



深圳市首韩科技有限公司

SHENZHEN SHOUHAN TECHNOLOGY CO., LTD

Tel: 0755-27597601 Fax: 0755-27597491

# 承 认 书

## SPECIFICATION FOR APPROVAL

客 户 Customer:

\_\_\_\_\_

产品名称 Project:

磁环

\_\_\_\_\_

规格型号 Part No:

SHKJ 2032-0930

\_\_\_\_\_

### 贵公司承认印 Approval signatures

| 料 号/Part No. | 签 章/Signatures |
|--------------|----------------|
|              |                |

日期 Date:

|             |     |  |
|-------------|-----|--|
| 拟制/Drawn    | 李春风 |  |
| 审核/Check    | 钟华华 |  |
| 批准/Approved | 罗孝金 |  |

# 承 認 書

## SPECIFICATION FOR APPROVAL

| 客戶名稱<br>CUSTOMER   |                             | 日期<br>DATE   | 2019.5.20  |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
|--|-----------------------------|--|------------|---------------|-------------------------|-------------------------------|-------------------|-----------------------------------|-------------------|-----------------------------------|--------|----------------------------|--------|---------------|---|------------|---|--|
| 規 格<br>ITEM  | SHKJ 2032-0930              | 編 號<br>SERIAL NO.  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| <p>1.1. 形狀尺寸(單位/毫米):<br/>SHAPE &amp; DIMENSION(unit/mm):</p> <p>1.2. 實物圖:<br/>The Sample::</p>   |                             | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">A</td><td style="text-align: center;">36.0 ± 1.0 mm</td></tr> <tr><td style="text-align: center;">B</td><td style="text-align: center;">32.0 ± 1.0 mm</td></tr> <tr><td style="text-align: center;">C</td><td style="text-align: center;">9.0 ± 1.0 mm</td></tr> <tr><td style="text-align: center;">D</td><td style="text-align: center;">19.5 ± 1.0 mm</td></tr> <tr><td style="text-align: center;">E</td><td style="text-align: center;">16 ± 0.5 mm</td></tr> <tr><td style="text-align: center;">F</td><td style="text-align: center;">28.2 ± 0.7 mm</td></tr> <tr><td style="text-align: center;">G</td><td style="text-align: center;">9 ± 0.4 mm</td></tr> <tr><td style="text-align: center;">H</td><td></td></tr> </table> | A          | 36.0 ± 1.0 mm | B                       | 32.0 ± 1.0 mm                 | C                 | 9.0 ± 1.0 mm                      | D                 | 19.5 ± 1.0 mm                     | E      | 16 ± 0.5 mm                | F      | 28.2 ± 0.7 mm | G | 9 ± 0.4 mm | H |  |
| A  | 36.0 ± 1.0 mm               |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| B  | 32.0 ± 1.0 mm               |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| C  | 9.0 ± 1.0 mm                |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| D  | 19.5 ± 1.0 mm               |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| E  | 16 ± 0.5 mm                 |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| F  | 28.2 ± 0.7 mm               |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| G  | 9 ± 0.4 mm                  |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| H  |                             |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| <p>外殼尺寸:<br/>ΦC(Core ID)</p>  <p>磁芯尺寸:</p>    |                             |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| <p>2. 電氣性能檢測項目:<br/>ELECTRICAL REQUIREMENTS:</p>   |                             | <p>測試儀器<br/>TEST INSTRUMENTS</p> <p>1. Q-METER:<br/>○HP 4342A    ○MQ-172</p> <p>2. L.C.R. METER:<br/>○HP 4284A</p> <p>3. IMPEDANCE ANALYZER:<br/>○HP 4396B    ○HP 4191A    ØE4991A<br/>ØAgilent 16194A-TESTFIXTURE</p> <p>4. L-METER:<br/>○TH 2817A</p> <p>5. DIGITAL MINI-OHMMETER:<br/>○VP2941A</p>  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| <input type="checkbox"/> L   |                             | TEST<br>FREQ   | KHZ<br>MHZ |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| <input type="checkbox"/> Q   |                             | TEST<br>FREQ   | KHZ<br>MHZ |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| <input checked="" type="checkbox"/> Z  | Z1= 65Ω MIN    KHZ<br>25MHZ | Z2=125Ω MIN    KHZ<br>100MHZ   |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
|  | Z3=    /    KHZ<br>MHZ      | Z4=    /    KHZ<br>MHZ   |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| 溫度<br>TEMP   | ℃                           | 濕 度<br>HUMIDITY  | %          |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| 綫 組<br>WINDING   | Φ0.5x0.5TSx100L(mm)         |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| <p>3. 磁 芯 外 觀:<br/>THE LIMIT OF CORE BREAKAGE:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">項 目<br/>Item</th> <th style="text-align: center;">標 準 值<br/>Standard Value</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">一處缺陷的面積<br/>Area of a breakage</td> <td style="text-align: center;">≤1mm<sup>2</sup></td> </tr> <tr> <td style="text-align: center;">總缺陷面積<br/>All area of the breakage</td> <td style="text-align: center;">≤2mm<sup>2</sup></td> </tr> <tr> <td style="text-align: center;">缺陷深度<br/>The depth of the breakage</td> <td style="text-align: center;">≤0.4mm</td> </tr> <tr> <td style="text-align: center;">毛刺長度<br/>The length of burr</td> <td style="text-align: center;">≤0.2mm</td> </tr> </tbody> </table> |                             |  |            | 項 目<br>Item   | 標 準 值<br>Standard Value | 一處缺陷的面積<br>Area of a breakage | ≤1mm <sup>2</sup> | 總缺陷面積<br>All area of the breakage | ≤2mm <sup>2</sup> | 缺陷深度<br>The depth of the breakage | ≤0.4mm | 毛刺長度<br>The length of burr | ≤0.2mm |               |   |            |   |  |
| 項 目<br>Item  | 標 準 值<br>Standard Value     |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| 一處缺陷的面積<br>Area of a breakage  | ≤1mm <sup>2</sup>           |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| 總缺陷面積<br>All area of the breakage  | ≤2mm <sup>2</sup>           |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| 缺陷深度<br>The depth of the breakage  | ≤0.4mm                      |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| 毛刺長度<br>The length of burr   | ≤0.2mm                      |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |
| <p>4. 包 裝:<br/>PACKAGING:</p> <p>內包裝採用泡塑盒, 外包裝採用紙箱, 每箱產品外面都蓋上合格章(包括品名、數量、批號、檢驗員)。<br/>Inner packing adopts foam plastics box, outer packing adopts carton and each carton should have a qualified chapter label outside(include the variety, quantity, batch number and inspector).</p>  |                             |  |            |               |                         |                               |                   |                                   |                   |                                   |        |                            |        |               |   |            |   |  |

