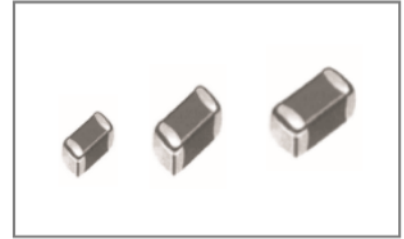


## ■ 叠层片式铁氧体超大电流磁珠 Multilayer Chip Ferrite Ultra-High Current Beads



### ◆ 特征 Feature

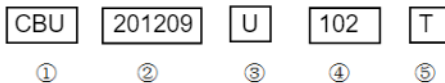
- \* 体积小  
Miniature volume.
- \* 低直流电阻，超大额定电流  
Low DC resistance, large current rating
- \* 漏磁小，不产生耦合，可靠性高  
No cross coupling between inductors due to low magnetic shield and high reliability.
- \* 无引线，不产生跟踪性，适合高密度表面贴装  
No lead, ideal for high density SMT installation, with no directionality.
- \* 优良的可焊性及耐热冲击性，适合回流焊  
Superior solderability and resistance to soldering heat, suitable for reflow soldering.

### ◆ 应用 Applications

- \* 用于通信设备、计算机、液晶电视等电气设备的电源线或超大电流信号线的噪声抑制。

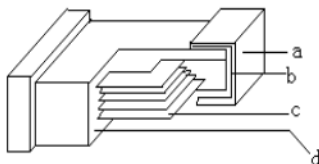
It is used for noise suppression in power lines or extra-large current signal lines of electrical equipment such as communication equipment, computers and LCD TVs.

### ◆ 型号表示法 Part Number



① 产品代号 Product Code		② 规格尺寸(L×W×T) Dimensions (mm)		③ 材料代号 Material Code	④ 阻抗(Ω) Impedance		⑤ 包装方式 Packaging Style	
CBU	叠层片式铁氧体超大电流磁珠 Multilayer Chip Ferrite Ultra-High Current Beads	160808	1.6×0.8×0.8	U	示例 Example		T	卷带盘装 Tape & Reel
		201209	2.0×1.2×0.9	X	110	11	B	散装 Bulk
					121	120		
					102	1000		

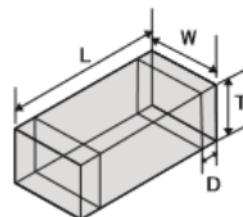
### ◆ 产品结构 Product Structure



- a. 银层 Ag layer
- b. 镀层 Ni/Sn plating
- c. 内电极 Inner electrode
- d. 瓷体 Body

**◆规格尺寸**
**Dimension**

Part No	L(mm)	W(mm)	T(mm)	D(mm)
100505 (0402)	1.0±0.15 (0.040±0.006)	0.5±0.15 (0.020±0.006)	0.5±0.15 (0.020±0.006)	0.25±0.1 (0.010±0.004)
160808 (0603)	1.6±0.20 (0.063±0.008)	0.8±0.20 (0.031±0.008)	0.8±0.20 (0.031±0.008)	0.3±0.2 (0.01±0.008)
201209 (0805)	2.0±0.20 (0.079±0.008)	1.2±0.20 (0.047±0.008)	0.9±0.20 (0.035±0.008)	0.5±0.3 (0.020±0.012)


**◆电性能参数**
**Electrical Characteristics**
**1005 Type**

型号 Part NO	误差范围 Tolerance	标称阻抗 Impedance(Ω)	测试频率 Test frequency(MHz)	直流电阻 DCR (Ω)Max	额定电流 Ir (A)Max
CBU100505X100T	±25%	10	100	0.018	3.1
CBU100505X330T	±25%	33	100	0.022	3.0
CBU100505X600T	±25%	60	100	0.032	2.5
CBU100505X800T	±25%	80	100	0.038	2.3
CBU100505X121T	±25%	120	100	0.050	2.0
CBU100505X181T	±25%	180	100	0.085	1.6
CBU100505X221T	±25%	220	100	0.095	1.5
CBU100505X331T	±25%	330	100	0.150	1.2
CBU100505X471T	±25%	470	100	0.200	1.0
CBU100505X601T	±25%	600	100	0.230	0.9

**1608 Type**

型号 Part NO	误差范围 Tolerance	标称阻抗 Impedance(Ω)	测试频率 Test frequency(MHz)	直流电阻 DCR (Ω)Max	额定电流 Ir (A)Max
CBU160808X220T	±25%	22	100	0.004	8.0
CBU160808X300T	±25%	30	100	0.010	5.0
CBU160808X700T	±25%	70	100	0.020	4.0
CBU160808X101T	±25%	100	100	0.030	3.0
CBU160808X121T	±25%	120	100	0.025	3.0
CBU160808X221T	±25%	220	100	0.040	2.5
CBU160808X331T	±25%	330	100	0.070	1.7
CBU160808X471T	±25%	470	100	0.120	1.5
CBU160808X601T	±25%	600	100	0.150	1.3
CBU160808X102T	±25%	1000	100	0.200	1.0

