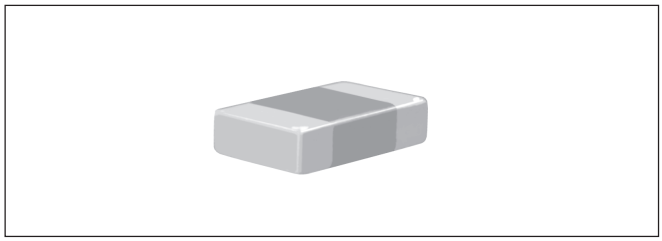
Multilayer Ceramic Chip Capacitors



FEATURES

- COG is an ultra-stable dielectric offering a Temperature Coefficient of Capacitance (TCC) of 0 ± 30PPM/°C over the entire temperature range.
- Low Dissipation Factor (DF).
- Ideal for critical timing and tuning applications.

GENERAL SPECIFICATIONS

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

Capacitance Range: 1.0pF to 680pF.

Temperature Coefficient of Capacitance (TCC):
0 ± 30PPM/°C from - 55°C to + 125°C.

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

Insulation Resistance (IR):
@ + 25°C and rated voltage 100,000 Megohms minimum or 1000 ohm-farads, whichever is less.

@ + 125°C and rated voltage 10,000 Megohms minimum or 100 ohm-farads, whichever is less.

Dielectric Withstanding Voltage (DWV):
250% of rated voltage for 5 ± 1 seconds, 50 milliamps current maximum.

ORDERING INFORMATION

VJ	0805	Q	102	K	X	A	A	T
PRODUCT SERIES	CASE SIZE	DIELECTRIC	CAPACITANCE NOMINAL CODE	CAPACITANCE TOLERANCE	TERMINATION	DC VOLTAGE RATING	MARKING	PACKAGING
VJ = MLCC	0603 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. **Examples:** 102 = 1000pF. 1R8 = 1.8pF.	C = ± 0.25pF (1 to 25pF) D = ± 0.5pF (1 to 50pF) F = ± 1% (≥ 10pF) G = ± 2% (≥ 5pF) J = ± 5% (≥ 2pF) K = ± 10% (≥ 1pF)	X = Nickel barrier with 100% tin plated finish F = Palladium silver	A = 50V B = 100V C = 200V	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 B = Bulk **NOTE:** 0402 and 0603 available in paper tape only

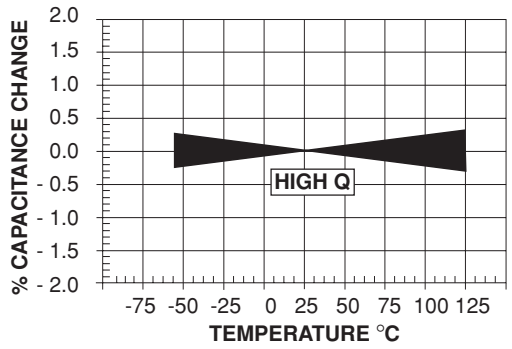
VJ High Q Dielectric

Vishay Vitramon

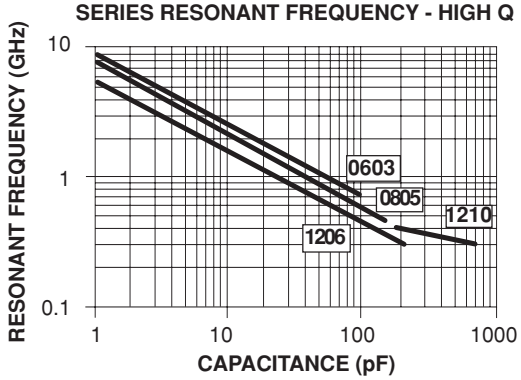
HIGH Q DIELECTRIC													
STYLE		VJ0603			VJ0805			VJ1206			VJ1210		
E.I.A. TYPE		0603			0805			1206			1210		
VOLTAGE (VDC)		50	100	—	50	100	200	50	100	200	50	100	200
Capacitance Code	Capacitance pF												
1R0	1.0												
1R2	1.2												
1R5	1.5												
1R8	1.8												
2R2	2.2												
2R7	2.7												
3R3	3.3												
3R9	3.9												
4R7	4.7												
5R6	5.6												
6R8	6.8												
8R2	8.2												
100	10												
120	12												
150	15												
180	18												
220	22												
270	27												
330	33												
390	39												
470	47												
560	56												
680	68												
820	82												
101	100												
121	120												
151	150												
181	180												
221	220												
271	270												
331	330												
391	390												
471	470												
561	560												
681	680												
821	820												

