

## MULTILAYER CHIP FERRITE BEADS- FBCA SERIES

### 多层片状铁氧体磁珠-FBCA系列



#### ■ Features

##### 产品特点

- Wide range of frequency to suppress EMI.  
频率范围宽, 可抑制EMI。
- Wide range of impedance values for various applications.  
阻抗值范围广, 适用于各种应用。
- Internal silver printed layers and magnetic shielded structure.  
内部银印层和磁屏蔽结构。
- ROHS compliant.  
符合ROHS标准。
- Operating temperature range: -55°C~125°C (Including self-temperature rise)  
工作温度范围: -55°C~125°C(含自升温)。
- AEC-Q200 qualified.  
通过AEC-Q200认证。

#### ■ Applications

##### 产品应用

- Body controls | 车身控制
- Car infotainment | 汽车信息娱乐系统
- Navigation system | 导航系统

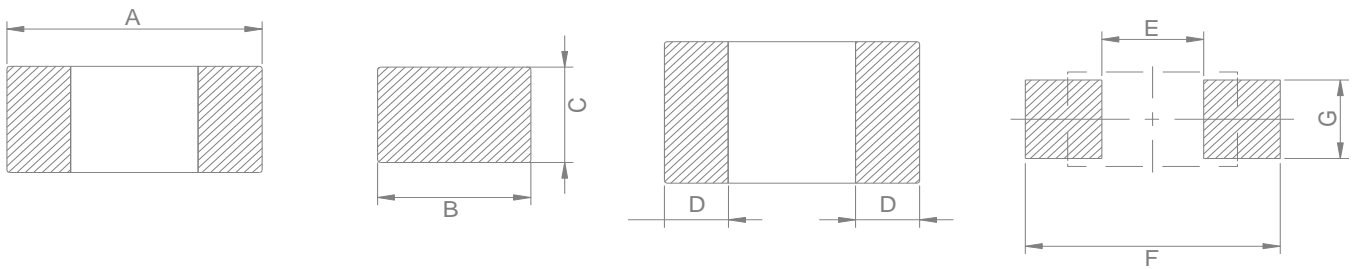
#### ■ Product Identification

##### 产品标识

FBCA Series name: High Current Ferrite Bead	1608 Size: 1.6×0.8×0.8mm	121 Inductance: 120 Ω	Y Tolerance: ±25%
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#### ■ Shape and Dimensions (Unit:mm)

##### 形状和尺寸(单位:毫米)



Series	A	B	C	D	E <sub>Typ</sub>	F <sub>Typ</sub>	G <sub>Typ</sub>
FBCA1608	1.6±0.20	0.8±0.2	0.8±0.2	0.3±0.2	0.7	1.8	0.8

