

Multilayer Ceramic Chip Capacitors



FEATURES

- General purpose dielectric
- Excellent aging characteristics
- Ideal for decoupling and filtering
- Wide range of case sizes, voltage ratings and capacitance values



RoHS
COMPLIANT

GENERAL SPECIFICATIONS

NOTE: Electrical characteristics at + 25 °C unless otherwise specified

Capacitance Range: 100 pF to 1.0 μ F

Temperature Coefficient of Capacitance (TCC):
X7R: $\pm 15\%$ from - 55 °C to + 125 °C, with 0 Vdc applied

Dissipation Factor (DF):
 ≤ 25 V ratings: 3.5 % maximum at 1.0 Vrms and 1 kHz
50 V, 100 V ratings: 2.5 % maximum at 1.0 Vrms and 1 kHz

Aging Rate: 1 % maximum per decade

Insulation Resistance (IR):

At + 25 °C and rated voltage 100 000 M Ω minimum or 1000 Ω F, whichever is less

At + 125 °C and rated voltage 10 000 M Ω minimum or 100 Ω F, whichever is less

Dielectric Withstanding Voltage (DWV):

This is the maximum voltage the capacitors are tested for a 1 to 5 second period and the charge/discharge current does not exceed 50 mA

≤ 100 VDC: DWV at 250 % of rated voltage

ORDERING INFORMATION

VJ0805	Y	102	K	X	A	A	T	### ²⁾
CASE CODE	DIELECTRIC	CAPACITANCE NOMINAL CODE	CAPACITANCE TOLERANCE	TERMINATION	DC VOLTAGE RATING ¹⁾	MARKING	PACKAGING	PROCESS CODE
0402 0603 0805 1206 1210 1808 1812 1825 2220 2225 3640	Y = X7R	Expressed in picofarads (pF). The first two digits are significant, the third is a multiplier. Examples: 102 = 1000 pF	J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	X = Ni barrier 100 % tin plated F = AgPd	J = 16 V X = 25 V A = 50 V B = 100 V	A = Unmarked M = Marked NOTE: Marking is only available for 0805 and 1206.	T = 7" reel/plastic tape C = 7" reel/paper tape R = 11 1/4" reel/plastic tape P = 11 1/4" reel/paper tape O = 7" reel/flamed paper tape I = 11 1/4" / 13" reel/flamed paper tape NOTE: "I" and "O" is used for "F" termination.	

Note

1. DC voltage rating should not be exceeded in application.
2. Process Code may be added with up to three digits, used to control non-standard products and/or special requirements.



X7R DIELECTRIC																						
STYLE		VJ0402				VJ0603				VJ0805				VJ1206				VJ1210 ¹⁾				
EIA TYPE		0402				0603				0805				1206				1210				
VOLTAGE (Vdc)		16	25	50	100	16	25	50	100	16	25	50	100	16	25	50	100	16	25	50	100	
CAP. CODE	CAP.																					
121	120 pF																					
151	150 pF																					
181	180 pF																					
221	220 pF																					
271	270 pF																					
331	330 pF																					
391	390 pF																					
471	470 pF																					
561	560 pF																					
681	680 pF																					
821	820 pF																					
102	1000 pF																					
122	1200 pF																					
152	1500 pF																					
182	1800 pF																					
222	2200 pF																					
272	2700 pF																					
332	3300 pF																					
392	3900 pF																					
472	4700 pF																					
562	5600 pF																					
682	6800 pF																					
822	8200 pF																					
103	0.010 μF																					
123	0.012 μF																					
153	0.015 μF																					
183	0.018 μF																					
223	0.022 μF																					
273	0.027 μF																					
333	0.033 μF																					
393	0.039 μF																					
473	0.047 μF																					
563	0.056 μF																					
683	0.068 μF																					
823	0.082 μF																					
104	0.10 μF																					
124	0.12 μF																					
154	0.15 μF																					
184	0.18 μF																					
224	0.22 μF																					
274	0.27 μF																					
334	0.33 μF																					
394	0.39 μF																					
474	0.47 μF																					
564	0.56 μF																					
684	0.68 μF																					
824	0.82 μF																					
105	1.0 μF																					
125	1.2 μF																					
155	1.5 μF																					
185	1.8 μF																					
225	2.2 μF																					
275	2.7 μF																					
335	3.3 μF																					
395	3.9 μF																					
475	4.7 μF																					
565	5.6 μF																					
685	6.5 μF																					

