



Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

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

E-mail: frontiersales@frontierusa.com

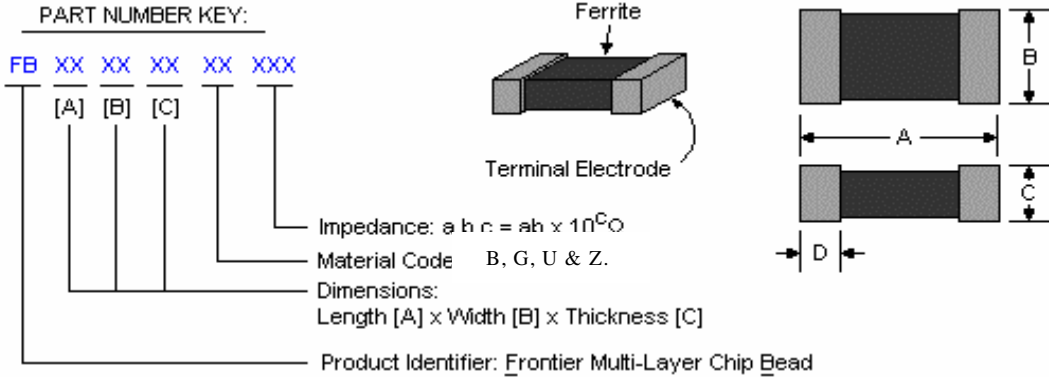
Web: <http://www.frontierusa.com>

Multi-Layer Ferrite Chip Beads

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

Package Size	A	B	C	D
100505 (0402)	1.0 ± 0.1 (0.04 ± 0.004)	0.5 ± 0.1 (0.020 ± 0.004)	0.5 ± 0.1 (0.020 ± 0.004)	0.1 Min. (0.004 Min.)
160808 (0603)	1.6 ± 0.2 (0.063 ± 0.008)	0.8 ± 0.2 (0.031 ± 0.008)	0.8 ± 0.2 (0.031 ± 0.008)	0.5 ± 0.3 (0.020 ± 0.012)
201209 (0805)	2.0 ± 0.2 (0.079 ± 0.008)	1.2 ± 0.2 (0.047 ± 0.008)	0.9 ± 0.2 (0.035 ± 0.008)	0.5 ± 0.3 (0.020 ± 0.012)
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)
321616 (1206)	3.2 ± 0.2 (0.126 ± 0.008)	1.6 ± .02 (0.063 ± 0.008)	1.6 ± 0.2 (0.063 ± 0.008)	0.5 ± 0.3 (0.020 ± 0.012)
322513 (1206)	3.2 ± 0.2 (0.126 ± 0.008)	2.5 ± .02 (0.098 ± 0.008)	1.3 ± 0.2 (0.035 ± 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)
453215 (1812)	4.5 ± 0.2 (0.177 ± 0.008)	3.2 ± 0.2 (0.126 ± 0.008)	1.5 ± 0.2 (0.059 ± 0.008)	0.5 ± 0.3 (0.020 ± 0.012)

B. Part Number Key & Mechanical drawing:



FB: for Standard and high impedance series.

TI: for high current series.

FC: for GHz range noise suppression series.

C. Materials:

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



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D. Application:

1. Computers and peripheral devices, personal computers, VCR and camera.
2. Noise suppression in digital equipments, car stereo, car engines controllers and OA electronic instruments.
3. Communication equipment.

E. 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. TI series can be used in high current circuits due to its low DC resistance.
5. B material type can minimize attenuation of the signal waveform due to its sharp impedance characteristics.
6. The products have four types of material: Material B, G, U & Z. Different types with the same shape are available.
7. **RoHS** compliant.

F. Impedance Characteristics of Materials:

1. Z Material is for applications whose blocking regions are near 100 MHz.
2. G Material is for application whose signal frequency is far from the cut off region. Suitable for application requires low insertion loss at high frequency.
3. Different materials are available for different application range.
4. With one material, higher impedance has sharper characteristics.
5. Please confirm the signal wave form to choose suitable products.

