



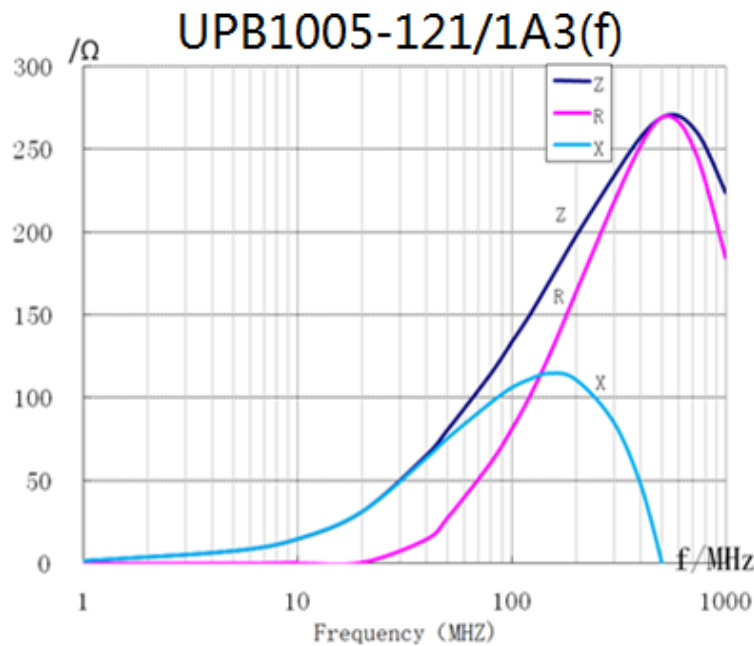
UPB1005 Series Specification

1 Test Data For Preproduction Samples

CUSTOMER	碧绿天			DATE	14/Dec/20	
Z.H.F.PART NO.	UPB1005-121/1A3(f)			PART		
TEST ITEM	Z (Ω)	DCR (mΩ)	L (mm)	W (mm)	T (mm)	a (mm)
SUGGEST	120±25%	120(max)	1.0±0.15	0.5±0.15	0.5±0.15	0.25±0.15
TEST FYEQ.	100 MHz					
1	123.5	68.5	1.03	0.52	0.51	0.21
2	122.1	72.4	1.02	0.52	0.52	0.20
3	121.5	70.7	1.03	0.51	0.51	0.23
4	125.6	75.3	1.01	0.53	0.50	0.25
5	124.5	70.8	1.02	0.50	0.51	0.25
6	115.6	69.2	1.03	0.51	0.50	0.20
7	118.7	71.5	1.01	0.50	0.52	0.20
8	124.3	73.6	1.03	0.53	0.53	0.22
9	132.1	67.4	1.02	0.52	0.51	0.20
10	115.1	69.3	1.03	0.53	0.53	0.21
\bar{X}	122.3	70.9	1.023	0.517	0.514	0.217
R	17.0	7.9	0.02	0.03	0.03	0.05

Rate Current (mA) Max.: 1300 mA

Curve:



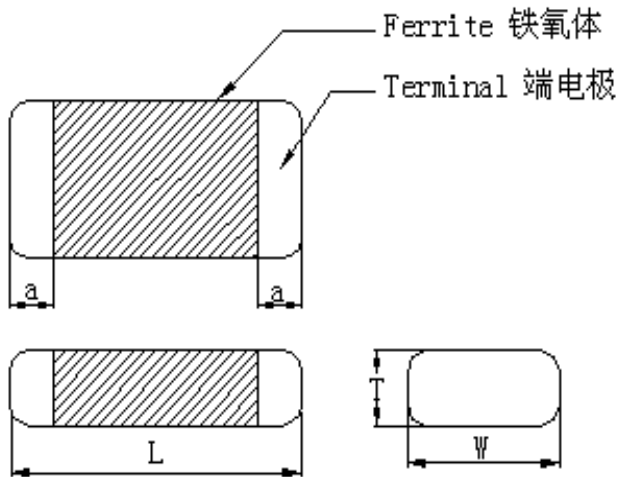


UPB1005 Specification

2 Scope:

This specification applies to LARGE CURRENT MULTILAYER CHIP FERRITE BEADS

3 Shape And Dimensioncs



TYPE	UPB1005
L	1.0±0.15
W	0.5±0.15
T	0.5±0.15
a	0.25±0.15

4 Part Numbering: Product Identification

UPB 1005 - 121/1A3 T (f)
 ① ② ③ ④ ⑤ ⑥

(1) Product symbol 系列代号:

