

Surface Mount Multilayer Ceramic Chip Capacitors for Ultra Small Commodity Applications



FEATURES

- High capacitance in unit size
- High precision dimensional tolerances
- Suitably used in high-accuracy automatic mounting machine
- Dry sheet manufacturing technology
- Halogen-free according to IEC 61249-2-21



RoHS
COMPLIANT
HALOGEN
FREE

APPLICATIONS

- Miniature microwave module
- Portable equipment - Mobile phone, PDA
- High frequency circuits

ELECTRICAL SPECIFICATIONS			
Size	0201		
Dielectric	NP0	X7R	X5R
Capacitance	0.5 pF to 100 pF	100 pF to 4.7 nF	100 pF to 0.10 μF
Capacitance Tolerance	Cap. ≤ 5 pF: C (± 0.25 pF) 5 pF < Cap. < 10 pF: D (± 0.5 pF) Cap. ≥ 10 pF: J (± 5 %)	K (± 10 %)	K (± 10 %) M (± 20 %)
Rated Voltage (Vdc)	16 V, 25 V	16 V, 50 V	6.3 V, 10 V, 50 V
Tan δ/Q	Cap. < 30 pF, Q ≥ 400 + 20 C Cap. ≥ 30 pF, Q ≥ 1000	16 V: ≤ 3.5 % 50 V: ≤ 3.0 %	6.3 V: ≤ 10 % 10 V: ≤ 5.0 % 50 V: ≤ 3.0 %
Insulation Resistance at U _R	≥ 10 GΩ	≥ 10 GΩ or R x C ≥ 500 Ω F, whichever is less	
Operating Temperature	- 55 to + 125 °C		- 55 to + 85 °C
Capacitance Change	± 30 ppm	± 15 %	
Termination	Ni/Sn lead (Pb)-free termination		

Note:

Measured at 30 ~ 70 % related humidity

NP0: apply 1.0 ± 0.2 V_{rms}, 1.0 MHz ± 10 % at the conditions of 25 °C ambient temperature

X7R, X5R: apply 1.0 ± 0.2 V_{rms}, 1.0 kHz ± 10 % at the conditions of 25 °C ambient temperature

DIMENSIONS in inches [millimeters]					
	SIZE CODE	L	W	T MAX.	MB
	0201	0.024 ± 0.0012 [0.60 ± 0.03]	0.012 ± 0.0012 [0.30 ± 0.03]	0.013 [0.33]	0.006 ± 0.002 [0.15 ± 0.05]

ORDERING INFORMATION							
VJ0201	A	100	J	X	X	C	W1BC
SIZE CODE	DIELECTRIC	CAPACITANCE	TOLERANCE	TERMINATION	RATED VOLTAGE	PACKAGING	PROCESS CODE FOR BASIC COMMODITY
0201	A = NP0 Y = X7R G = X5R	Two significant digits followed by the number of zeros. R is in place of decimal point: 0R5 = 0.5 pF 1R0 = 1.0 pF 100 = 10 pF	C = ± 0.25 pF D = ± 0.5 pF J = ± 5 % K = ± 10 % M = ± 20 %	X = Ni Barrier	Y = 6.3 V Q = 10 V J = 16 V X = 25 V A = 50 V	C = 7" reel/paper tape	

VJ0201....W1BC Ultra Small Series



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SELECTION CHART								
EIA SIZE		0201						
DIELECTRIC		NP0		X7R		X5R		
EIA CAP. CODE	CAP.	16 V	25 V	16 V	50 V	6.3 V	10 V	50 V
0R5	0.5 pF		L					
1R0	1.0 pF		L					
1R2	1.2 pF		L					
1R5	1.5 pF		L					
1R8	1.8 pF		L					
2R2	2.2 pF		L					
2R7	2.7 pF		L					
3R3	3.3 pF		L					
3R9	3.9 pF		L					
4R7	4.7 pF		L					
5R6	5.6 pF		L					
6R8	6.8 pF		L					
8R2	8.2 pF		L					
100	10 pF		L					
120	12 pF		L					
150	15 pF		L					
180	18 pF		L					
220	22 pF		L					
270	27 pF		L					
330	33 pF		L					
390	39 pF		L					
470	47 pF		L					
560	56 pF	L	L					
680	68 pF	L	L					
820	82 pF	L	L					
101	100 pF	L	L	L	L			L
121	120 pF			L	L			L
151	150 pF			L	L			L
181	180 pF			L	L			L
221	220 pF			L	L			L
271	270 pF			L	L			L
331	330 pF			L	L			L
391	390 pF			L	L			L
471	470 pF			L	L			L
561	560 pF			L	L			L
681	680 pF			L	L			L
821	820 pF			L	L			L
102	1000 pF			L	L			L
152	1500 pF			L			L	
222	2200 pF			L			L	
332	3300 pF			L			L	
472	4700 pF			L			L	
682	6800 pF						L	
103	0.010 μF						L	
153	0.015 μF							
223	0.022 μF					L		
333	0.033 μF							
473	0.047 μF							
683	0.068 μF							
104	0.10 μF					L		

Note:

Letters indicate product thickness, see packaging quantities



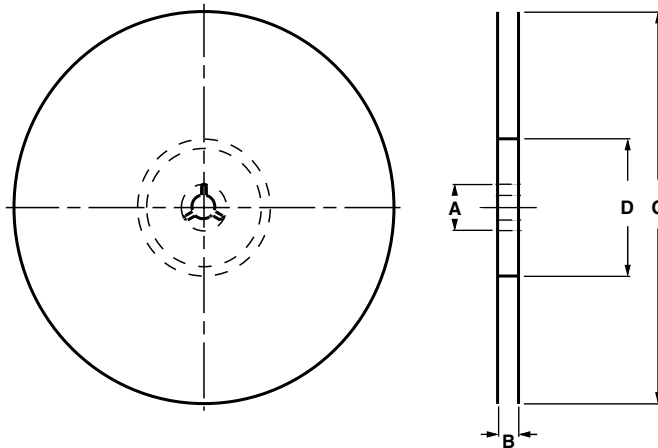
VJ0201....W1BC Ultra Small Series

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PACKAGING QUANTITIES			
SIZE (inch/mm)	THICKNESS (mm)	PAPER TAPE	
		7" reel (C)	13" reel (P)
0201 (0603)	0.30 ± 0.03	15K	-

REEL SPECIFICATIONS



REEL DIMENSIONS AND TAPE WIDTH in millimeters	
	Ø 180 mm; 7"
A	13.0 ± 1.0
B	9.0 ± 1.0
C	178.0 ± 1.0
D	60.5 ± 1.0



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