



Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

TEL: (805) 522-9998 FAX: (805) 522-9989

E-mail: frontiersales@frontierusa.com

Web: <http://www.frontierusa.com>

Multi-Layer Chip Beads

High Impedance FB 3216 & 4516 series

A. Electrical specifications:

Part Number	Impedance (OHM)	DCR (OHM) Max.	I (mA) max.
FB321611Z260	26 ± 25% (@ 100 MHz)	0.20	500
FB321611Z151	150 ± 25% (@ 100 MHz)	0.30	300
FB321611Z301	300 ± 25% (@ 100 MHz)	0.30	300
FB321611Z601	600 ± 25% (@ 100 MHz)	0.30	200
FB321611Z122	1200 ± 25% (@ 50 MHz)	0.50	100
FB321611Z202	2000 ± 25% (@ 30 MHz)	0.60	100
FB321611U310	31 ± 25% (@ 100 MHz)	0.20	500
FB321611U600	60 ± 25% (@ 100 MHz)	0.30	400
FB321611U900	90 ± 25% (@ 100 MHz)	0.30	300
FB321611U151	150 ± 25% (@ 100 MHz)	0.30	300
FB321611U301	300 ± 25% (@ 100 MHz)	0.30	300
FB321611U601	600 ± 25% (@ 100 MHz)	0.30	200
FB321611U122	1200 ± 25% (@ 50 MHz)	0.50	100
FB321611U152	1500 ± 25% (@ 50 MHz)	0.50	100
FB321611U202	2000 ± 25% (@ 30 MHz)	0.60	100
FB321611G151	150 ± 25% (@ 100 MHz)	0.30	300
FB321611G301	300 ± 25% (@ 100 MHz)	0.30	300
FB321611G601	600 ± 25% (@ 100 MHz)	0.30	200
FB321611B190	19 ± 25% (@ 100 MHz)	0.20	500
FB322513Z520	52 ± 25% (@ 100 MHz)	0.30	400
FB322513U600	60 ± 25% (@ 100 MHz)	0.30	400
FB322513U900	90 ± 25% (@ 100 MHz)	0.30	300
FB322513B310	31 ± 25% (@ 100 MHz)	0.30	400
FB451616Z800	80 ± 25% (@ 100 MHz)	0.10	500
FB451616Z151	150 ± 25% (@ 100 MHz)	0.30	300
FB451616U600	60 ± 25% (@ 100 MHz)	0.10	500
FB451616U151	150 ± 25% (@ 100 MHz)	0.30	300
FB453215Z121	120 ± 25% (@ 100 MHz)	0.30	300
FB453215Z131	130 ± 25% (@ 100 MHz)	0.30	300
FB453215B700	70 ± 25% (@ 100 MHz)	0.30	300

B. Materials:

ITEM	UNIT	Material Code				
		L	B	G	U	Z
Initial Permeability (μiac):	----	25	45	110	200	500
Maximum Permeability (μm):	----	125	125	250	450	900
Saturation Flux Density at 10 Oe (Bs):	Gauss	2000	2000	1700	1400	1500
Curie Temperature (Tc):	°C	>200	>200	>130	>130	>100
Volume Resistivity (ρ):	Ω-m	100000	100000	100000	100000	100000
Temperature Coefficient:	1/10000°C	10	10	12	13	5
Density:	g/cm ³	4.8	4.8	4.8	4.8	4.8



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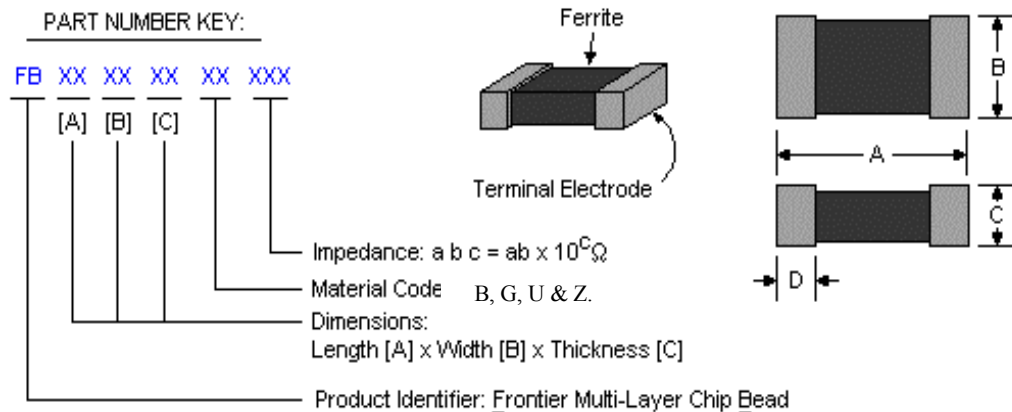
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C. Dimensions: [Unit: mm /(inch)]

Package Size	A	B	C	D
321611 (1206)	3.2 ± 0.2 (0.126 ± 0.008)	1.6 ± 0.2 (0.063 ± 0.008)	1.1 ± 0.2 (0.043 ± 0.008)	0.5 ± 0.3 (0.020 ± 0.012)
451616 (1806)	4.5 ± 0.2 (0.177 ± 0.008)	1.6 ± 0.2 (0.063 ± 0.008)	1.6 ± 0.2 (0.063 ± 0.008)	0.5 ± 0.3 (0.020 ± 0.012)

D. Part Number Key & Mechanical drawing:



FB: for Standard and high impedance series.

TI: for high current series.

FC: for GHz range noise suppression series.

D. Features:

1. High-density packaging with a pitch of 2.54 mm (0.1 Inch) max. is possible. This series require less space and have greater EMI suppression effects.
2. Excellent in physical properties, such as terminal strength, flexure strength, soldering resistance and solder-ability.
3. Applicable to both flow and IR reflow soldering.
4. High impedance covers wide frequency ranges.
5. TI series can be used in high current circuits due to its low DC resistance.
6. The products have four types of material: Material L, B, G, U & Z. Different types with the same shape are available.
7. **RoHS** compliant.