	N	N				J	J	M	P	Q				J	J	J	J	Z			K	M			M	M	X	X	X		M	P
	0.47														N	N	N	N				M	M	M	P					M	M	M	M	Z			K	P			M	M	X	X	X		M	P
	0.68														N	N	N					M	M	Q	Q					M	M	P	X	Z			M	Q			M		X	X	X		M	P
	1.0							J	J						N	N	N					M	M	Q	Q					N	N	P	X	Z			M	X			M			X	Z		M	P
	1.5																					P	Q	Q						N	N	Z	Z				Z	Z			M			X	Z		M	X
	2.2						J										N					Q	Q	Q						Z	Z	Z	Z				Z	Z									M	
	3.3																													Z	Z	Z	Z				Z											
	4.7														P	P								Q						Z	Z	Z	Z				Z											
	10													P								Q	Q							Z	Z	Z													Z				
	22																				Q									Z	Z																		
	47																																																
	100																																																
	WVDC	10	16	16	25	50	6.3	10	16	25	50	100	200	6.3	10	16	25	50	100	200	6.3	10	16	25	50	100	200	500	6.3	10	16	25	50	100	200	500	50	100	200	500	50	100	6.3	50	100	200	50	100
SIZE		0201		0402			0603							0805							1206								1210								1812				1825		2220				2225	

= Under development

Letter	A	C	E	G	J	K	M	N	P	Q	X	Y	Z
Max. Thickness	0.33 (0.013)	0.56 (0.022)	0.71 (0.028)	0.86 (0.034)	0.94 (0.037)	1.02 (0.040)	1.27 (0.050)	1.40 (0.055)	1.52 (0.060)	1.78 (0.070)	2.29 (0.090)	2.54 (0.100)	2.79 (0.110)
	PAPER					EMBOSSED							

RoHS COMPLIANT