(2) Dimensions 尺寸: Length长 (L) ×Width宽 (W)

(3) Impedance 阻抗: 000: ≤10Ω; 300:30Ω; 121: 120Ω 102: 1000Ω

(4) Rated Current 额定电流: 1A3: 1300mA; 2A2: 2200mA; 3A0: 3000mA

(5) Packing style 包装方式: B: Bulk散装; T: Tape and reel 载带盘装

(6) Leadfree productors 无铅产品: 据客户要求

5 Test Equipment

- HP4287A PACKED RF LCR METER;
- HP4338B MILLIOHM METER;
- B2911A PRECISION SOURCE;
- E4991A RF IMPEDANCE ANALYZER。

6 Rating



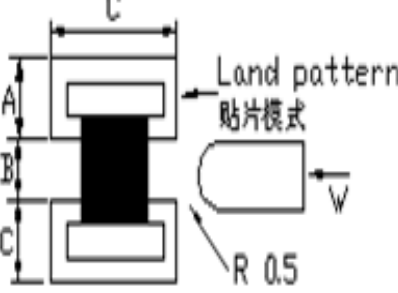
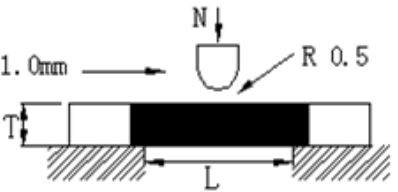
Operating Temperature (使用温度): -40℃~+85℃



