

## 零件承认书

SPECIFICATION FOR APPROVAL

客户名称：0110

增益型号：

规格描述：ZEACM9070F贴片共模滤波器规格书

日期：2023/5/01

版本：A

增益签核：

| 制订 | 审核  | 核准  |
|----|-----|-----|
| 张翔 | 刘业明 | 柯文学 |

客户签核：

| 工程 | 审核 | 核准 |
|----|----|----|
|    |    |    |



东莞市增益实业有限公司

地址：东莞市塘厦镇林村塘厦大道北552号

电话：0769-87321000

传真：0769-87891229

物料类型：

共模电感

日期：

2023/5/01

版本：

A



SMD Common Mode Inductor



产品特征：

- 适用大电流的片式共模滤波器
- 所有系列产品的形状均控制在最小限度  
同时共模阻抗超过了300~1000(10MHz时)可大幅抑制共模噪音
- 产品的高度尺寸也被控制在较低水平  
能够适应不断小型轻量化的便携式设备的高密度化趋势
- 符合RoHS,无卤和REACH
- 采用紧凑的SMD封装工艺，节省PCB空间
- 工作温度范围：-55℃~+125℃

产品应用：

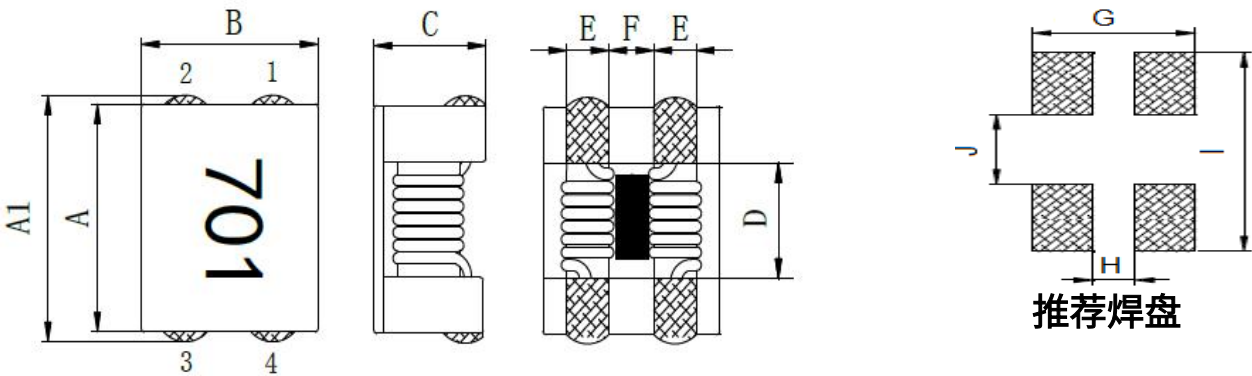
- 数据线、信号线的共模噪声抑制
- 电源线的共模噪声抑制80VDC(42VAC)
- EMI对策用
- 特别适用于USB、CAN、IEEE194(FireWire)、HDMI、LVDS、LAN等线路的电磁干扰抑制

产品型号识别：

ZEACM 9070F - 301 T6A00  
1 2 3 4

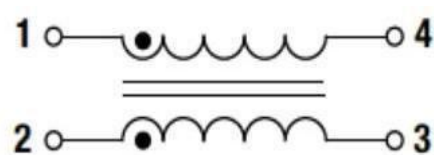
- 1.类型：贴片共模滤波器
- 2.规格外形尺寸
- 3.阻抗：301=300Ω
- 4.T: 编带包装 6A00：额定电流，6A

产品外形尺寸（单位：mm）：



| P/N        | A    | A1   | B    | C    | D    | E    | F    | G    | H    | I     | J    |
|------------|------|------|------|------|------|------|------|------|------|-------|------|
|            | ±0.5 | ±0.5 | ±0.5 | Max  | Typ  | Typ  | Typ  | Typ  | Typ  | Typ   | Typ  |
| ZEACM9070F | 9.00 | 9.50 | 7.00 | 4.80 | 5.60 | 1.50 | 1.70 | 5.50 | 1.50 | 10.50 | 5.00 |

