

Surface Mount Multilayer Ceramic Chip Capacitors for Film Cap Replacement



FEATURES

- An alternative to film capacitors for use in high frequency filtering in automotive audio, equalizer and crossover network applications
- Characteristics similar to film capacitors with the reliability of ceramics
- Available in 0603 to 1812 case sizes
- Surface Mount, precious metal technology wet build process



RoHS
COMPLIANT

ELECTRICAL SPECIFICATIONS

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

Operating Temperature: - 30 °C to + 85 °C

Capacitance Range: 470 pF to 1.0 µF

Voltage Range: 25 Vdc

Temperature Coefficient of Capacitance (TCC):
± 4.7 % from - 30 °C to + 85 °C

Dissipation Factor (DF):
3.5 % maximum at 1.0 V_{rms} and 1 kHz

Aging Rate: 1 % maximum per decade

Insulation Resistance (IR):

At + 25 °C and rated voltage 100 000 MΩ minimum or 1000 ΩF, whichever is less.

At + 125 °C and rated voltage 10 000 MΩ minimum or 100 ΩF, 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

≤ 25 Vdc: DWV at 250 % of rated voltage

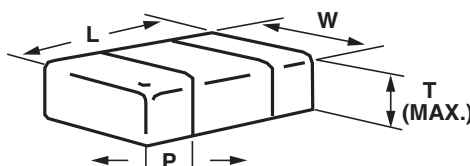
ORDERING INFORMATION

VJ1206	F	104	J	X	X	A	T
CASE CODE	DIELECTRIC	CAPACITANCE NOMINAL CODE	CAPACITANCE TOLERANCE	TERMINATION	DC VOLTAGE RATING ⁽¹⁾	MARKING	PACKAGING
0603 0805 1206 1210 1812	F = Y5E	Expressed in picofarads (pF). The first two digits are significant, the last digit is the number of zeros to follow. Example: 104 = 100 000 pF	J = ± 5 % K = ± 10 % M = ± 20 %	X = Ni barrier, tin plated finish	X = 25 V	A = Unmarked	T = 7" reel/plastic tape C = 7" reel/paper tape R = 11 1/4" reel/plastic tape P = 11 1/4" reel/paper tape

Note:

⁽¹⁾ DC voltage rating should not be exceeded in application

DIMENSIONS in inches [millimeters]



EIA STYLE	PART ORDERING NUMBER	LENGTH (L)	WIDTH (W)	MAXIMUM THICKNESS (T)	TERMINATION (P)	
					MINIMUM	MAXIMUM
0603	VJ0603	0.063 ± 0.005 [1.60 ± 0.12]	0.031 ± 0.005 [0.80 ± 0.12]	0.036 [0.92]	0.012 [0.30]	0.018 [0.46]
0805	VJ0805	0.079 ± 0.008 [2.00 ± 0.20]	0.049 ± 0.008 [1.25 ± 0.20]	0.057 [1.45]	0.010 [0.25]	0.028 [0.71]
1206	VJ1206	0.126 ± 0.008 [3.20 ± 0.20]	0.063 ± 0.008 [1.60 ± 0.20]	0.067 [1.70]	0.010 [0.25]	0.028 [0.71]
1210	VJ1210	0.126 ± 0.008 [3.20 ± 0.20]	0.098 ± 0.008 [2.50 ± 0.20]	0.067 [1.70]	0.010 [0.25]	0.028 [0.71]
1812	VJ1812	0.177 ± 0.010 [4.50 ± 0.25]	0.126 ± 0.008 [3.20 ± 0.20]	0.086 [2.18]	0.010 [0.25]	0.030 [0.76]