Specification

7 Reliability and Conditions

7.1

ITEM 项目	REQUIREMENTS 要求	TEST CONDITIONS 测试条件																																								
Resistance to solder heat 耐焊性	1.No damage such as cracks should be caused in chip element. 焊接过程中器件无破损. 2.More than 75% of the terminal shall be covered with new solder. 至少有 75%的端电极被焊锡覆盖. 3.Impedance change:within±30%;Inductance change: within ±10%; Quality factor change :within ±30%. 阻抗变化应在±30%以内;电感变化在±10%以内;Q 值变化在±30%以内.	Solder temperature(焊接温度): 260±3℃ Duration: 5s Solder:Sn/3.0AG/0.5Cu																																								
Solder ability 可焊性	1.More than 75% of the terminal shall be covered with new solder. 至少有 75%的端电极被焊锡覆盖. 2.Impedance change:within±30%;Inductance change: within ±10%;Quality factor change :within±30%. 阻抗变化应在±30%以内;电感变化在±10%以内;Q 值变化在±30%以内.	Solder temperature (焊接温度): 245±2℃ Dipping time (浸焊时间):3s																																								
Reflow soldering 回流焊	More than 75% of the terminal electrode shall be covered with new solder. 至少有 75%的端电极被焊锡覆盖. 	Preheat temperature (预热温度): 150℃ Preheat time (预热时间): 60 s Solder temperature (焊接温度): 260℃ Dipping time (浸焊时间): Max(最大)10 s																																								
Terminal strength 抗拉强度	No mechanical damage 无机机械损伤 <table border="1" style="width:100%; text-align:center;"> <tr> <td></td> <td>1005</td> <td>1608</td> <td>2012</td> <td>3216</td> <td>3225</td> <td>4516</td> <td>4532</td> </tr> <tr> <td>F(kg f)</td> <td>0.8</td> <td>1.0</td> <td>2.0</td> <td>2.5</td> <td>3.2</td> <td>3.0</td> <td>5.0</td> </tr> </table>		1005	1608	2012	3216	3225	4516	4532	F(kg f)	0.8	1.0	2.0	2.5	3.2	3.0	5.0	 W (kg f) min																								
	1005	1608	2012	3216	3225	4516	4532																																			
F(kg f)	0.8	1.0	2.0	2.5	3.2	3.0	5.0																																			
Adhesion of terminal electrode 端电极附着力	No mechanical damage 无机机械损伤 <table border="1" style="width:100%; text-align:center;"> <tr> <td></td> <td>1005</td> <td>1608</td> <td>2012</td> <td>3216</td> <td>3225</td> <td>4516</td> <td>4532</td> </tr> <tr> <td>w(kg f)</td> <td>1.5</td> <td>2.0</td> <td>4.0</td> <td>5.0</td> <td>7.0</td> <td>5.0</td> <td>8.5</td> </tr> <tr> <td>A(mm)</td> <td>0.8</td> <td>1.0</td> <td>1.0</td> <td>1.3</td> <td>1.3</td> <td>1.3</td> <td>1.3</td> </tr> <tr> <td>B(mm)</td> <td>0.8</td> <td>1.0</td> <td>1.0</td> <td>1.5</td> <td>1.5</td> <td>3.0</td> <td>3.0</td> </tr> <tr> <td>C(mm)</td> <td>1.0</td> <td>1.3</td> <td>1.3</td> <td>3.0</td> <td>3.5</td> <td>3.5</td> <td>3.5</td> </tr> </table>		1005	1608	2012	3216	3225	4516	4532	w(kg f)	1.5	2.0	4.0	5.0	7.0	5.0	8.5	A(mm)	0.8	1.0	1.0	1.3	1.3	1.3	1.3	B(mm)	0.8	1.0	1.0	1.5	1.5	3.0	3.0	C(mm)	1.0	1.3	1.3	3.0	3.5	3.5	3.5	 Land pattern 贴片模式 R 0.5
	1005	1608	2012	3216	3225	4516	4532																																			
w(kg f)	1.5	2.0	4.0	5.0	7.0	5.0	8.5																																			
A(mm)	0.8	1.0	1.0	1.3	1.3	1.3	1.3																																			
B(mm)	0.8	1.0	1.0	1.5	1.5	3.0	3.0																																			
C(mm)	1.0	1.3	1.3	3.0	3.5	3.5	3.5																																			
Bending strength 抗弯强度	The body shall not be damaged by forces applied on the right 以右图测试方式过程中器件无损伤 <table border="1" style="width:100%; text-align:center;"> <tr> <td></td> <td>1005</td> <td>1608</td> <td>2012</td> <td>3216</td> <td>3225</td> <td>4516</td> <td>4532</td> </tr> <tr> <td>w(kg f)</td> <td>1.5</td> <td>2.0</td> <td>3.0</td> <td>4.0</td> <td>4.5</td> <td>4.5</td> <td>5.5</td> </tr> <tr> <td>C(mm)</td> <td>1.0</td> <td>1.3</td> <td>1.3</td> <td>3.0</td> <td>3.0</td> <td>1.2</td> <td>4.2</td> </tr> </table>		1005	1608	2012	3216	3225	4516	4532	w(kg f)	1.5	2.0	3.0	4.0	4.5	4.5	5.5	C(mm)	1.0	1.3	1.3	3.0	3.0	1.2	4.2	 1.0mm R 0.5 L																
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w(kg f)	1.5	2.0	3.0	4.0	4.5	4.5	5.5																																			
C(mm)	1.0	1.3	1.3	3.0	3.0	1.2	4.2																																			