产品电路图：





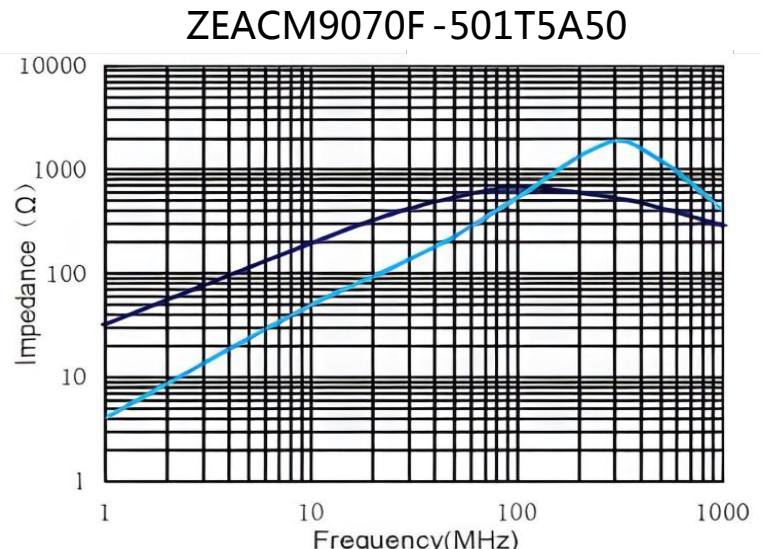
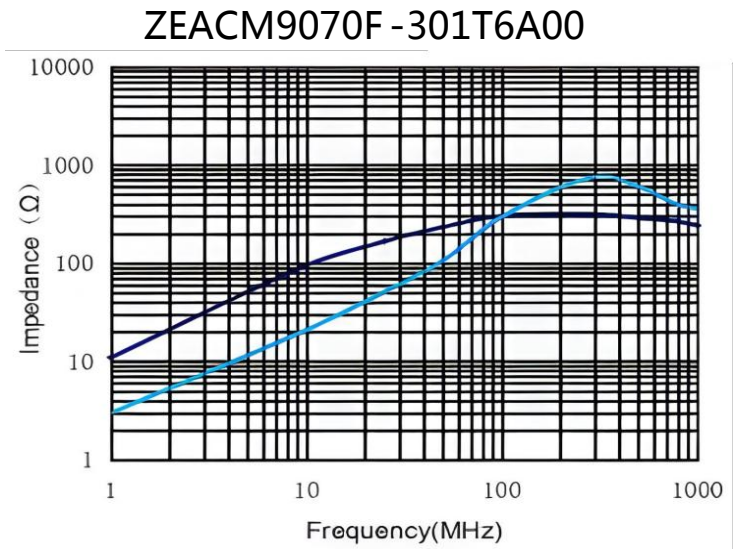
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## 产品电气特性(25℃下的电气规格)：

| 规格型号                 | 阻抗       |          | 额定电流      | 直流电阻      | 绝缘电阻    | 额定电压   | 测试频率       | 印字  |
|----------------------|----------|----------|-----------|-----------|---------|--------|------------|-----|
| Part No.             | Z Min(Ω) | Z Typ(Ω) | Max.Ir(A) | Max. (mΩ) | Min(MΩ) | Max(V) | Test Freq. |     |
| ZEACM9070F -301T6A60 | 225      | 300      | 6.6       | 5.5       | 10M     | 80     | 100MHz     | 301 |
| ZEACM9070F -501T6A00 | 450      | 600      | 6.0       | 7.3       | 10M     | 80     | 100MHz     | 501 |
| ZEACM9070F -601T5A50 | 500      | 700      | 5.5       | 9.0       | 10M     | 80     | 100MHz     | 601 |
| ZEACM9070F -701T5A50 | 500      | 700      | 5.5       | 9.0       | 10M     | 80     | 100MHz     | 701 |
| ZEACM9070F -102T4A40 | 750      | 1000     | 4.4       | 11.8      | 10M     | 80     | 100MHz     | 102 |
| ZEACM9070F -202T3A30 | 1500     | 2200     | 3.3       | 45.5      | 10M     | 80     | 100MHz     | 202 |
| ZEACM9070F -222T3A30 | 1700     | 2200     | 3.3       | 45.5      | 10M     | 80     | 100MHz     | 222 |
| ZEACM9070F -272T2A20 | 2000     | 2700     | 2.2       | 72.8      | 10M     | 80     | 100MHz     | 272 |
| ZEACM9070F -302T2A20 | 2500     | 3000     | 2.2       | 72.8      | 10M     | 80     | 100MHz     | 302 |