## ■ Electrical Characteristics

### 电气特性

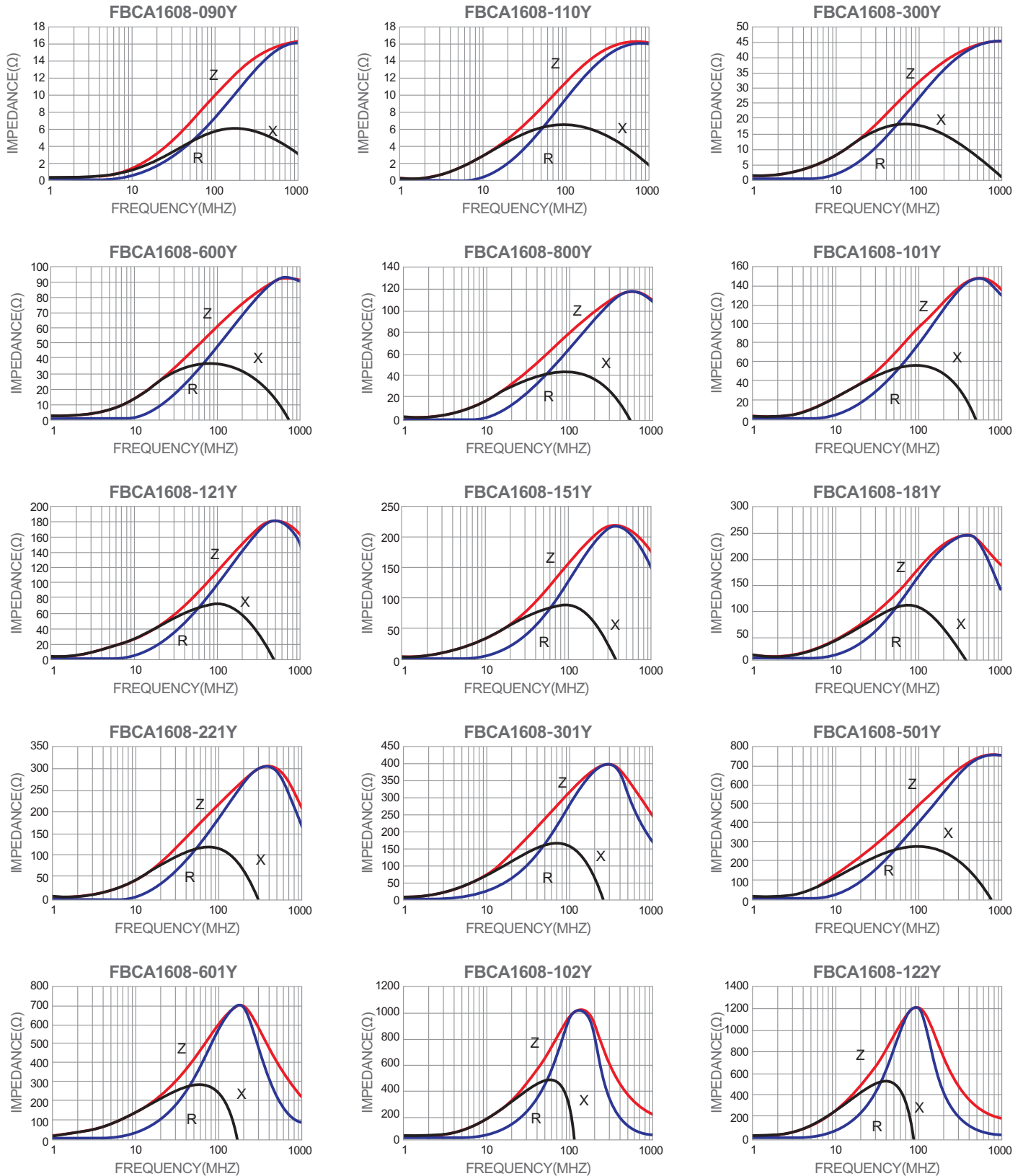
Part Number	Impedance (Ω)	Tolerance	Test Freq. (MHZ)	DCR Max (MHz)	Current Max (A)
FBCA1608-090Y	9	0-15Ω	100	0.08	1.0
FBCA1608-110Y	11	0-15Ω	100	0.08	1.0
FBCA1608-300Y	30	±25%	100	0.08	1.0
FBCA1608-600Y	60	±25%	100	0.12	1.0
FBCA1608-800Y	80	±25%	100	0.2	1.0
FBCA1608-101Y	100	±25%	100	0.2	1.0
FBCA1608-121Y	120	±25%	100	0.2	1.0
FBCA1608-151Y	150	±25%	100	0.25	1.0
FBCA1608-181Y	180	±25%	100	0.25	1.0
FBCA1608-221Y	220	±25%	100	0.3	1.0
FBCA1608-301Y	300	±25%	100	0.3	1.0
FBCA1608-501Y	500	±25%	100	0.4	1.0
FBCA1608-601Y	600	±25%	100	0.4	1.0
FBCA1608-102Y	1000	±25%	100	0.55	0.5
FBCA1608-122Y	1200	±25%	100	0.65	0.5
FBCA1608-152Y	1500	±25%	100	0.75	0.4
FBCA1608-182Y	1800	±25%	100	0.8	0.4
FBCA1608-202Y	2000	±25%	100	0.9	0.4

## Notes

- Rated Current: Applied the current to chip bead, the temperature rise shall not be more than 40°C.  
额定电流：施加到磁珠上的电流，温升不得超过 40°C。
- Measuring Equipment: Z: HP4291A.RDC: HP4338B or CHEN HWA 502.  
测量设备： Z: HP4291A.RDC: HP4338B 或 CHEN HWA 502。

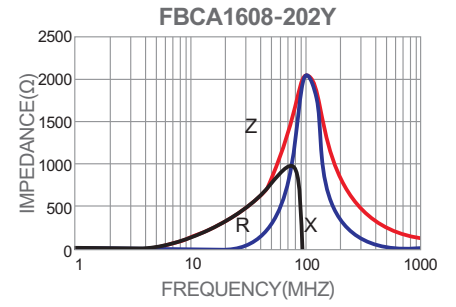
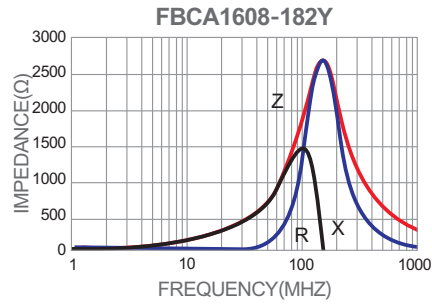
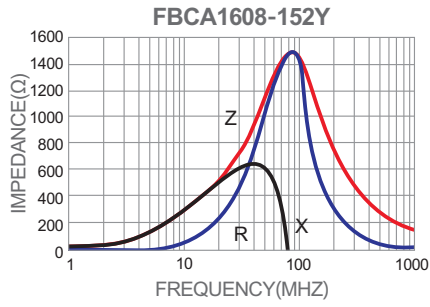
**Characteristics Charts**