Specification

Reliability and Conditions

7.2

ITEM 项目	REQUIREMENTS 要求	TEST CONDITIOS 测试条件
Drop 跌落	1.No mechanical damage. 无机械损伤。 2.Impedance change:within $\pm 30\%$;Inductance change: within $\pm 10\%$;Quality factor change :within $\pm 30\%$. 阻抗变化应在 $\pm 30\%$ 以内;电感变化在 $\pm 10\%$ 以内;Q 值变化在 $\pm 30\%$ 以内.	Drop 10 times on a concrets floor from a height of 100cm. 从 100cm 高度落到混凝土地面上 10 次
Vibration 抗震性	1.No mechanical damage. 无机械损伤。 2.Impedance change:within $\pm 30\%$;Inductance change: within $\pm 10\%$;Quality factor change :within $\pm 30\%$. 阻抗变化应在 $\pm 30\%$ 以内;电感变化在 $\pm 10\%$ 以内;Q 值变化在 $\pm 30\%$ 以内.	Frequency (频率):100Hz-55Hz-10Hz. Amplitude (振幅):1.52mm Direction and time:XYZ directons for 2 hours. 方向和时间: XYZ 三个方向各振动 2 小时
Theermal shock 热冲击	1.No mechanical damage. 无机械损伤。 2.Impedance change:within $\pm 30\%$;Inductance change: within $\pm 10\%$;Quality factor change :within $\pm 30\%$. 阻抗变化应在 $\pm 30\%$ 以内;电感变化在 $\pm 10\%$ 以内;Q 值变化在 $\pm 30\%$ 以内.	Step 1 (循环 1):-40 $\pm 3^{\circ}\text{C}$ 30 ± 3 min Step 2(循环 2):85 $\pm 3^{\circ}\text{C}$ 30 ± 3 min Number of cycle(循环次数):100 times
Heat load resistance 高温负载	1.No mechanical damage . 无机械损伤。 2.Impedance change:within $\pm 30\%$;Inductance change: within $\pm 10\%$;Quality factor change :within $\pm 30\%$. 阻抗变化应在 $\pm 30\%$ 以内;电感变化在 $\pm 10\%$ 以内;Q 值变化在 $\pm 30\%$ 以内.	Temperature:85 $^{\circ}\text{C} \pm 2^{\circ}\text{C}$;Applied current :Rated current; time:1000 hours. Measured at room ambient temperature.After placing for 24 hours. 通过额定电流, 85 $^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 放置 1000 小时, 室温条件下 24 小时后测量。
Low temperature resistance 耐低温	1.No mechanical damage . 无机械损伤。 2.Impedance change:within $\pm 30\%$;Inductance change: within $\pm 10\%$;Quality factor change :within $\pm 30\%$. 阻抗变化应在 $\pm 30\%$ 以内;电感变化在 $\pm 10\%$ 以内;Q 值变化在 $\pm 30\%$ 以内.	Temperature:-40 $^{\circ}\text{C} \pm 2^{\circ}\text{C}$;Applied current :Rated current;time:1000 hours. Measured at room ambient temperature.After placing for 24 hours 通过额定电流, -40 $^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 放置 1000 小时, 室温条件下 24 小时后测量。
Humidity load resistance 耐潮湿	1.No mechanical damage. 无机械损伤。 2.Impedance change:within $\pm 30\%$;Inductance change: within $\pm 10\%$;Quality factor change :within $\pm 30\%$. 阻抗变化应在 $\pm 30\%$ 以内;电感变化在 $\pm 10\%$ 以内;Q 值变化在 $\pm 30\%$ 以内.	Temperature:-40 $^{\circ}\text{C} \pm 2^{\circ}\text{C}$,Time:90~90%RH; Applied current; Rated current time:500 hours. Measured at room ambient temperature.After placing for 24 hours 通过额定电流,-40 $^{\circ}\text{C} \pm 2^{\circ}\text{C}$,90~95%RH 条件下放置 500 小时, 室温条件下 24 小时后测量。
Solevnt resistance 耐溶剂性	1.No mechanical damage. 无机械损伤。 2.Impedance change:within $\pm 30\%$;Inductance change: within $\pm 10\%$;Quality factor change :within $\pm 30\%$. 阻抗变化应在 $\pm 30\%$ 以内;电感变化在 $\pm 10\%$ 以内;Q 值变化在 $\pm 30\%$ 以内.	Solvent:Trichlorethylene 溶剂: 三氯乙烯 Washer:Ultrasonic washer(100w) Washing time:3 mintues 清洗: 100W 超声波清洗 3 分钟