● Rated Current: the actual value of DC current when the temperature rise is $\Delta T$  40℃ (Ta =25℃).

## 产品特性曲线图：

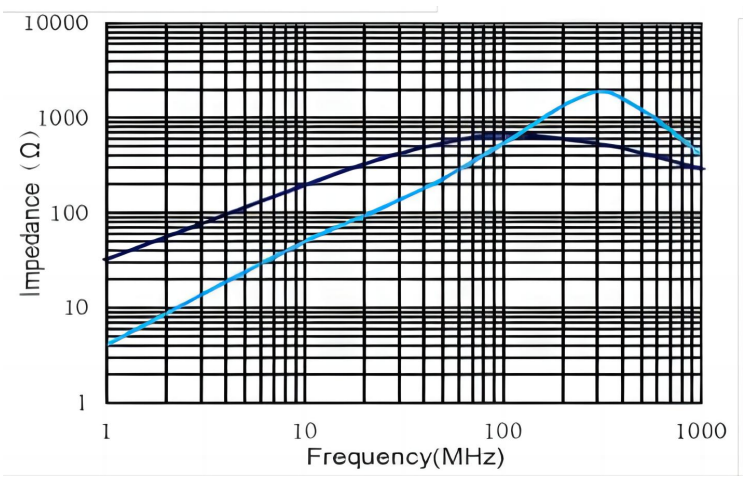




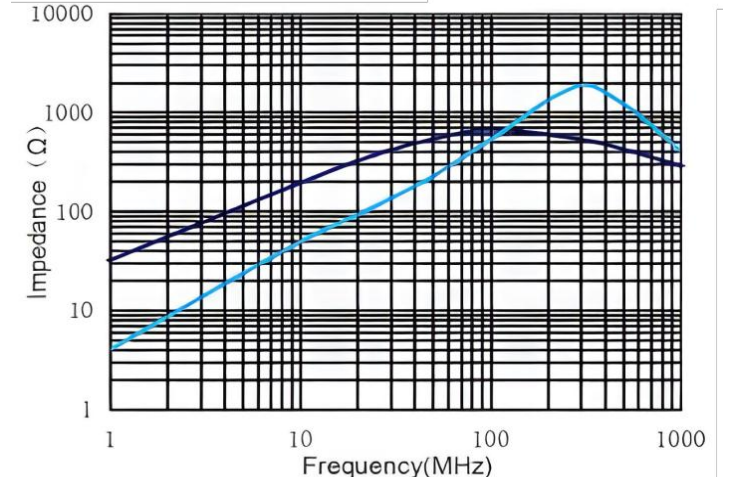
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## 产品特性曲线图：