## 1608 Type

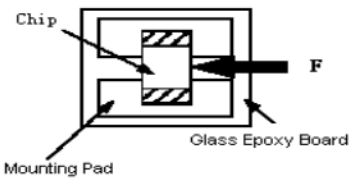
型号 Part NO	误差范围 Tolerance	标称阻抗 Impedance( $\Omega$ )	测试频率 Test frequency(MHz)	直流电阻 DCR ( $\Omega$ )Max	额定电流 Ir (A)Max
CBU160808U600T	$\pm 25\%$	60	100	0.025	3.5
CBU160808U800T	$\pm 25\%$	80	100	0.025	3.5
CBU160808U101T	$\pm 25\%$	100	100	0.04	3.0
CBU160808U121T	$\pm 25\%$	120	100	0.04	2.0
CBU160808U181T	$\pm 25\%$	180	100	0.07	2.0
CBU160808U221T	$\pm 25\%$	220	100	0.09	2.0
CBU160808U301T	$\pm 25\%$	300	100	0.15	2.0
CBU160808U501T	$\pm 25\%$	500	100	0.15	1.5
CBU160808U601T	$\pm 25\%$	600	100	0.15	1.5
CBU160808U801T	$\pm 25\%$	800	100	0.2	1.2
CBU160808U102T	$\pm 25\%$	1000	100	0.3	1.0

## 2012 Type

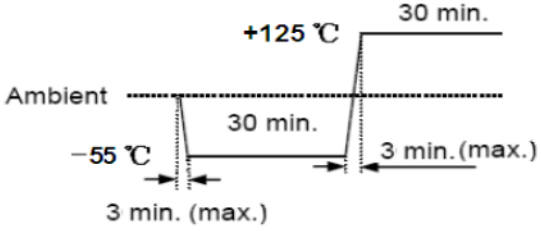
型号 Part NO	误差范围 Tolerance	标称阻抗 Impedance( $\Omega$ )	测试频率 Test frequency(MHz)	直流电阻 DCR ( $\Omega$ )Max	额定电流 Ir (A)Max
CBU201209U800T	$\pm 25\%$	80	100	0.025	3.5
CBU201209U101T	$\pm 25\%$	100	100	0.025	3.5
CBU201209U151T	$\pm 25\%$	150	100	0.05	3.0
CBU201209U181T	$\pm 25\%$	180	100	0.05	3.0
CBU201209U221T	$\pm 25\%$	220	100	0.05	3.0
CBU201209U301T	$\pm 25\%$	300	100	0.05	3.0
CBU201209U501T	$\pm 25\%$	500	100	0.09	2.5
CBU201209U601T	$\pm 25\%$	600	100	0.09	2.5
CBU201209102U	$\pm 25\%$	1000	100	0.11	2.0
CBU201209122U	$\pm 25\%$	1200	100	0.18	1.0

**◆可靠性测试方法**
**Reliability Test Method**

序号 No.	项目 Items	要求 Requirements	试验方法及备注 Test Methods and Remarks
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1	工作温度范围 Operating Temperature Range	$-55^{\circ}\text{C}\sim+125^{\circ}\text{C}$	包含产品表面温升 Includes product surface temperature rise
2	可焊性 Solder ability	无可见损伤； 电极面 95%以上覆盖新的焊料。 95% or more of electrode area shall be coated by new solder.	预热温度: $120^{\circ}\text{C} \sim 150^{\circ}\text{C}$ 预热时间: 60s 焊料: (96.5%Sn/3.0%Ag/0.5%Cu) 焊锡 焊锡温度: $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 浸锡深度: 10mm 浸锡时间: $5 \pm 1\text{s}$ 浸渍到助焊剂约: $3 \sim 5\text{s}$ Preheating temperature: $120^{\circ}\text{C}$ to $150^{\circ}\text{C}$ Preheating time: 60s Solder 96.5%Sn/3.0%Ag/0.5%Cu of the Sn solder. Solder temperature: $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Immersion tin depth: 10mm Duration: $5 \pm 1\text{s}$ Dip performance to a flux of about: $3 \sim 5\text{s}$
3	耐焊接热 Resistance to Soldering Heat	至少 95%的焊锡覆盖在端电极表面，无可见机械损伤。 阻抗变化率小于 $\pm 30\%$ 。 At least 95% of terminal electrode should be covered with solder. No mechanical damage. Inductance : Impedance change: within $\pm 30\%$	预热温度: $120^{\circ}\text{C} \sim 150^{\circ}\text{C}$ 预热时间: 60s 焊料: (96.5%Sn/3.0%Ag/0.5%Cu) 焊锡 浸锡温度: $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 浸锡深度: 10mm 浸锡时间: $10 \pm 1\text{s}$ 浸渍到助焊剂约: $3 \sim 5\text{s}$ Preheating temperature: $120^{\circ}\text{C}$ to $150^{\circ}\text{C}$ Preheating time: 60s Solder 96.5%Sn/3.0%Ag/0.5%Cu of the Sn solder. Solder temperature: $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Immersion tin depth: 10mm Duration: $10 \pm 1\text{s}$ Dip performance to a flux of about: $3 \sim 5\text{s}$
4	端电极强度 Adhesion of electrode	端电极与磁体不应受损，无可见机械损伤。 The termination and body should be no damage.	施加力: 1005 系列为 5N ; 1608 系列为 7N ; 2012、3216 系列为 10N; 3225、4532 系列为 15N。 保持时间: $10 \pm 1\text{s}$ Applied force: 5N force for 1005 series; 7N force for 1608 series; 10N force for 2012、3216 series. 15N force for 3225、4532 series. Keep time: $10 \pm 1\text{s}$ 
5	耐低温 Low temperature resistance	无可见机械损伤， 阻抗变化率小于 $\pm 30\%$ 。 No mechanical damage. Impedance change: within $\pm 30\%$	测试温度: $-55 \pm 2^{\circ}\text{C}$ 测试时间: $1000 \pm 24\text{h}$ Temperature: $-55 \pm 2^{\circ}\text{C}$ Testing time: $1000 \pm 24\text{h}$