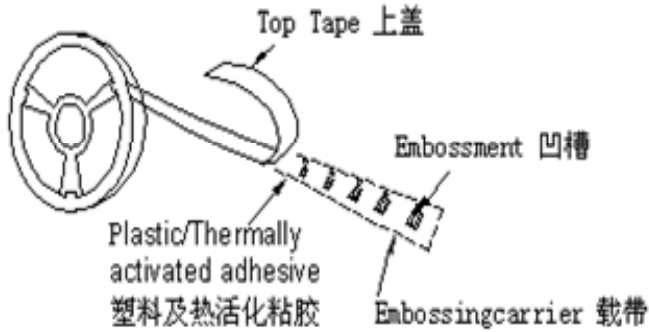


Specification

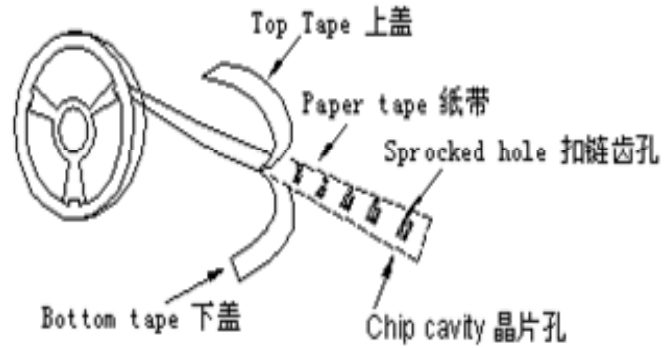
8 Packaging Style

8.1 Taping Material 包装材料

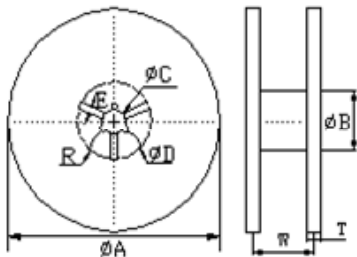
Embossing Tape 胶带



Paper Tape 纸带



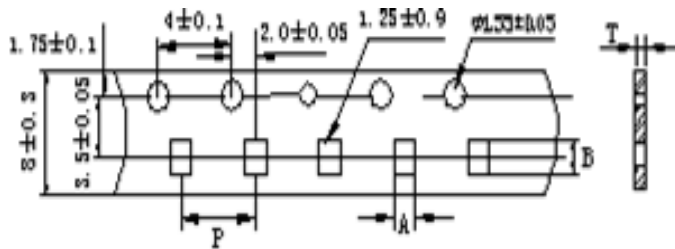
8.2 Reel Dimensions 卷轴尺寸 (mm)



Tape Width 载带宽度	A	B	C	D	E	W	T	R
8mm	178±2	60±1	13±0.5	21±0.8	2±0.5	10±1	1.5±0.5	1
12mm	178±2	60±1	13±0.5	21±0.8	2±0.5	14±1	1.5±0.5	1

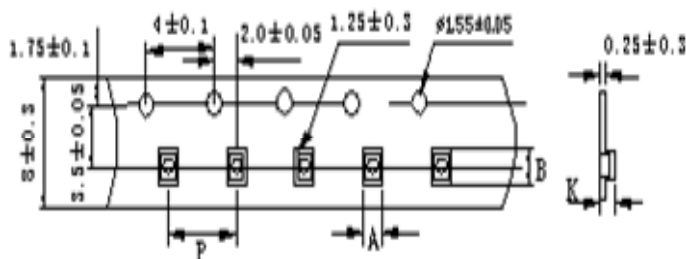
8.3 Carrier Dimensions 载带尺寸 (mm)