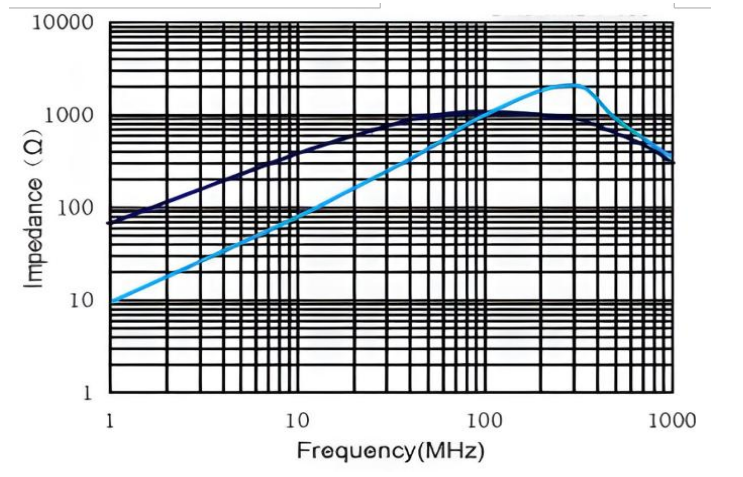
ZEACM9070F -601T5A00



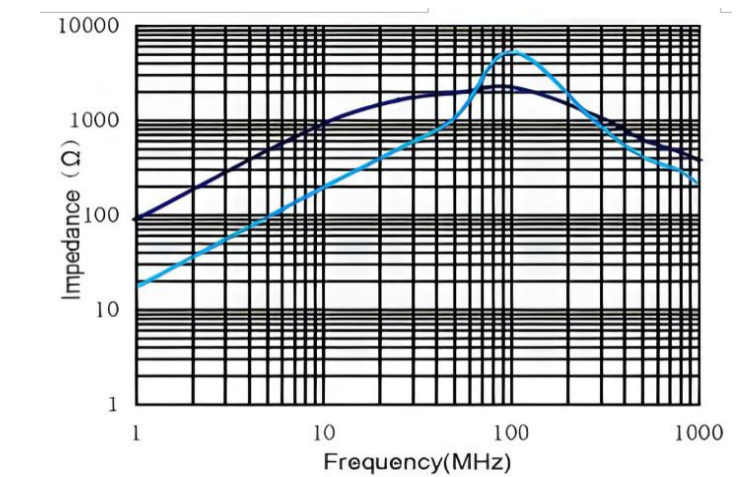
ZEACM9070F -701T5A00



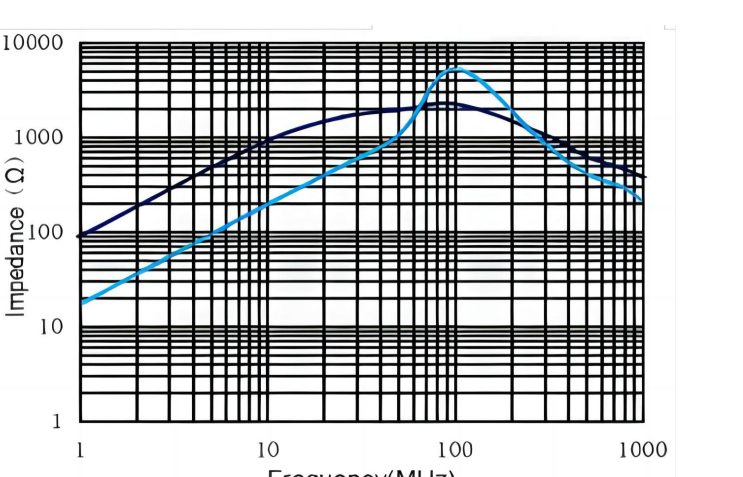
ZEACM9070F -102T4A00



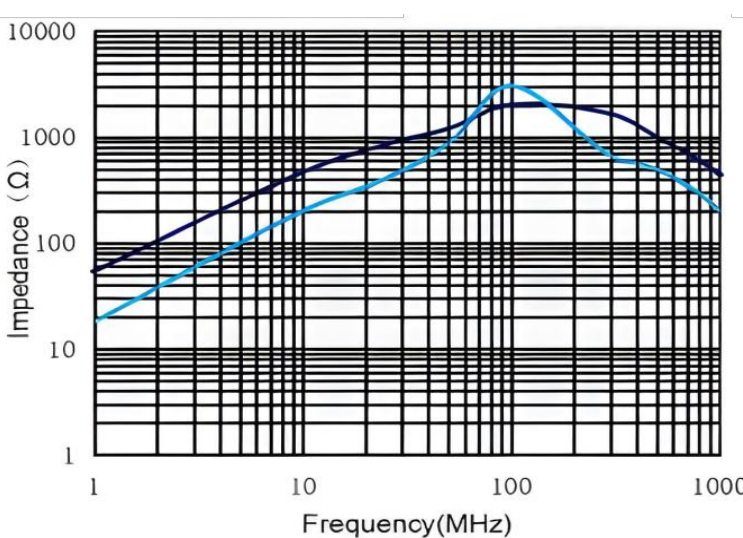
ZEACM9070F -202T3A00



ZEACM9070F -222T3A00



ZEACM9070F -272T2A00



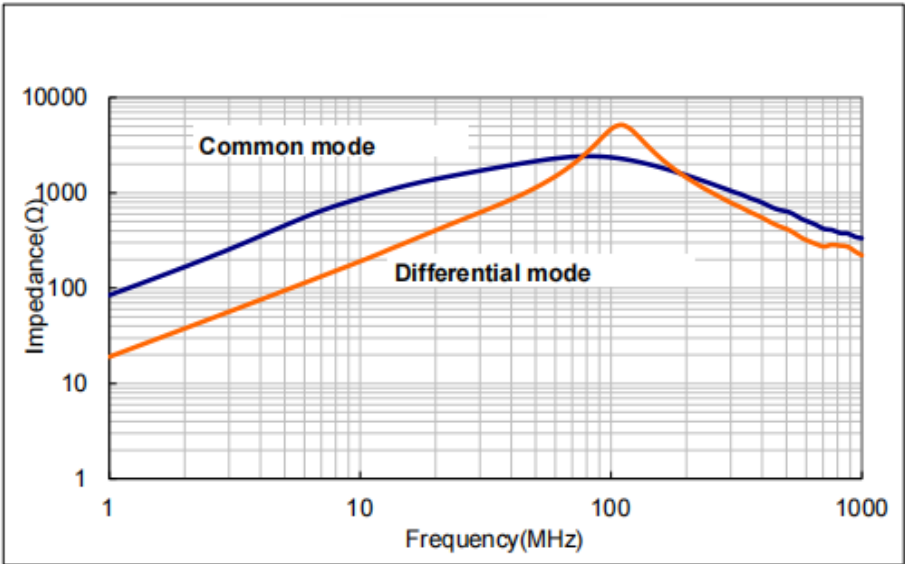




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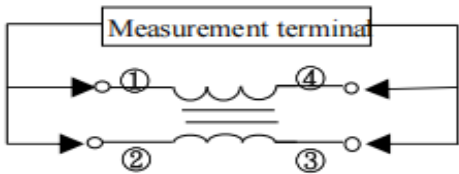
## 产品特性曲线图：

ZEACM9070F -302T2A00

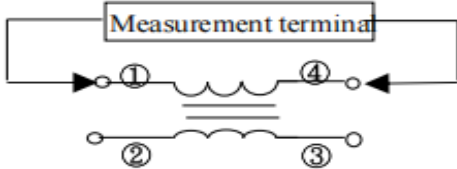


## 产品电气特性测试设备：

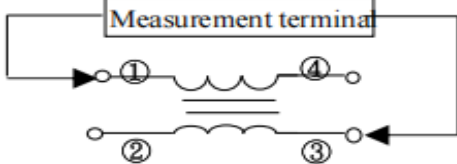
**Impedance**  
Measured by using HP4291B RF Impedance Analyzer.



**DC Resistance**  
Measured by using Chroma 16502 milliohm meter.



**Insulation Resistance**  
Measured by using Chroma 19073  
Measurement voltage : 50v ,Measurement time : 60 sec.





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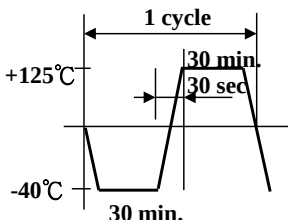
## 可靠性测试：

