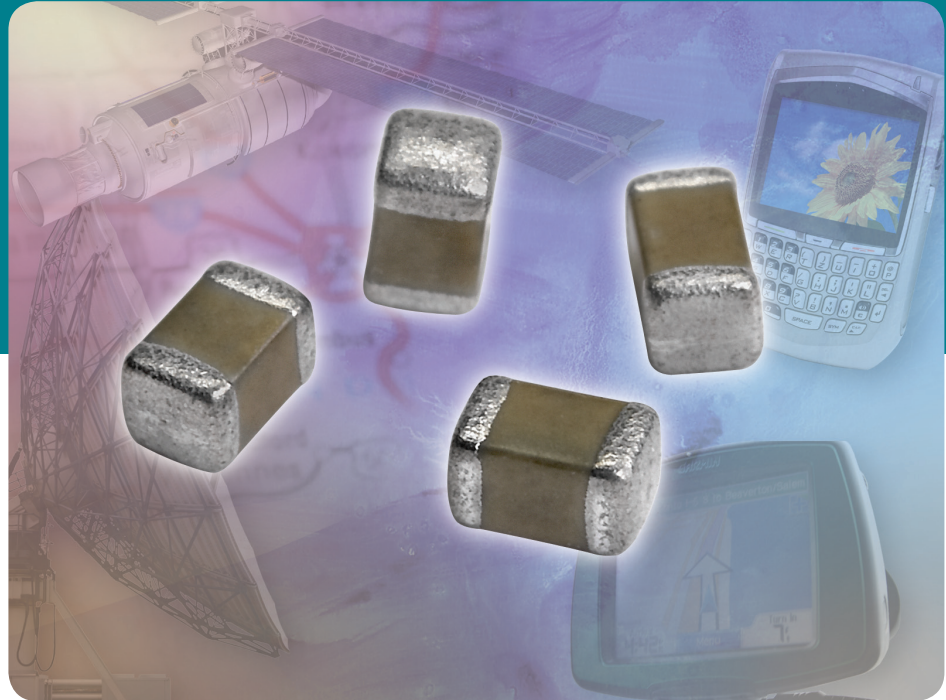




MULTILAYER CERAMIC CHIP CAPACITORS

VJ...W1BC Ultra High Q/Low ESR



Surface-Mount MLCC Capacitors for Ultra High Q/Low ESR Applications

KEY BENEFITS

- Ultra stable Class 1 dielectric
- Ultra high Q and low ESR at high frequency
- High SRF characteristic
- Ultra low capacitance to 0.1 pF
- High precision capacitance tolerance ± 0.05 pF
- 100 % tin terminations
- Available in standard case sizes: 0201, 0402, 0603

APPLICATIONS

- Mobile/cellular communication
- Satellite and cable TV tuners
- Vehicle location systems
- GPS (Global Positioning Systems)
- Radar systems
- WLAN
- RF modules

Surface-Mount Multilayer Ceramic Chip Capacitors for Ultra High Q/Low ESR Applications

FEATURES

- Ultra stable class 1 dielectric
- Ultra High Q and low ESR at high frequency
- Three standard sizes
- High SRF characteristic
- Ultra low capacitance to 0.1 pF
- High precision capacitance tolerance ± 0.05 pF
- Supplied in tape on reel
- Ni-barrier with 100 % tin terminations
- Dry sheet manufacturing technology
- Base Metal Electrode system (BME)
- Compliant to RoHS directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS COMPLIANT HALOGEN FREE

ELECTRICAL SPECIFICATIONS

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

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

Capacitance Range: 0.1 pF to 47 pF

Voltage Range: 25 V_{DC} to 250 V_{DC}

Temperature Coefficient of Capacitance (TCC):

0 ppm/°C \pm 30 ppm/°C from - 55 °C to + 125 °C

Dissipation Factor:

0201/0402: Q \geq 400 + 20 C

0603: Cap < 30 pF: Q \geq 800 + 20 C

Cap \geq 30 pF: Q \geq 1400

Test Conditions for Capacitance and DF Measurement:

Cap. \leq 1000 pF 1.0 V_{RMS} \pm 0.2 V_{RMS}, 1 MHz \pm 10 %

Cap. > 1000 pF 1.0 V_{RMS} \pm 0.2 V_{RMS}, 1 kHz \pm 10 %

SELECTION CHART

DIELECTRIC	ULTRA HIGH Q				TOLERANCE
	VJ0201	VJ0402	VJ0603	VJ0603	
STYLE	0201	0402	0603	0603	
VOLTAGE V _{DC}	25 V	50 V	100 V	250 V	
VOLTAGE CODE	X	A	A	B	P
CAP. CODE	CAP.				
0R1	L	N			B
0R2	L	N			V,B
0R3	L	N	S	S	V,B
0R4	L	N	S	S	V,B
0R5	L	N	S	S	V,B,C
0R6	L	N	S	S	V,B,C
0R7	L	N	S	S	V,B,C
0R8	L	N	S	S	V,B,C
0R9	L	N	S	S	V,B,C
1R0	L	N	S	S	V,B,C
1R2	L	N	S	S	V,B,C
1R5	L	N	S	S	V,B,C
1R8	L	N	S	S	V,B,C
2R2	L	N	S	S	V,B,C
2R4	L	N	S	S	V,B,C
2R7	L	N	S	S	V,B,C
3R3	L	N	S	S	V,B,C
3R9	L	N	S	S	V,B,C
4R7	L	N	S	S	V,B,C
5R6	L	N	S	S	B,C,D
6R8	L	N	S	S	B,C,D
8R2	L	N	S	S	B,C,D
100	L	N	S	S	F,G,J
110	L	N	S	S	F,G,J
120	L	N	S	S	F,G,J
130	L	N	S	S	F,G,J
150	L	N	S	S	F,G,J
160	L	N	S	S	F,G,J
180	L	N	S	S	F,G,J
200	L	N	S	S	F,G,J
220	L	N	S	S	F,G,J
240	L	N	S	S	F,G,J
270	L	N	S	S	F,G,J
300	L	N	S	S	F,G,J
330	L	N	S	S	F,G,J
360	L	N	S	S	F,G,J
390	L	N	S	S	F,G,J
430	L	N	S	S	F,G,J
470	L	N	S	S	F,G,J

Note
• Letters indicate product thickness, see packaging quantities

Revision 05-Jul-10



RoHS COMPLIANT HALOGEN FREE



ORDERING INFORMATION

- L** = Ultra High Q
- 0201** = Expressed in pF two significant digits followed by the number of zeros:
0R3 = 0.3 pF
1R0 = 1.0 pF
150 = 15 pF
- F** = Cap. value \leq 5 pF
V = ± 0.05 pF
B = ± 0.10 pF
C = ± 0.25 pF
D = ± 0.50 pF
5 pF > Cap. value < 10 pF
B = ± 0.10 pF
C = ± 0.25 pF
D = ± 0.50 pF Cap. value ≥ 10 pF
F = ± 1 %
G = ± 2 %
J = ± 5 %
- X** = Ni-barrier 100 % tin termination
- A** = 25 V
A = 50 V
B = 100 V
P = 250 V
- C** = 7" reel/paper
P = 13" reel/paper
- W1BC** = PROCESS CODE FOR BASIC COMMODITY

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For technical questions, contact mlcc@vishay.com

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