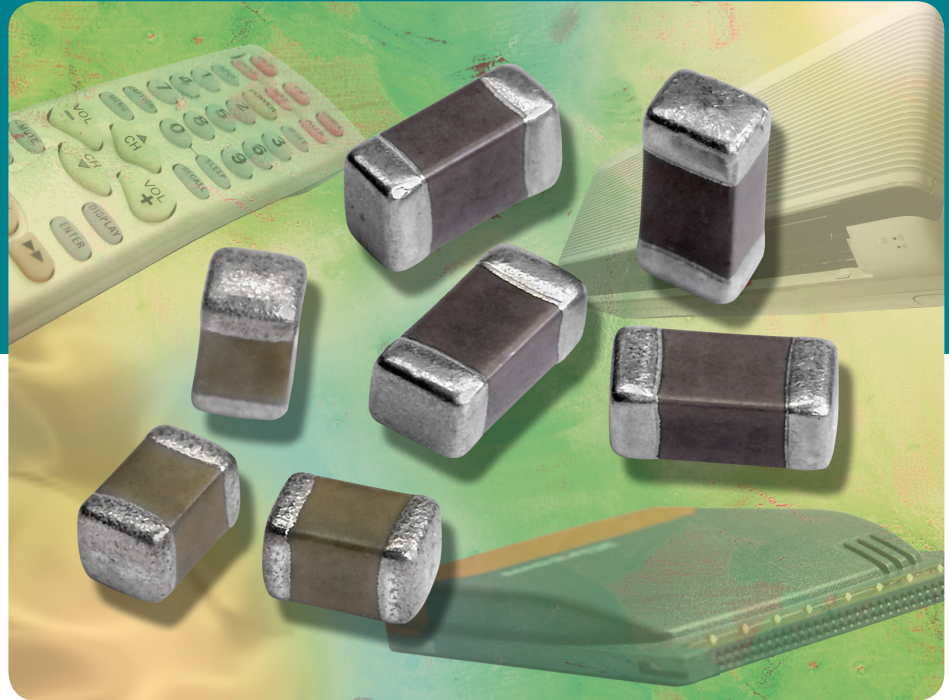




# MULTILAYER CERAMIC CHIP CAPACITORS

VJ...W1BC Y5V Dielectric



## Surface-Mount MLCC Capacitors for Commodity Applications

### KEY BENEFITS

- Class 3 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

- Class 3 dielectric
- Four standard sizes
- High capacitance per unit volume
- Supplied in tape on reel
- For high frequency applications
- Ni-barrier with 100 % Ir 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
- Mobile applications



## ELECTRICAL SPECIFICATION

- Note
- Electrical characteristics at 20 °C, 30 % to 70 % relative humidity, unless otherwise specified

**Operating Temperature:** -25 °C to +85 °C

**Capacitance Range:** 10 pF to 100 µF

**Voltage Range:** 6.3 V<sub>DC</sub> to 100 V<sub>DC</sub>

**Temperature Coefficient of Capacitance (TCC):**

+30 % / -80 % without voltage applied

**Dispersion Factor (DF):**

0.3 V<sub>DC</sub> ≤ 2.0 %

10 V<sub>DC</sub> ≤ 12.5 %

1.20 % for 0402 ± 0.47 µF

1.20 % for 0402 ± 0.68 µF

≤ 12.5 % for 0402 ≥ 0.22 µF

≤ 9 % for 0402 ≥ 0.68 µF; 0603 ± 0.68 µF

16 V<sub>DC</sub> for Cap. ≥ 1 µF; ≤ 9 %

≤ 12.5 % for 0603 ≤ 3.3 µF; 1206 ≥ 10 µF; 1210 ≥ 22 µF

≤ 7 % for 0402 ≥ 0.047 µF; 0603 ≥ 0.1 µF; 0805 ≥ 0.33 µF;

1206 ≥ 1 µF; 1210 ≥ 4.7 µF

≥ 50 V<sub>DC</sub> ≤ 5.0 %

≤ 7 % for 0603 ≥ 0.1 µF; 0805 ≥ 0.47 µF

**Test Conditions for Capacitance and DF Measurement:**

For C ≤ 10 µF apply 1.0 V<sub>RMS</sub> ± 0.2 V<sub>RMS</sub>, 1.0 kHz ± 10 %

For C > 10 µF apply 0.5 V<sub>RMS</sub> ± 0.2 V<sub>RMS</sub>, 120 Hz ± 20 %

DIELECTRIC		Y5V										Y5V										Y5V									
EA CODE	Q	10 V	16 V	25 V	50 V	100 V	10 V	16 V	25 V	50 V	100 V	10 V	16 V	25 V	50 V	100 V	10 V	16 V	25 V	50 V	100 V	10 V	16 V	25 V	50 V	100 V					
102	1.0 nF																														
122	1.2 nF																														
152	1.5 nF																														
182	1.8 nF																														
222	2.2 nF																														
272	2.7 nF																														
332	3.3 nF																														
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223	22 nF																														
273	27 nF																														
333	33 nF																														
393	39 nF																														
473	47 nF																														
563	56 nF																														
683	68 nF																														
823	82 nF																														
104	100 nF																														
124	120 nF																														
154	150 nF																														
174	170 nF																														
224	220 nF																														
334	330 nF																														
474	470 nF																														
684	680 nF																														
105	1.0 µF																														
155	1.5 µF																														
225	2.2 µF																														
335	3.3 µF																														
475	4.7 µF																														
685	6.8 µF																														
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686	68 µF																														
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Notes  
 • Letters indicate product thickness, please see packaging quantities  
 (1) Not in 20 % (code "M") tolerance

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