| TEST ITEM                                       | SPECIFICATION                                                                                                                                                                                                                                | TEST DETAILS                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Solder ability                                  | The product shall be connected to the test circuit board by the fillet (the height is 0.2mm).                                                                                                                                                | Apply cream solder to the printed circuit board .<br>Refer to clause 8 for Reflow profile.                                                                                                                                                                                                                                                        |
| Resistance to Soldering heat (reflow soldering) | There shall be no damage or problems.                                                                                                                                                                                                        | <p><b>Temperature profile of reflow soldering</b></p> <p>The specimen shall be passed through the reflow oven with the condition shown in the above profile for 1 time.</p> <p>The specimen shall be stored at standard atmospheric eric conditions for 1 hour, after which the measurement shall be made.</p>                                    |
| Terminal strength                               | The terminal electrode and the ferrite must not damaged.                                                                                                                                                                                     | <p>Solder a chip to test substrate , and then laterally apply a load 9.8N in the arrow direction.</p>                                                                                                                                                                                                                                             |
| Strength on PC board bending                    | The terminal electrode and the ferrite must not damaged.                                                                                                                                                                                     | <p>Solder a chip to test substrate and then apply a load.</p>                                                                                                                                                                                                                                                                                     |
| High temperature resistance                     | <p>Impedance: Within <math>\pm 20\%</math> of the initial value.</p> <p>Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met.</p> <p>The terminal electrode and the ferrite must not damaged.</p> | <p>After the samples shall be soldered onto the test circuit board, the test shall be done.</p> <p>Measurement : After placing for 24 hours min.</p> <p>Temperature : <math>+125 \pm 2^\circ\text{C}</math></p> <p>Applied voltage : Rated voltage</p> <p>Applied current : Rated current</p> <p>Testing time : <math>500 \pm 12</math> hours</p> |



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## 可靠性测试：

| TEST ITEM               | SPECIFICATION                                                                                                                                                                                                         | TEST DETAILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Humidity resistance     | Impedance: Within $\pm 20\%$ of the initial value.<br>Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met.<br>The terminal electrode and the ferrite must not be damaged. | After the samples shall be soldered onto the test circuit board, the test shall be done.<br>Measurement : After placing for 24 hours min.<br>Temperature : $+60 \pm 2^\circ\text{C}$ , Humidity : 90 to 95 %RH<br>Applied voltage : Rated voltage<br>Applied current : Rated current<br>Testing time : $500 \pm 12$ hours                                                                                                                                                                                     |
| Thermal shock           | Impedance: Within $\pm 20\%$ of the initial value.<br>Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met.<br>The terminal electrode and the ferrite must not be damaged. |  <p>1 cycle<br/>+125°C<br/>30 min.<br/>30 sec<br/>-40°C<br/>30 min.</p>                                                                                                                                                                                                                                                                                                                                                    |
| Low temperature storage | Impedance: Within $\pm 20\%$ of the initial value.<br>Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met.<br>The terminal electrode and the ferrite must not be damaged. | After the samples shall be soldered onto the test circuit board, the test shall be done.<br>Measurement : After placing for 24 hours min.<br>Temperature : $-40 \pm 2^\circ\text{C}$<br>Testing time : $500 \pm 12$ hours                                                                                                                                                                                                                                                                                     |
| Vibration               | Impedance: Within $\pm 20\%$ of the initial value.<br>Insulation resistance and DC resistance on the specification (refer to clause 2-1) shall be met.<br>The terminal electrode and the ferrite must not be damaged. | After the samples shall be soldered onto the test circuit board, the test shall be done.<br>Frequency : 10 to 55 Hz<br>Amplitude : 1.52 mm<br>Dimension and times : X, Y and Z directions for 2 hours each.                                                                                                                                                                                                                                                                                                   |
| Solderability           | New solder More than 75%                                                                                                                                                                                              | Flux (rosin, isopropyl alcohol {JIS-K-1522}) shall be coated over the whole of the sample before hand, the sample shall then be preheated for about 2 minutes in a temperature of $130 \sim 150^\circ\text{C}$ and after it has been immersed to a depth 0.5mm below for $3 \pm 0.2$ seconds fully in molten solder M705 with a temperature of $245 \pm 2^\circ\text{C}$ . More than 75% of the electrode sections shall be covered with new solder smoothly when the sample is taken out of the solder bath. |