



MULTILAYER CERAMIC CHIP CAPACITORS

VJ...W1BC X7R Dielectric



Surface-Mount MLCC Capacitors for Commodity Applications

KEY BENEFITS

- Stable Class 2 dielectric
- 100 % tin terminations
- Available in standard case sizes: 0402, 0603, 0805, 1206, 1210

APPLICATIONS

- Telecommunications
- Consumer electronics
- Power supplies
- Industrial



Surface-Mount Multilayer Ceramic Chip Capacitors for Commodity Applications

- FEATURES**
- Stable class 2 dielectric
 - Four standard sizes
 - High capacitance per unit volume
 - Supplied in tape on reel
 - For high frequency applications
 - Nil-barrier with 100% IrI terminations
 - Dry etch technology process
 - Base Metal Electrode system (BME)
 - Compliant to RoHS Directive 2002/95/EC
 - Halogen-free according to IEC 61249-2-21 definition
- APPLICATIONS**
- Consumer electronics
 - Telecommunications
 - Data processing
- RoHS COMPLIANT**
 HALOGEN-FREE



ELECTRICAL SPECIFICATION

Note: Electrical characteristics at +25 °C, 30% to 70% relative humidity, unless otherwise specified.

Operating Temperature: -55 °C to +125 °C

Capacitance Range: 100 pF to 10 μF

Voltage Range: 10 V_{DC} to 100 V_{DC}

Temperature Coefficient of Capacitance (TCC)

±1% without voltage applied

Dispensation Factor (DF):

10 V ≤ 5%
 ≤ 10% for 0603 ≥ 0.33 μF; 0805 ≥ 2.2 μF; 1206 ≥ 2.2 μF

16 V ≤ 3.5%
 ≤ 10% for 0603 ≥ 0.093 μF; 0803 ≥ 0.15 μF; 0805 ≥ 0.68 μF; 1206 ≥ 2.2 μF; 1210 ≥ 4.7 μF

25 V ≤ 3.5%
 ≤ 5% for 0805 ≥ 1 μF

≤ 7% for 0803 ≥ 0.33 μF; 1206 ≥ 4.7 μF

≤ 10% for 0402 ≥ 0.10 μF; 0603 ≥ 0.47 μF; 0805 ≥ 2.2 μF; 1206 ≥ 6.8 μF

± 50 V ≤ 2.5%
 ≤ 3% for 0603 ≥ 0.047 μF; 0805 ≥ 0.18 μF; 1206 ≥ 0.47 μF

Test Conditions for Capacitance and DF measurement:

For C ≤ 10 μF apply 1.0 V_{RMS} ± 0.2 V_{RMS}, 1.0 kHz ± 10%
 For C > 10 μF apply 0.5 V_{RMS} ± 0.2 V_{RMS}, 120 Hz ± 20%

ORDERING INFORMATION

MMSC CODE	Y	DIELECTRIC	SIZE	CAPACITANCE	J	TOLERANCE	X	TERMINATION	G	VOLTAGE	PACKAGING	W1BC PROCESS CODE FOR BASIC COMMODITY
0402	Y = X7R		101	Two significant digits followed by the number by line	J = ± 5% (1)		X = Nil-barrier			Y = 63 V P = 15% real/paper J = 18 V X = 25 V A = 50 V B = 100 V		
0605				101 = 100 pF	M = ± 20%							
1206				102 = 1000 pF								
1210				103 = 10,000 pF								