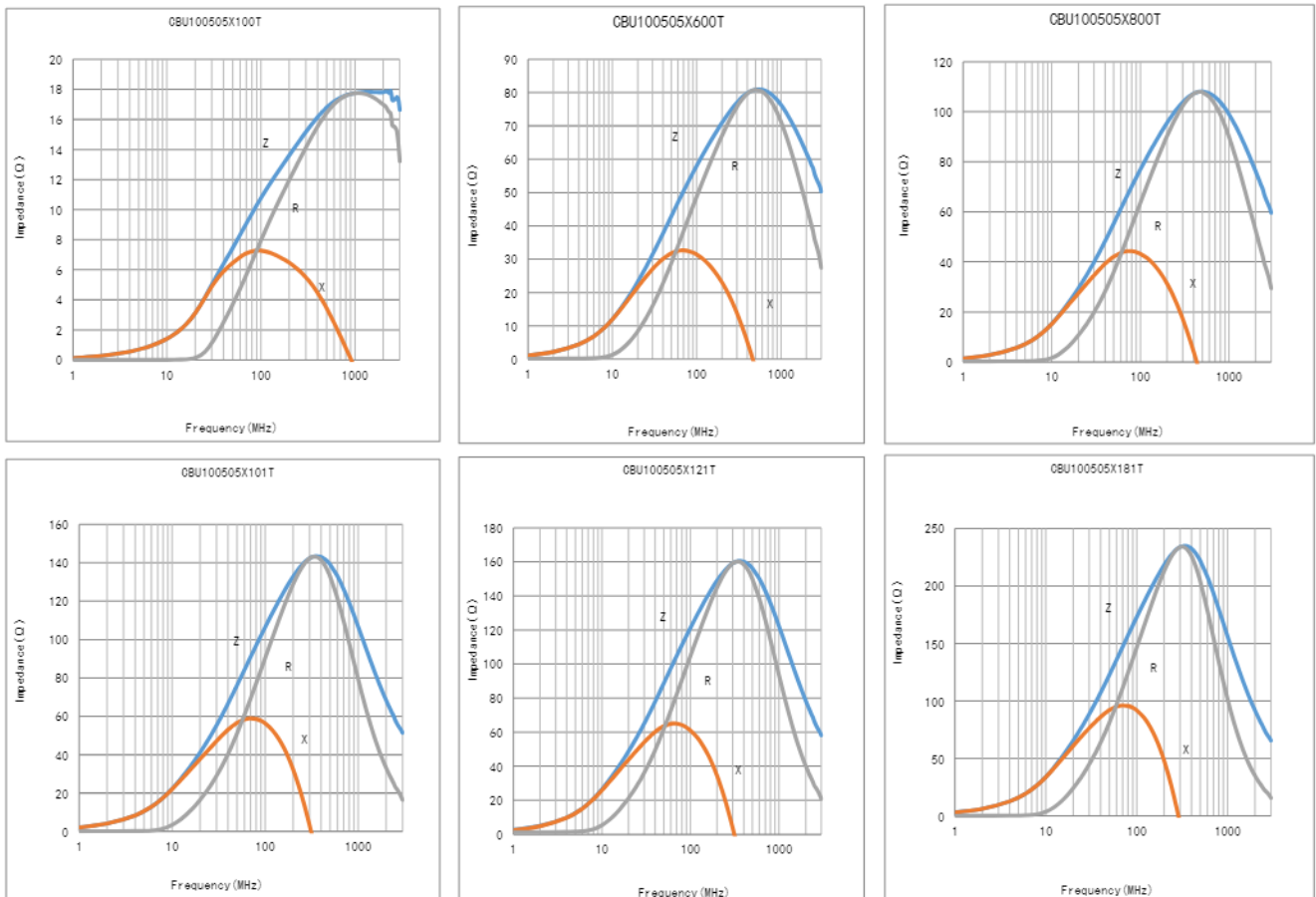
6	抗弯强度 Bending strength	无可见机械损伤 No mechanical damage	<p>测试基板: 玻璃环氧树脂基板          加压速度为 0.5mm/s, 弯度: 2mm, 保持时间 20s±1s          Testing board: glass epoxy-resin substrate          For 0.5 mm/s compression speed, curvature: 2mm, hold time 20s±1s .</p> 
7	振动 Vibration	无可见机械损伤, 阻抗变化率小于±30%。 No mechanical damage. Impedance change: within ±30%	<p>振幅: 1.5mm          测试时间: 沿三个垂直方向各做 2 小时          频率范围: 10Hz~55Hz~10Hz (1 分钟)          Amplitude modulation: 1.5mm          Test time: A period of 2h in each of 3 mutually perpendicular directions.          Frequency range: 10Hz to 55Hz to 10Hz for 1min.</p>
8	耐高温 High temperature resistance	无可见机械损伤, 阻抗变化率小于±30%。 No mechanical damage. Impedance change: within ±30%	<p>测试时间: 1000<sup>+24</sup><sub>0</sub> h          测试温度: 125±2°C          Testing time: 1000<sup>+24</sup><sub>0</sub> h          Temperature: 125±2°C</p>
9	恒定湿热 Static Humidity	无可见机械损伤, 阻抗变化率小于±30%。 No mechanical damage. Impedance change: within ±30%	<p>湿度: 90%~95% RH, 温度: 60°C±2°C          测试时间: 1000<sup>+24</sup><sub>0</sub> h          Humidity: 90% to 95% RH          Temperature: 60°C±2°C          Testing time: 1000<sup>+24</sup><sub>0</sub> h</p>
10	高温负载 High temperature load	无可见机械损伤, 阻抗变化率小于±30%。 No mechanical damage. Impedance change: within ±30%	<p>施加电流: 额定电流          测试时间: 1000<sup>+24</sup><sub>0</sub> h          测试温度: 85°C±2°C          impose current: at room          Testing time: 1000<sup>+24</sup><sub>0</sub> h          Temperature: 85±2°C</p>