HIGH Q - DIELECTRIC TYPICAL PARAMETERS

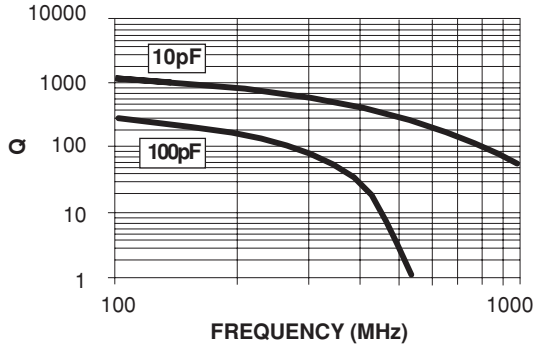
TEMPERATURE COEFFICIENT OF CAPACITANCE



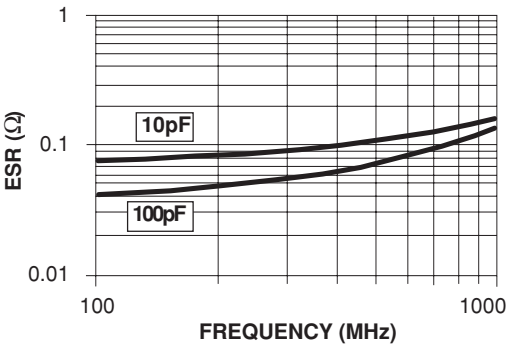
SERIES RESONANT FREQUENCY - HIGH Q



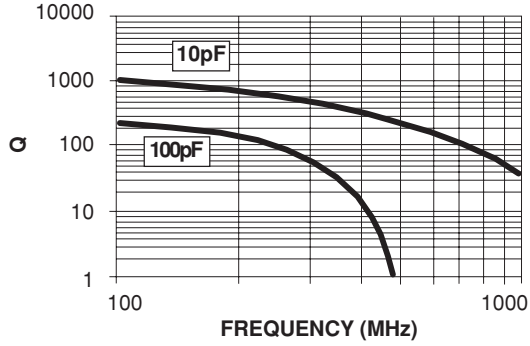
Q vs FREQUENCY - VJ0805, 50V



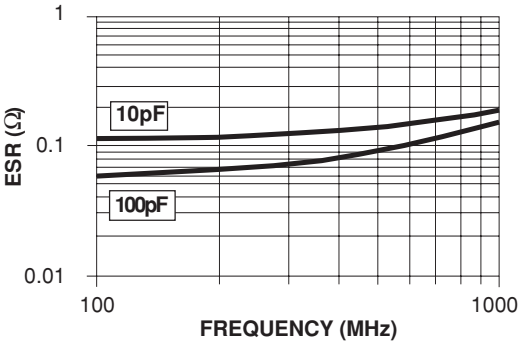
ESR vs FREQUENCY - VJ0805, 50V



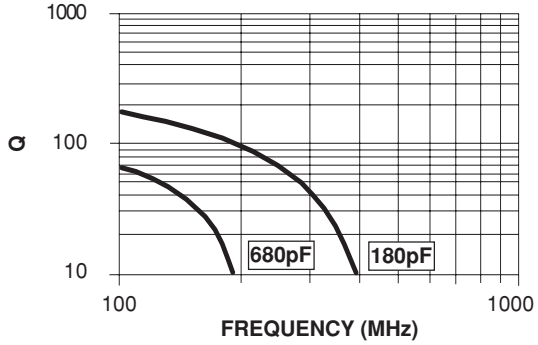
Q vs FREQUENCY - VJ1206, 50V



ESR vs FREQUENCY - VJ1206, 50V



Q vs FREQUENCY - VJ1210, 50V



ESR vs FREQUENCY - VJ1210, 50V