



# FB160808 (0603) Series – SMD MULTILAYER FERRITE CHIP BEADS (HIGH IMPEDANCE)

Rev. A

## A. Electrical Specifications:

P/N	Impedance ( $\Omega$ ) $\pm 25\%$ @100MHz	DCR Max. ( $\Omega$ )	I rms. Max.(mA)
FB160808Z100	10	0.10	800
FB160808Z300	30	0.10	800
FB160808Z600	60	0.10	800
FB160808Z800	80	0.10	900
FB160808Z121	120	0.10	800
FB160808Z221	220	0.15	600
FB160808Z301	300	0.35	400
FB160808Z601	600	0.45	600
FB160808Z102	1000	0.55	500
FB160808U100	10	0.10	900
FB160808U300	30	0.10	800
FB160808U470	47	0.10	600
FB160808U600	60	0.10	800
FB160808U800	80	0.15	900
FB160808U121	120	0.15	800
FB160808U221	220	0.20	700
FB160808U301	300	0.25	900
FB160808U471	470	0.35	500
FB160808U601	600	0.45	600
FB160808U102	1000	0.55	500
FB160808G100	10	0.08	800
FB160808G310	31	0.08	800
FB160808G470	47	0.15	500
FB160808G600	60	0.20	500
FB160808G750	75	0.20	500
FB160808G121	120	0.20	500
FB160808G221	220	0.20	500
FB160808G301	300	0.35	500
FB160808G541	540	0.40	500
FB160808G601	600	0.40	500
FB160808G102	1000	0.60	300
FB160808G152	1500	0.70	250
FB160808G202	2000	0.80	200
FB160808G252	2500	1.00	200
FB160808G272	2700	1.20	100
FB160808B100	10	0.10	500
FB160808B300	30	0.10	600
FB160808B470	47	0.20	500
FB160808B600	60	0.20	600
FB160808B750	75	0.25	500
FB160808B121	120	0.25	300
FB160808B221	220	0.40	600
FB160808B301	300	0.45	200
FB160808B471	470	0.65	200
FB160808B601	600	0.65	200

## B. Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g
FB160808	1.6 (0.063)	0.8 (0.031)	0.8 (0.031)	0.3 (0.012)	2.80 (0.110)	1.00 (0.039)	0.60 (0.024)
Tol.	$\pm 0.2$ (0.008)	$\pm 0.2$ (0.008)	$\pm 0.2$ (0.008)	$\pm 0.2$ (0.008)	Typ.	Typ.	Typ.

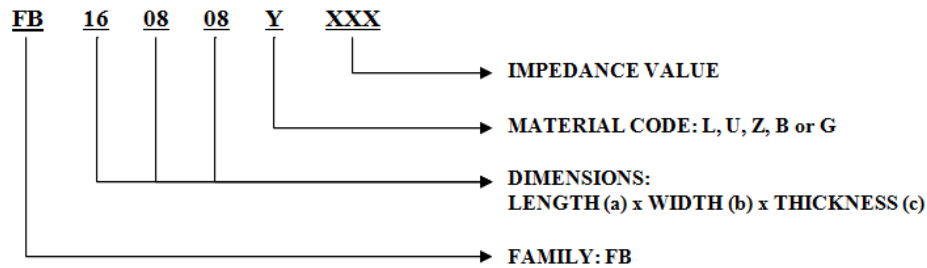
The diagram shows a 3D perspective view of the chip bead and four 2D cross-sectional views. Dimension 'a' is the total length, 'b' is the length of the ferrite core, 'c' is the thickness of the ferrite core, 'd' is the length of the copper pads, 'e' is the total length including pads, 'f' is the width of the copper pads, and 'g' is the thickness of the copper pads.



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## C. Part Number Key:

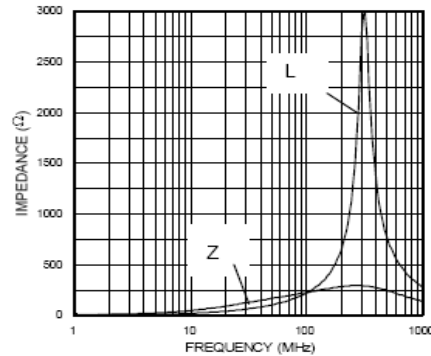
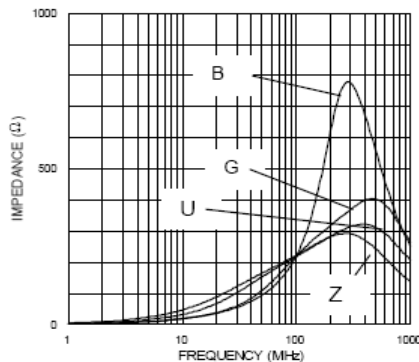


## D. Materials:

ITEM	UNIT	Material Code				
		L	B	G	U	Z
Initial Permeability ( $\mu_{iac}$ ):	----	25	45	110	200	500
Maximum Permeability ( $\mu_m$ ):	----	125	125	250	450	900
Saturation Flux Density at 10 Oe:	Gauss	2000	2000	1700	1400	1500
Curie Temperature( $T_c$ ):	$^{\circ}\text{C}$	>200	>200	>130	>100	>130
Volume Resistivity ( $\rho$ ):	$\Omega\text{-m}$	100000	100000	100000	100000	100000
Temperature Coefficient:	1/10000 $^{\circ}\text{C}$	10	10	13	5	12
Density:	$\text{g/cm}^3$	4.8	4.8	4.8	4.8	4.8

## E. Impedance Characteristics of Materials:

- Z Material is for applications whose blocking regions are near 100 MHz.
- L Material, an improvement of B Material has sharp impedance characteristic at high frequency.
- 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.
- Different materials are available for different application range.
- With one material, higher impedance has sharper characteristics.
- Please confirm the signal wave form to choose suitable products.



## F. General Information:

- FB160808-yxxx, "FB160808" = P/N, "y" = Material, "xxx" = Impedance.
- Tolerance: 25%
- Small and lightweight surface mounting type.
- Dimensions are suitable for automatic mounting
- High-density packaging with a pitch of 2.54 mm (0.1 inch) max. is possible. This series requires less space and has greater EMI suppression effects.
- Different types with the same shape are available.
- Excellent in physical properties, such as terminal strength, flexure strength, soldering resistance and solder-ability.
- Applicable to both flow and IR reflow soldering.
- High impedance covers wide frequency ranges.
- TI series can be used in high current circuits due to its low DC resistance.
- Operating temperature:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Impedance and Current Range: From  $10\ \Omega$  (900 mA) to  $2700\ \Omega$  (200 mA)
- Unspecified values available on request.
- MSL: Level 1.



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**G. Applications:**

1. Game Consoles
2. Set Top Boxes
3. Cables Modems
4. Computers
5. Mobile Communication Devices (Cell Phones, Radios, etc.)