Paper Tape 纸带



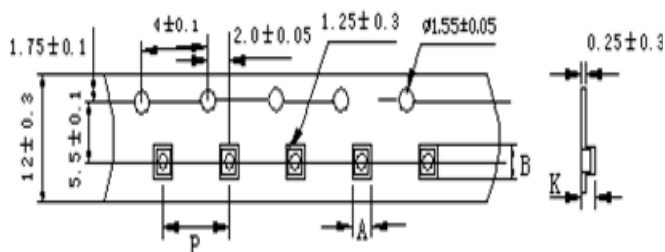
Paper Tape 纸带				
Type	A	B	P	T
1005	0.65±0.02	1.15±0.03	2.0±0.05	0.61±0.02
1608	1.00±0.03	1.15±0.03	4.0±0.1	0.95±0.1
2012	1.5±0.1	2.3±0.1	4.0±0.1	0.95±0.1
3216	1.9±0.1	3.6±0.1	4.0±0.1	0.95±0.1

Embossing Tape 胶带



Embossing Tape 胶带				
Type	A	B	P	K
1608	1.08±0.1	1.88±0.1	4.0±0.1	1.05±0.1
2012	1.50±0.1	2.32±0.1	4.0±0.1	1.40±0.1
3216	1.88±0.1	3.50±0.1	4.0±0.1	1.27±0.1
3225	3.10±0.1	3.80±0.1	4.0±0.1	1.63±0.1
4516	2.20±0.1	4.95±0.1	4.0±0.1	1.95±0.1
4532	3.80±0.1	4.95±0.1	8.0±0.1	1.90±0.1

Embossing Tape 胶带





Specification

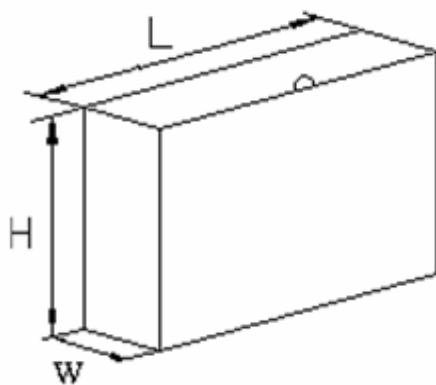
9 Storage

9.1 Quantity 标准数量

Type	PCS/REEL(PCS/每卷)	PCS/INNERBOX(PCS/小盒)	PCS/OUTERBOX(PCS/大盒)
1005	10000	50000	250000
1608	4000	20000	100000
2012	4000	20000	100000
3216	4000	20000	100000
3225	2000	10000	50000
4516	2000	6000	30000
4532	1000	3000	15000

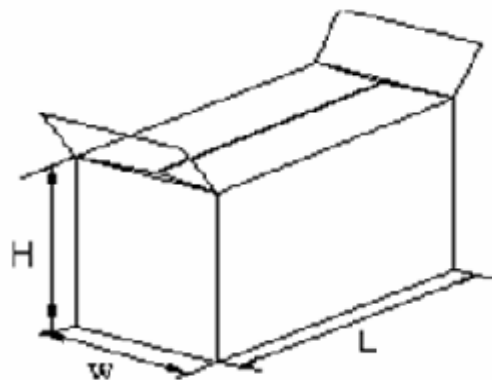
9.2 Packing Dimensions 包装尺寸 (mm)

Inner Box Dimensions 内包装尺寸



L	W	H	THICK(厚度)
180±3	70±3	190±3	2±0.8

Outer Box Dimensions 外包装尺寸



L	W	H	THICK(厚度)
370±3	200±3	210±3	2±0.8

9.3 Indication on the box 包装上标识

- CUSTOMER 客户名
- QUANTITY 数量
- PART NUMBER 料号
- LOT NUMBER 批号
- ZHENHUA FERRITE & CERAMIC ELECTRONICS CO.,LTD 深圳振华富电子有限公司

9.4 Storage 储存

Please be sure to the parts at -10°C~+40°C, 70%RH or less, and isolate the parts from sulphic and chloric atmosphere.

存放环境温度 -10°C~+40°C, 相对湿度不高于 70%, 并存放在不含硫和氯的空气气氛中