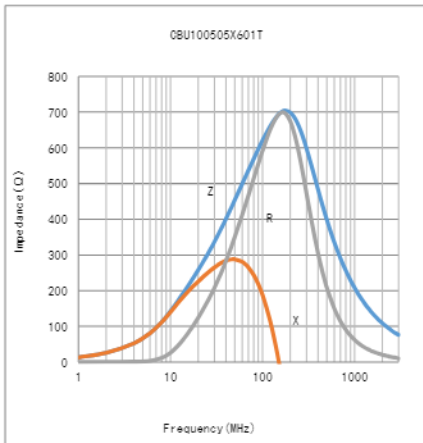
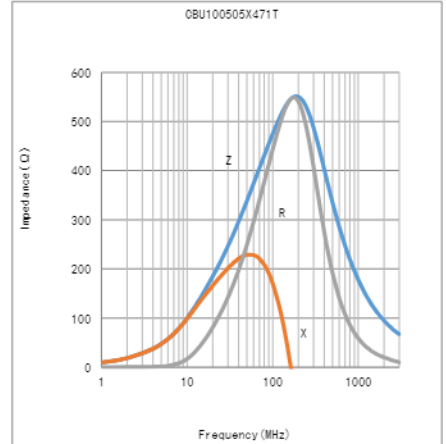
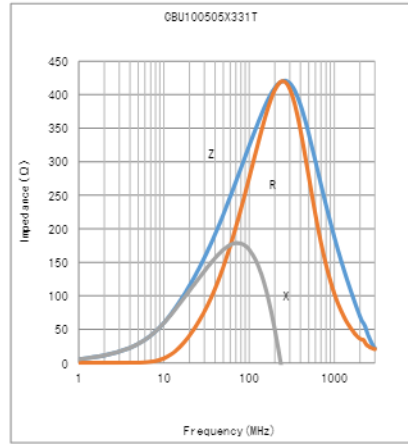
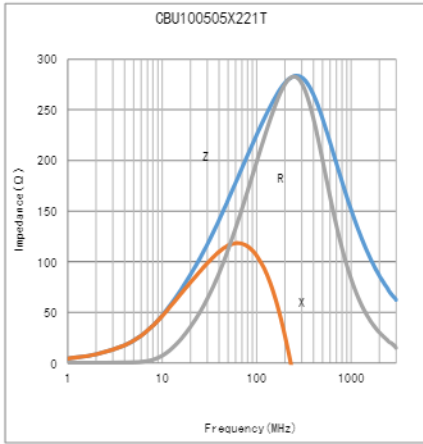
11	<p>温度冲击 Temperature Shock</p>	<p>无可见机械损伤， 阻抗变化率小于±30%。 No mechanical damage. Impedance change: within ±30%</p>	<p>温度: -55°C, 30±3 分钟 +125°C, 30±3 分钟 循环次数: 100 Temperature: -55°C for 30±3min +125°C for 30±3min Number of cycles: 100</p> 
<p>注: 以上要求测试电性能的项目, 应试验后在标准条件下放置 24 小时后测试。 Note: When there are questions concerning, measurement shall be made after 24±2hrs of recovery under the standard condition.</p>			

