

## Multilayer Ceramic Chip Capacitors for High Frequency Applications



### FEATURES

- C0G is an ultra-stable dielectric offering a Temperature Coefficient of Capacitance (TCC) of  $0 \pm 30$  ppm/°C over the entire temperature range.
- Low Dissipation Factor (DF).



RoHS  
COMPLIANT

### APPLICATIONS

- Ideal for critical timing applications.
- Ideal for tuning applications.

### ELECTRICAL SPECIFICATIONS

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

**Capacitance Range:** 1.0 pF to 680 pF.

**Temperature Coefficient of Capacitance (TCC):**  
 $0 \pm 30$  ppm/°C from - 55 °C to + 125 °C.

**Dissipation Factor (DF):**  
0.1 % maximum at 1.0 Vrms and 1kHz for values >1000 pF.  
0.1 % maximum at 1.0 Vrms and 1MHz for values ≤1000 pF.

### 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

≤ 200 Vdc : DWV at 250 % of rated voltage.

### ORDERING INFORMATION

VJ0805	Q	101	K	X	A	A	T	### <sup>2)</sup>
CASE CODE	DIELECTRIC	CAPACITANCE NOMINAL CODE	CAPACITANCE TOLERANCE	TERMINATION	DC VOLTAGE RATING <sup>1)</sup>	MARKING	PACKAGING	PROCESS CODE
0805 1206 1210	Q = High Q	Expressed in picofarads (pF). The first two digits are significant, the third is a multiplier. An "R" indicates a decimal point. <b>Examples:</b> 101 = 100 pF 1R8 = 1.8 pF	C = ± 0.25 pF D = ± 0.5 pF F = ± 1 % G = ± 2 % H = ± 3 % J = ± 5 % K = ± 10 % <b>NOTE:</b> C, D < 10 pF F, G, H ≥ 10 pF J, K ≥ 10 pF	X = Ni barrier 100 % tin plated.	A = 50 V B = 100 V C = 200 V	A = Unmarked M = Marked	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
2. Process Code may be added with up to three digits, used to control non-standard products and/or special requirements

# VJ High Q Dielectric

Vishay Vitramon

Multilayer Ceramic Chip Capacitors  
for High Frequency Applications



HIGH Q DIELECTRIC										
STYLE		VJ0805			VJ1206			VJ1210		
EIA TYPE		0805			1206			1210 <sup>1)</sup>		
VOLTAGE (Vdc)		50	100	200	50	100	200	50	100	200
CAP. CODE	CAP.									
1R0	1.0 pF									
1R2	1.2 pF									
1R5	1.5 pF									
1R8	1.8 pF									
2R2	2.2 pF									
2R7	2.7 pF									
3R3	3.3 pF									
3R9	3.9 pF									
4R7	4.7 pF									
5R6	5.6 pF									
6R8	6.8 pF									
8R2	8.2 pF									
100	10 pF									
120	12 pF									
150	15 pF									
180	18 pF									
220	22 pF									
270	27 pF									
330	33 pF									
390	39 pF									
470	47 pF									
560	56 pF									
680	68 pF									
820	82 pF									
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									

**Note**

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



**HIGH Q DIELECTRIC - TYPICAL PARAMETERS**