特征图表



**Characteristics Charts**

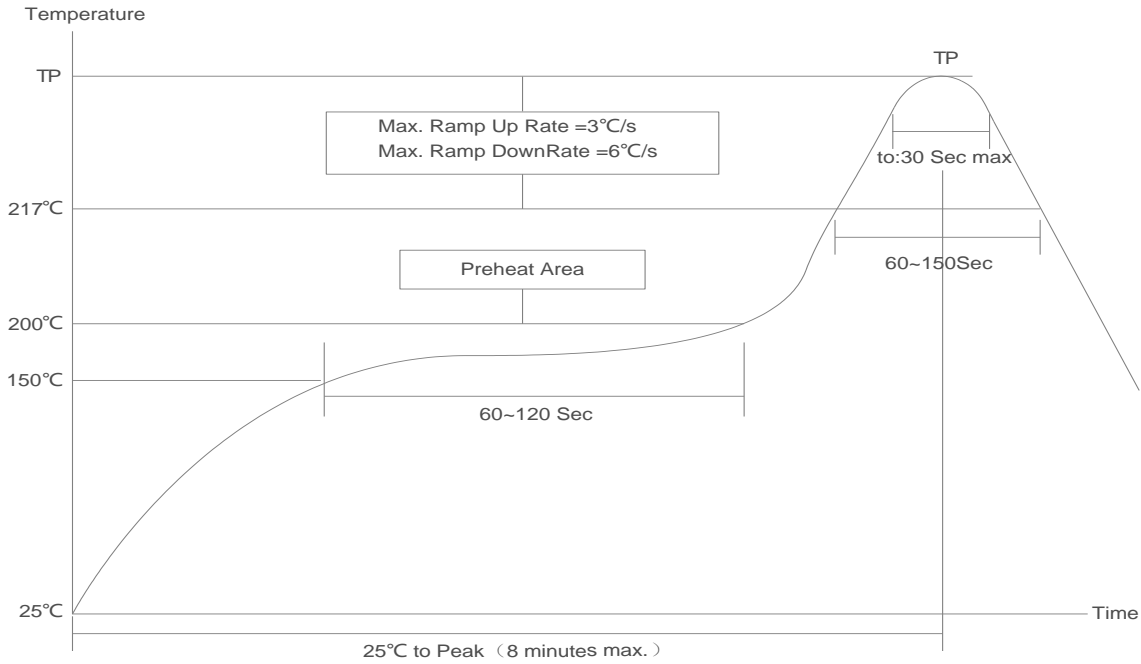
特征图表



**■ Soldering Specification**

焊接规格

Reflow Profile for SMD components  
SMT 回流焊温度曲线



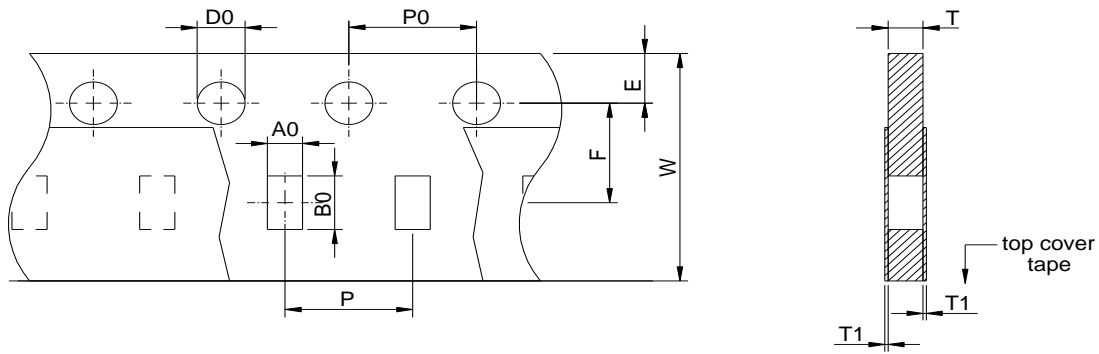
Pb-Free Process-Classification (TP)  
无铅工艺-分类温度(TP)

	Package Thickness 封装厚度	Package Volume 封装体积		
		<350 mm <sup>3</sup>	350~2000 mm <sup>3</sup>	>2000 mm <sup>3</sup>
PB-Free Assembly 无铅装配	<1.6mm	260°C	260°C	260°C
	1.6~2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

Reflow is referred to standard IPC/JEDEC J-STD-020E.  
回流焊参照标准 IPC/JEDEC J-STD-020E

■ Carrier Tape Dimensions (Unit: mm)