◆ 产品特性曲线图

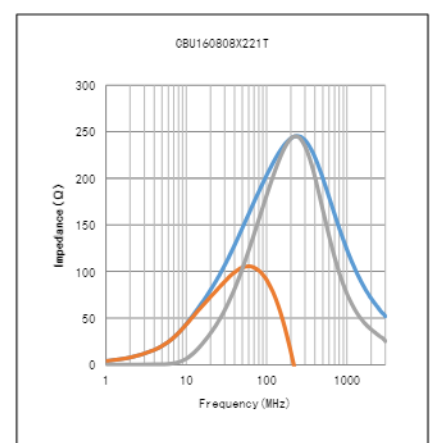
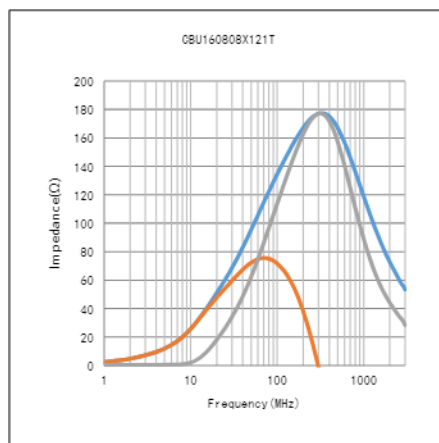
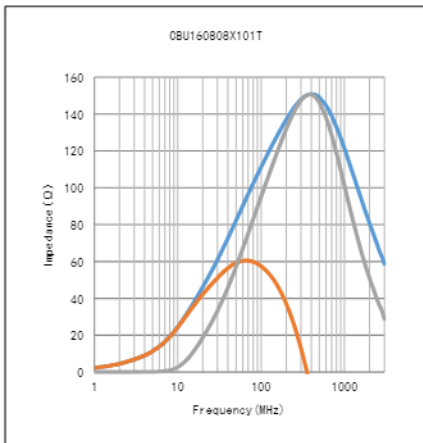
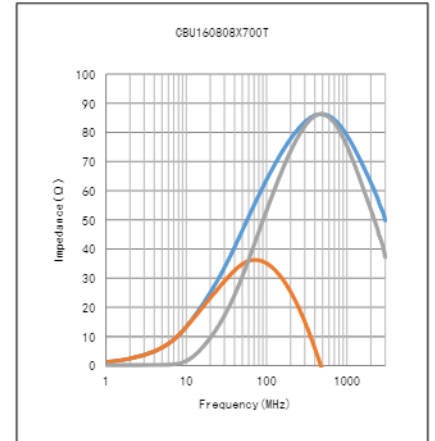
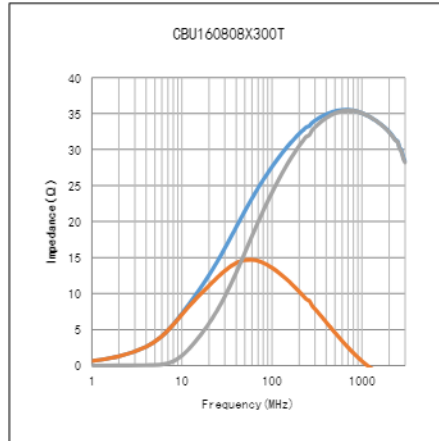
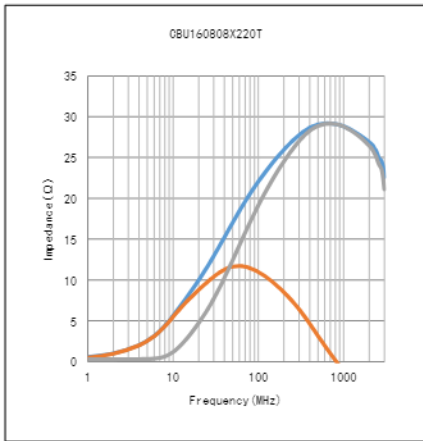
Product Characteristic Curve