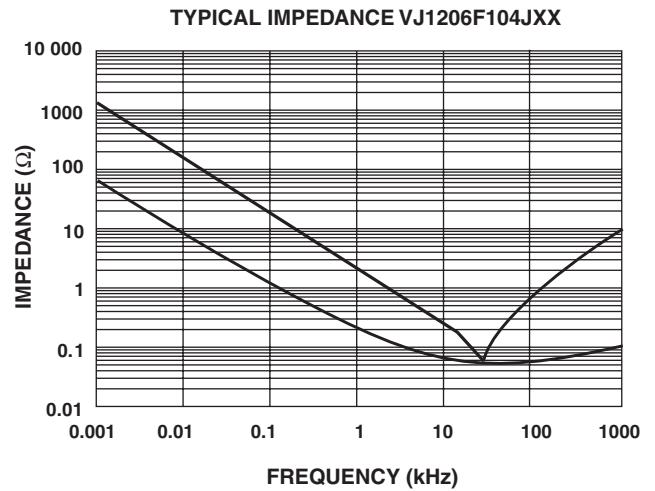
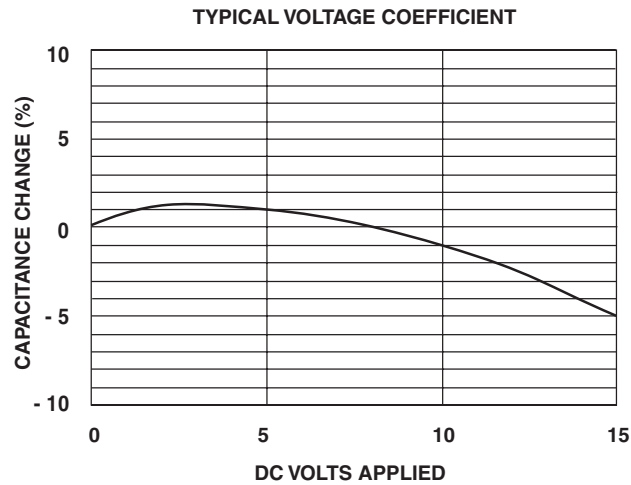
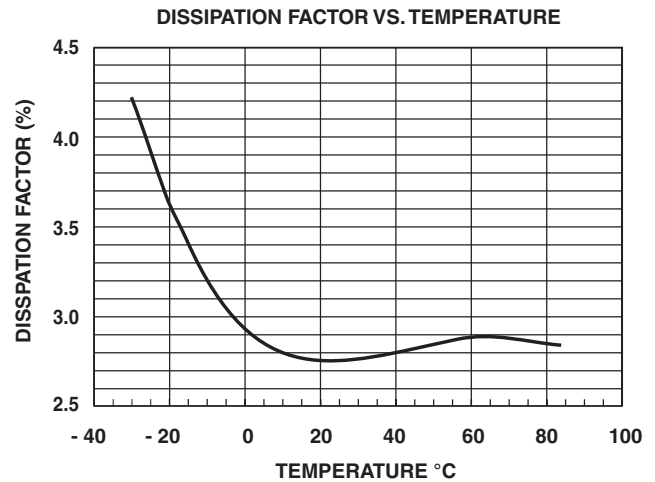
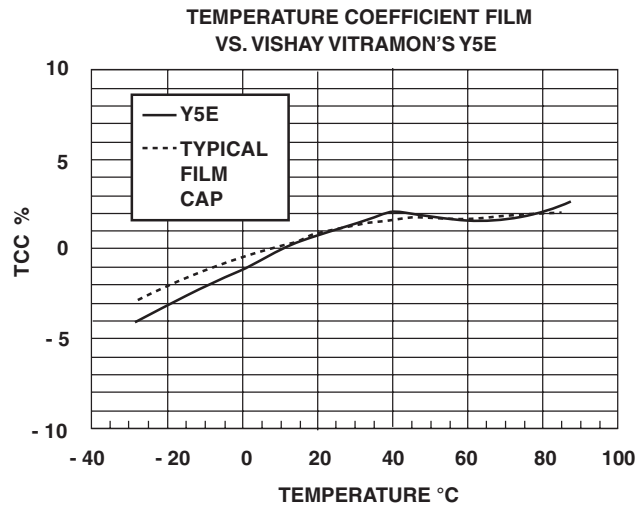
SELECTION CHART						
STYLE		VJ0603	VJ0805	VJ1206	VJ1210 ⁽¹⁾	VJ1812 ⁽¹⁾
EIA TYPE		0603	0805	1206	1210	1812
VOLTAGE (Vdc)		25	25	25	25	25
CAP. CODE	CAP.					
101	100 pF					
121	120 pF					
151	150 pF					
181	180 pF					
221	220 pF					
271	270 pF					
331	330 pF					
391	390 pF					
471	470 pF	•	•			
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 μ F	•	•	•	•	
123	0.012 μ F	•	•	•	•	
153	0.015 μ F	•	•	•	•	
183	0.018 μ F		•	•	•	
223	0.022 μ F		•	•	•	•
273	0.027 μ F		•	•	•	•
333	0.033 μ F		•	•	•	•
393	0.039 μ F			•	•	•
473	0.047 μ F			•	•	•
563	0.056 μ F			•	•	•
683	0.068 μ F			•	•	•
823	0.082 μ F			•	•	•
104	0.10 μ F			•	•	•
124	0.12 μ F				•	•
154	0.15 μ F				•	•
184	0.18 μ F				•	•
224	0.22 μ F				•	•
274	0.27 μ F				•	•
334	0.33 μ F				•	•
394	0.39 μ F					•
474	0.47 μ F					•
564	0.56 μ F					•
684	0.68 μ F					•
824	0.82 μ F					•
105	1.0 μ F					•
125	1.2 μ F					
155	1.5 μ F					
185	1.8 μ F					
225	2.2 μ F					

Note:

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



CER-F (Y5E) DIELECTRIC - TYPICAL PARAMETERS





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