Note: (1) Not all values, see selection chart sizes 0603, 0805, 1206

SELECTION CHART

DIELECTRIC	VOLTAGE (V _{DC})	SIA CODE	X7R				W1BC						
			10 V	15 V	25 V	50 V	10 V	16 V	25 V	50 V			
101	100 pF		G	J	X	A	B	S	S	S	S	A	B
151	150 pF		G	J	X	A	B	S	S	S	S	A	B
181	180 pF		G	J	X	A	B	S	S	S	S	A	B
271	270 pF		G	J	X	A	B	S	S	S	S	A	B
331	330 pF		G	J	X	A	B	S	S	S	S	A	B
391	390 pF		G	J	X	A	B	S	S	S	S	A	B
471	470 pF		G	J	X	A	B	S	S	S	S	A	B
561	560 pF		G	J	X	A	B	S	S	S	S	A	B
681	680 pF		G	J	X	A	B	S	S	S	S	A	B
102	1,000 pF		G	J	X	A	B	S	S	S	S	A	B
122	1.2 nF		G	J	X	A	B	S	S	S	S	A	B
152	1.5 nF		G	J	X	A	B	S	S	S	S	A	B
182	1.8 nF		G	J	X	A	B	S	S	S	S	A	B
222	2.2 nF		G	J	X	A	B	S	S	S	S	A	B
272	2.7 nF		G	J	X	A	B	S	S	S	S	A	B
332	3.3 nF		G	J	X	A	B	S	S	S	S	A	B
392	3.9 nF		G	J	X	A	B	S	S	S	S	A	B
472	4.7 nF		G	J	X	A	B	S	S	S	S	A	B
562	5.6 nF		G	J	X	A	B	S	S	S	S	A	B
682	6.8 nF		G	J	X	A	B	S	S	S	S	A	B
103	10 nF		G	J	X	A	B	S	S	S	S	A	B
123	12 nF		G	J	X	A	B	S	S	S	S	A	B
153	15 nF		G	J	X	A	B	S	S	S	S	A	B
183	18 nF		G	J	X	A	B	S	S	S	S	A	B
223	22 nF		G	J	X	A	B	S	S	S	S	A	B
273	27 nF		G	J	X	A	B	S	S	S	S	A	B
333	33 nF		G	J	X	A	B	S	S	S	S	A	B
393	39 nF		G	J	X	A	B	S	S	S	S	A	B
473	47 nF		G	J	X	A	B	S	S	S	S	A	B
563	56 nF		G	J	X	A	B	S	S	S	S	A	B
683	68 nF		G	J	X	A	B	S	S	S	S	A	B
104	100 nF		G	J	X	A	B	S	S	S	S	A	B
124	120 nF		G	J	X	A	B	S	S	S	S	A	B
154	150 nF		G	J	X	A	B	S	S	S	S	A	B
184	180 nF		G	J	X	A	B	S	S	S	S	A	B
224	220 nF		G	J	X	A	B	S	S	S	S	A	B
274	270 nF		G	J	X	A	B	S	S	S	S	A	B
334	330 nF		G	J	X	A	B	S	S	S	S	A	B
394	390 nF		G	J	X	A	B	S	S	S	S	A	B
474	470 nF		G	J	X	A	B	S	S	S	S	A	B
564	560 nF		G	J	X	A	B	S	S	S	S	A	B
684	680 nF		G	J	X	A	B	S	S	S	S	A	B
105	1,000 nF		G	J	X	A	B	S	S	S	S	A	B
155	1.5 μF		G	J	X	A	B	S	S	S	S	A	B
225	2.2 μF		G	J	X	A	B	S	S	S	S	A	B
335	3.3 μF		G	J	X	A	B	S	S	S	S	A	B
475	4.7 μF		G	J	X	A	B	S	S	S	S	A	B
685	6.8 μF		G	J	X	A	B	S	S	S	S	A	B
106	10 μF		G	J	X	A	B	S	S	S	S	A	B
156	15 μF		G	J	X	A	B	S	S	S	S	A	B
226	22 μF		G	J	X	A	B	S	S	S	S	A	B
336	33 μF		G	J	X	A	B	S	S	S	S	A	B
476	47 μF		G	J	X	A	B	S	S	S	S	A	B
107	100 μF		G	J	X	A	B	S	S	S	S	A	B

Note: Letters indicate product thickness, see packaging quantities
 * Not in 3% code (J) tolerance

Revision 05-Jul-10

Build Vishay into your Design

DISCLAIMER All product specifications and data are subject to change without notice. Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product. Vishay disclaims any and all liability arising out of the use or application of any product described herein or any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed herein, which apply to these products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications. Product names and markings noted herein may be trademarks of their respective owners.

For technical questions, contact mlcc@vishay.com

单击下面可查看定价，库存，交付和生命周期等信息

[>>Vishay\(威世\)](#)

[>>点击查看相关商品](#)