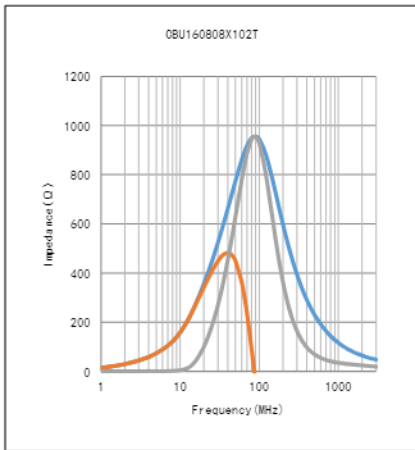
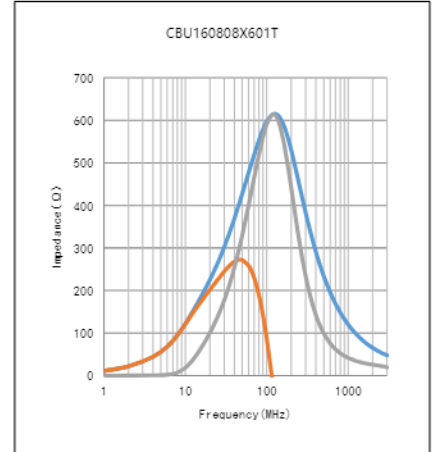
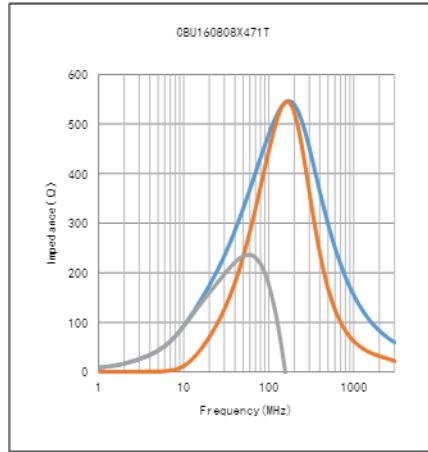
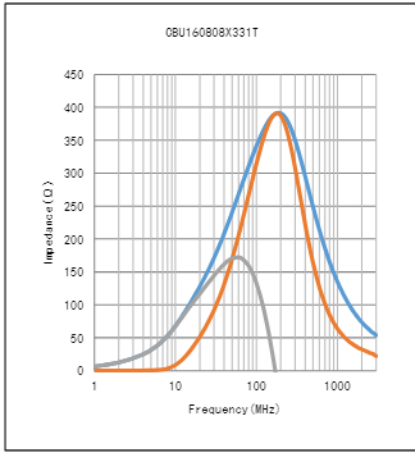
CBU1005 Type



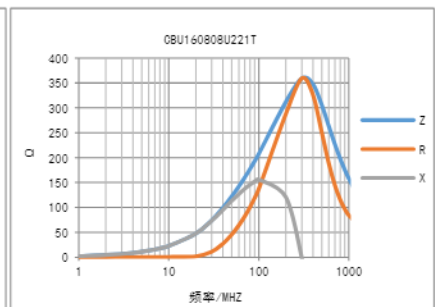
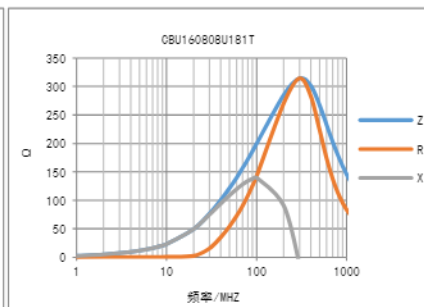
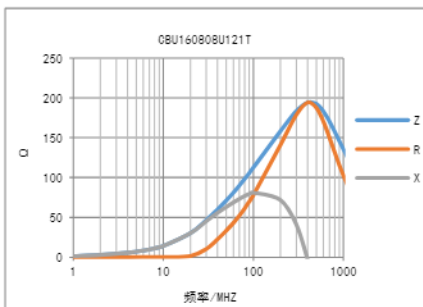
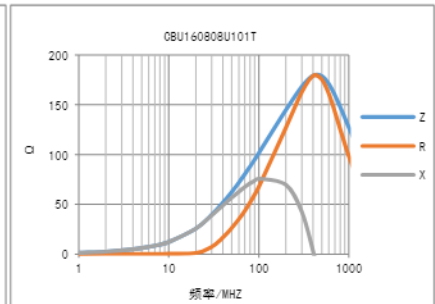
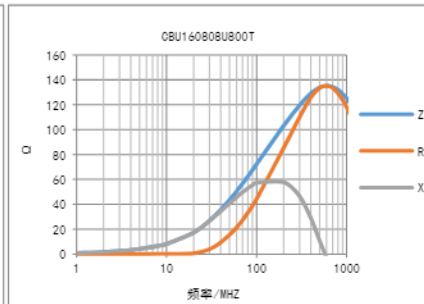
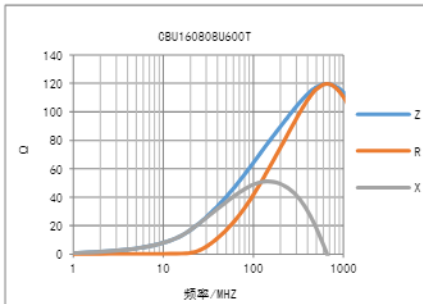