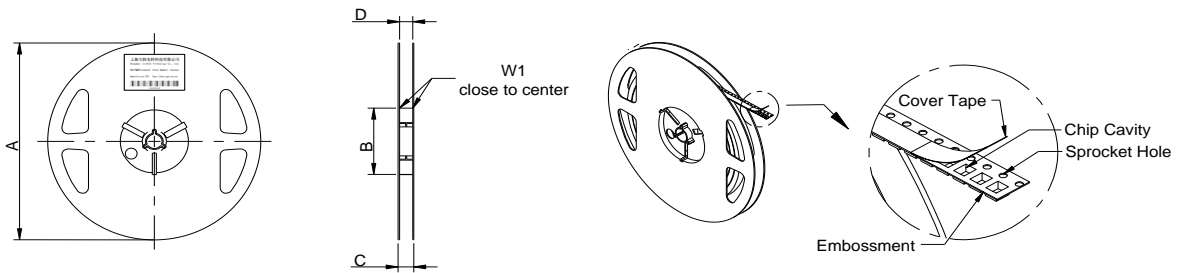
载带尺寸 (单位: mm)



Dimensions Code(mm)										
Series	A0	B0	D0	P	P0	E	F	W	Tmax	T1
FBCA1608	1.0±0.2	1.8±0.2	1.5±0.1	4.0±0.1	4.0±0.1	1.75±0.1	3.5±0.05	8.0±0.3	1.1	0.1 Ref.

■ Reel Dimensions (Unit: mm)

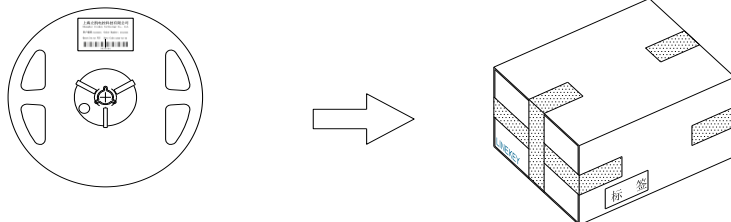
料盘尺寸 (单位: mm)



Series	A	B	C	D
FBCA1608	178±2.0	58±2.0	14.4 MAX	8.4 + 1.5/-0.0

■ Packaging Specification

包装信息



10000pcs/Reel

60 Reels/Carton box( 600K pcs)

## ■ Notice of Use

### 使用注意事项

1. Please note the recommendations in our product datasheet (latest edition).  
请留意我们的产品手册(最新版本)中的推荐使用条件。
  - Particular attention should be paid to the derating curves given there.  
如果有降额曲线, 请格外留意:
  - The soldering conditions should also be observed. Temperatures quoted in relation to wave soldering refer to the pin, not the housing.  
请注意焊接曲线。如果是波峰焊工艺, 焊接温度指的是引脚温度, 而不是底座。
2. If the components are to be washed varnished it is necessary to check whether the washing varnish agent that is used has a negative effect on the wire insulation, any plastics that are used, or on glued joints, in particular, it is possible for washing varnish agent residues to have a negative effect in the long-term on wire insulation.  
如果要用有机溶剂清洗元件, 必须检查清洗剂的成份, 因为清洗剂对线材绝缘层和塑料部件或者点胶部位有负面影响。尤其要避免清洗剂中的成份对线材绝缘造成长期负面影响。
3. The following points must be observed if the components are potted in customer applications.  
如果产品被封装在客户特别的应用中, 下面几点必须引起关注:
  - Many potting materials shrink as they harden. They therefore exert a pressure on the plastic housing or core. This pressure can have a deleterious effect on electrical properties, and in extreme cases can damage the core or plastic housing mechanically.  
很多封装材料在固化时会收缩, 这样会在元件的塑料外壳或者磁芯上施加额外的应力。这种应力对电气性能有破坏性, 在极端情况下会损坏磁芯或外壳。
  - It is necessary to check whether the potting material used attacks or destroys the wire insulation, plastics or glue.  
需要检查所使用的封装材料是否会破坏线材绝缘层, 塑料外壳或者点胶。
  - The effect of the potting material can change the high-frequency behaviour of the components.  
封装材料的应力可能会影响器件的高频特性。
4. Ferrites are sensitive to direct impact. This can cause the core material to flake, or lead to breakage of the core.  
铁氧体材料不堪直接冲击, 可能会造成磁芯材料脱落或者磁芯破损。
5. Even for customer-specific products, conclusive validation of the component in the circuit can only be carried out by the customer.  
即便是为客户定制的产品, 也需要客户在电路中对元件做全方位测试验证。
6. Specifications are subject to change without notice.  
产品规格更改不会提前告知。
7. Customers should verify actual device performance in their specific applications.  
客户需要在特殊应用中验证元件的性能。