Note

1. See soldering recommendations within this data book, or visit www.vishay.com/doc?45034



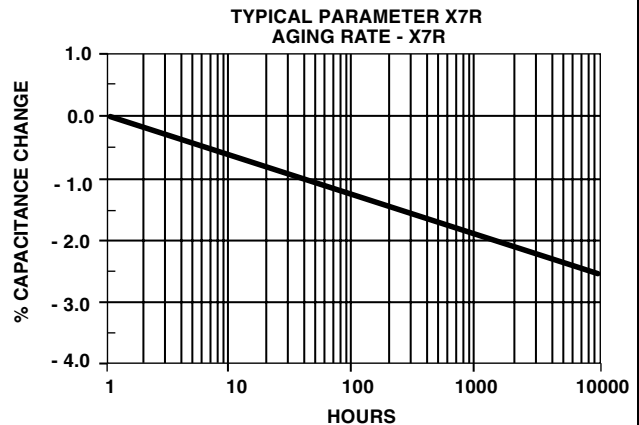
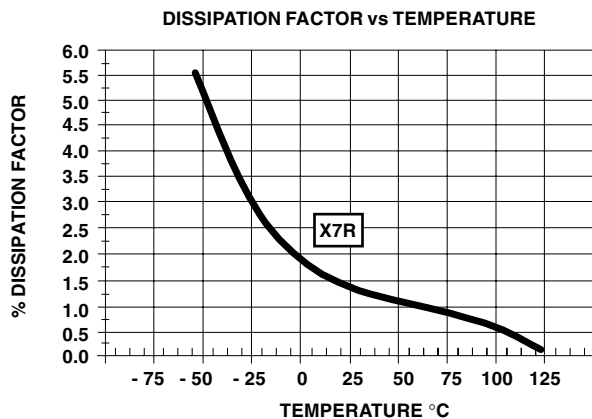
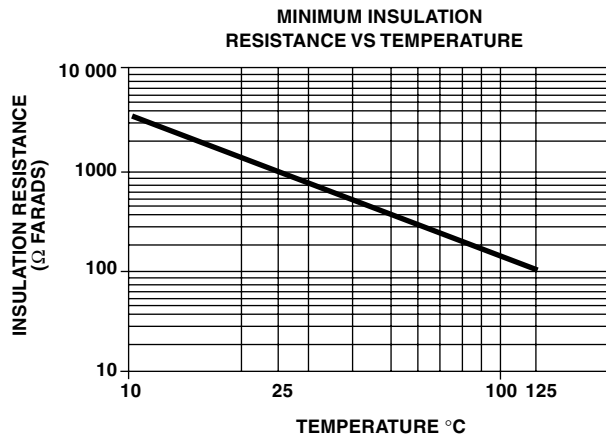
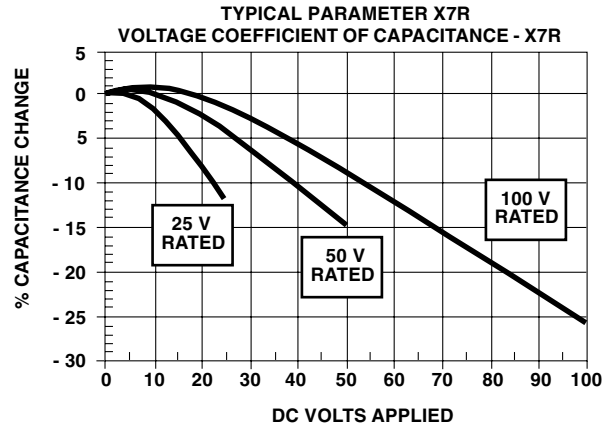
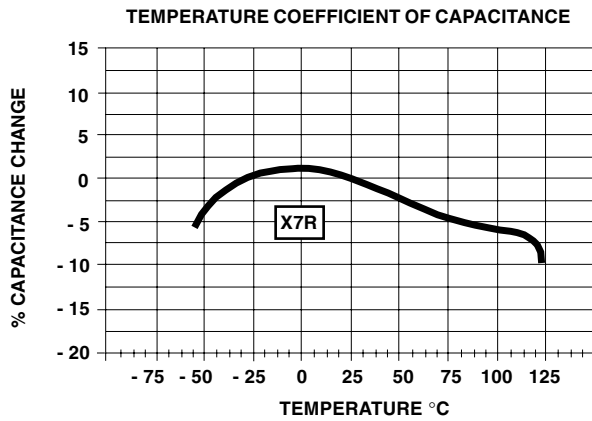
X7R DIELECTRIC																		
STYLE		VJ1808 ¹⁾			VJ1812 ¹⁾			VJ1825 ¹⁾			VJ2220 ¹⁾		VJ2225 ¹⁾			VJ3640 ¹⁾		
EIA TYPE		-			1812			1825			-		-			-		
VOLTAGE (Vdc)		-	50	100	25	50	100	25	50	100	50	100	25	50	100	25	50	100
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X7R DIELECTRIC - TYPICAL PARAMETERS





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