CBU1608X Type

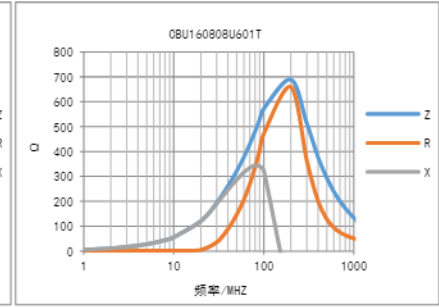
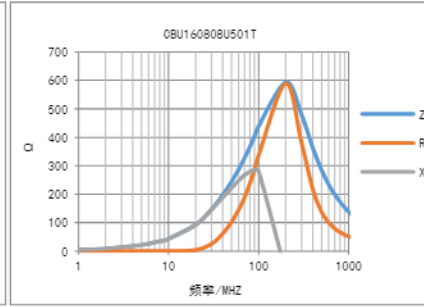
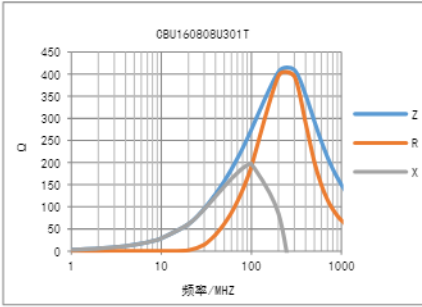




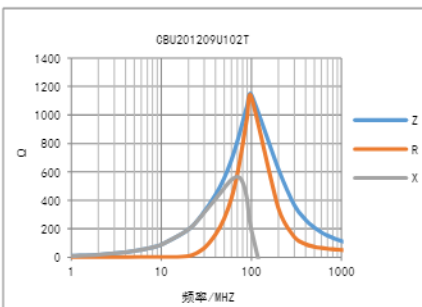
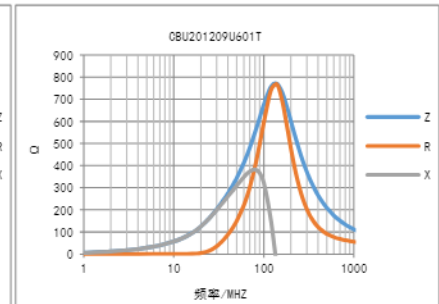
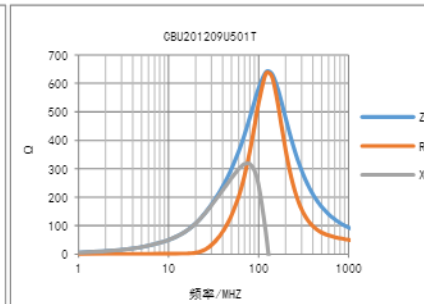
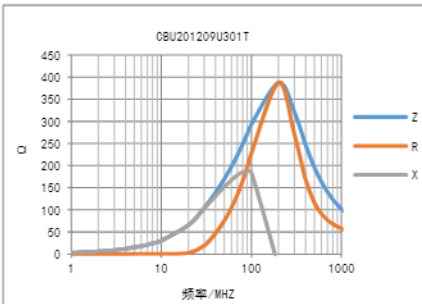
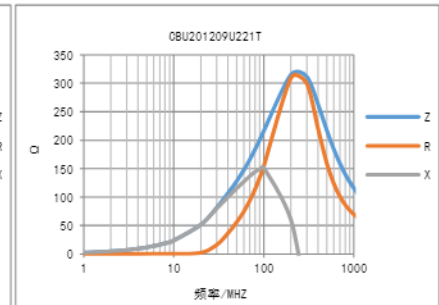
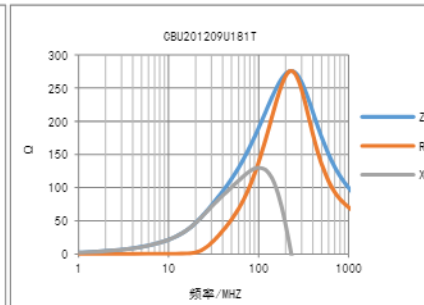
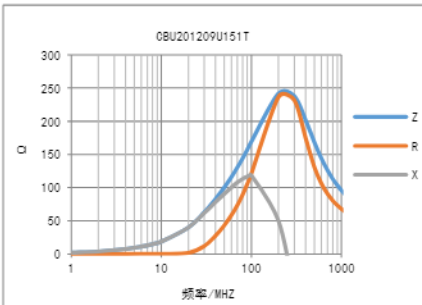
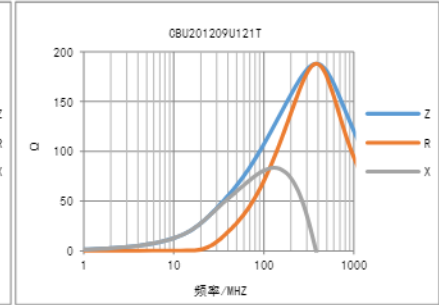
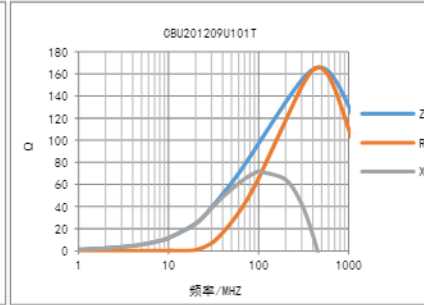
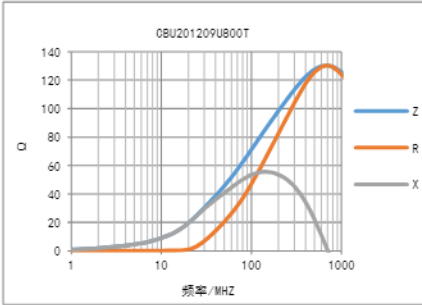
CBU1608U Type







