



# **Multilayer Ceramic Chip Capacitors**



### **FEATURES**

 C0G is an ultra-stable dielectric offering a Temperature Coefficient of Capacitance (TCC) of 0 ± 30ppm/ °C.



- · Low Dissipation Factor (DF).
- · Ideal for critical timing and tuning applications.

## **GENERAL SPECIFICATIONS**

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

Capacitance Range: 1.0 pF to 0.056 μF.

## **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 1 kHz for values > 1000 pF. 0.1 % maximum at 1.0 Vrms and 1 MHz for values  $\leq$  1000 pF.

## Insulation Resistance (IR):

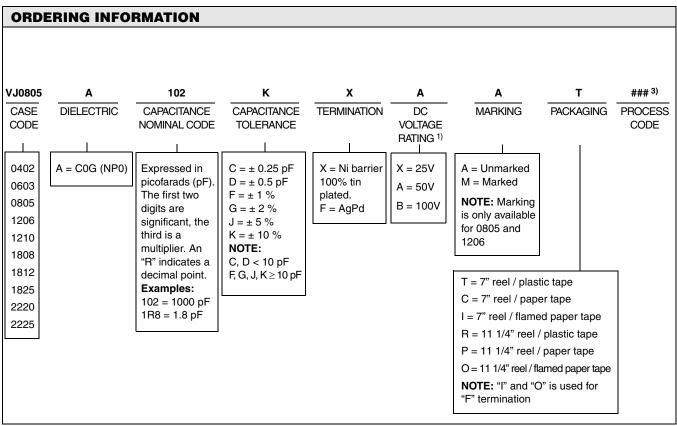
At + 25 °C and rated voltage 100,000 M $\Omega$  minimum or 1000  $\Omega$ F, whichever is less.

At + 125 °C and rated voltage 10,000 M $\Omega$  minimum or 100  $\Omega$ 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 50mA

≤ 100V DC : DWV at 250 % of rated voltage.



### Note

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

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COG	(NPO) D	IEL	ECT	RIC																			
STYLE		١	/ <b>J</b> 040	2	VJC	VJ0603		VJ0805		VJ1206		VJ1210 1)		VJ1808 1)		VJ1812 1)		VJ1825 1)		VJ2220 1)		VJ2225 1)	
EIA TYPE		0402			0603		0805		1206		1210		-		1812		1825		-		-		
VOLTAGE (Vdc)		25 50		100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	
CAP.	CAP.																						
1R0	1.0 pF																						
1R2	1.2 pF																						
1R5 1R8	1.5 pF 1.8 pF																						
2R2	2.2 pF																						
2R7	2.7 pF																						
3R3	3.3 pF																						
3R9 4R7	3.9 pF 4.7 pF																						
5R6	5.6 pF																						
6R8	6.8 pF																						
8R2 100	8.2 pF																						
120	10 pF 12 pF																						
150	15 pF																						
180	18 pF																						
220 270	22 pF 27 pF																						
330	33 pF																						
390	39 pF																						
470	47 pF																						
560 680	56 pF 68 pF																						
820	82 pF																						
101	100 pF																						
121	120 pF																						
151 181	150 pF 180 pF																						
221	220 pF																						
271	270 pF																						
331	330 pF																						
391 471	390 pF 470 pF																						
561	560 pF																						
681	680 pF																						
821	820 pF																						
102 122	1000 pF 1200 pF																						
152	1500 pF																						
182	1800 pF																						
222	2200 pF																						
272 332	2700 pF 3300 pF							-															
392	3900 pF																						
472	4700 pF																						
562	5600 pF																						
682 822	6800 pF 8200 pF					<u> </u>		-															
103	0.010 μF																						
123	0.012 μF																						
153	0.015 μF																						
183 223	0.018 μF							-															
273	0.022 μF 0.027 μF																						
333	0.033 μF																						
393	0.039 μF																						
473	0.047 μF							-								1							
563	0.056 μF		<u> </u>	<u> </u>	<u> </u>			<u> </u>			<u> </u>			<u> </u>			<u> </u>	<u> </u>		<u> </u>		<u> </u>	

# Note

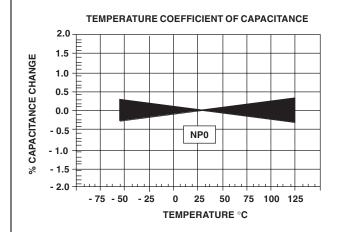
See soldering recommendations within this data book, or visit <a href="https://www.vishay.com/doc?45034">www.vishay.com/doc?45034</a>

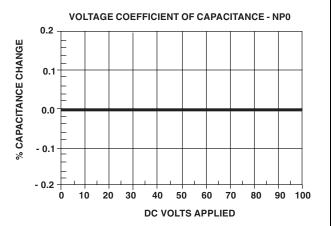


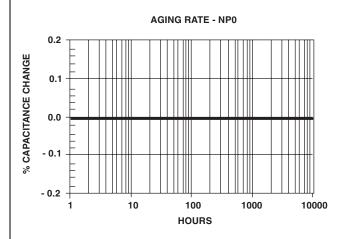


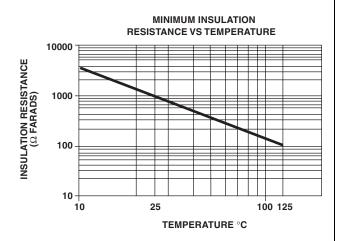
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# **COG (NPO) DIELECTRIC - TYPICAL PARAMETERS**









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Vishay

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