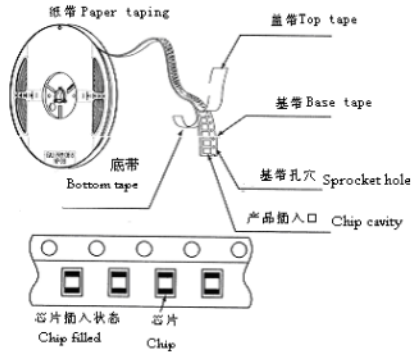
CBU2012 Type



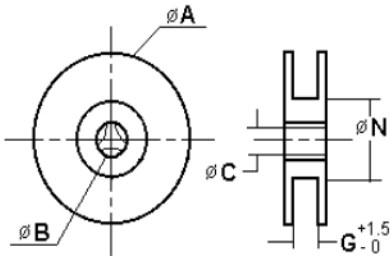
◆ 包装

Packaging

\* 编带图 Taping drawings

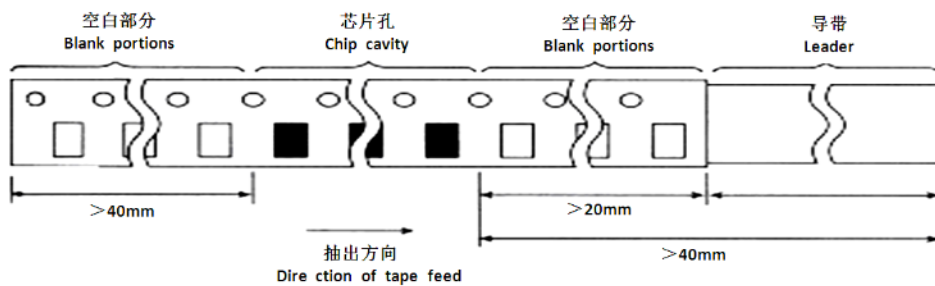


\* 卷盘尺寸 Reel dimensions (Unit: mm)



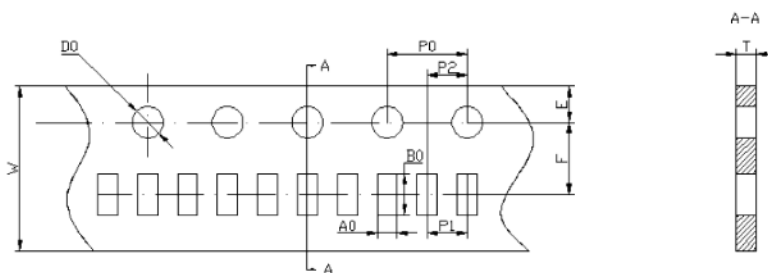
型号 Size	A	B	C	N	G
CF-8	178±2.0	22.0±2.0	12.5±1.5	57±2.0	8

\* 导带及空格部分 Leader and blank portion



\* 编带尺寸 Taping dimensions (Unit: mm)

纸带 Paper tape



Part NO.	A0	B0	W	F	E	P1	P2	P0	D0	T
100505	0.65±0.1	1.15±0.1	8.0±0.2	3.5±0.1	1.75±0.2	2.0±0.1	2.0±0.1	4.0±0.2	1.55±0.1	0.60±0.1
160808	1.10±0.2	1.90±0.2	8.0±0.2	3.5±0.1	1.75±0.2	4.0±0.2	2.0±0.1	4.0±0.2	1.55±0.1	0.95±0.1
201209	1.50±0.2	2.30±0.2	8.0±0.2	3.5±0.1	1.75±0.2	4.0±0.2	2.0±0.1	4.0±0.2	1.55±0.1	0.95±0.1
321609	1.90±0.2	3.50±0.2	8.0±0.2	3.5±0.1	1.75±0.2	4.0±0.2	2.0±0.1	4.0±0.2	1.55±0.1	0.95±0.1

\* 包装数量 (单位: 粒) Packaging number (Unit: Pcs )

型号 Size	321609	201209	160808	100505
每卷数量 REEL	4000	4000	4000	10000
每盒数量 BOX	40000	40000	40000	100000
每箱数量 CASE	240000	240000	240000	600000