深圳市首韩科技有限公司

# 檢驗數據

## INSPECTION DATA

|   |                                  |                      |                        |   |                                 |       |                |                       |       |               |       |                |  |
|---|----------------------------------|----------------------|------------------------|---|---------------------------------|-------|----------------|-----------------------|-------|---------------|-------|----------------|--|
| 客戶名稱<br>CUSTOMER                            |                                  |                      |                        | 日期<br>DATE  | 2019.5.20                       |       | 數量<br>QUANTITY | 10PCS                 |       |               |       |                |  |
| 編號<br>SERIAL NO.                            |                                  |                      |                        | 形狀尺寸(單位/毫米):<br>SHAPE & DIMENSION(unit/mm):<br>外殼尺寸:<br>ΦC(Core ID) |                                 |       |                | 實物圖:<br>The Sample::: |       |               |       |                |  |
| 規格<br>ITEM                                  |                                  | SHKJ 2032-0930       |                        |   |                                 |       |                |                       |       |               |       |                |  |
| 繞組<br>WINDING                               |                                  | Φ0.5x0.5TSx100L(mm)  |                        | 磁芯尺寸:<br>   |                                 |       |                |                       |       |               |       |                |  |
| 測試頻率<br>TEST FREQ                           |                                  | Z1= 25 KHZ<br>25 MHZ | Z2= 100 KHZ<br>100 MHZ |   |                                 |       |                |                       |       |               |       |                |  |
|   |                                  | Z3= KHZ<br>MHZ       | Z4= KHZ<br>MHZ         | 溫度<br>TEMP  |                                 | ℃     |                | 濕度<br>HUMIDITY        |       | %             |       |                |  |
| 項目<br>TEST ITEM                             | 電氣性能<br>ELECTRIC CHARACTERISTICS |                      |                        |   | 尺寸(單位:毫米)<br>DIMENSION(unit:mm) |       |                |                       |       |               |       |                |  |
|   | L(μH)<br>(MH)                    | Z1(Ω)                | Z2(Ω)                  | Z3(Ω)   | Z4(Ω)                           | A     | B              | C                     | D     | E             | F     | G              |  |
|   | 65                               | 125                  |                        |   |                                 | 36.0  | 32.0           | 9.0                   | 19.5  | 16            | 28.2  | 9              |  |
| +   | /                                | /                    |                        |   |                                 | 1.0   | 1.0            | 1.0                   | 1.0   | 0.5           | 0.7   | 0.4            |  |
| -   | 0                                | 0                    |                        |   |                                 | 1.0   | 1.0            | 1.0                   | 1.0   | 0.5           | 0.7   | 0.4            |  |
| 1   | 88.2                             | 165.6                |                        |   |                                 | 35.60 | 31.40          | 8.90                  | 20.10 | 15.70         | 28.08 | 8.68           |  |
| 2   | 87.6                             | 166.0                |                        |   |                                 | 35.70 | 31.30          | 8.93                  | 19.90 | 15.60         | 28.06 | 8.66           |  |
| 3   | 88.8                             | 166.2                |                        |   |                                 | 35.40 | 31.50          | 8.96                  | 20.05 | 15.57         | 28.14 | 8.81           |  |
| 4   | 90.4                             | 165.8                |                        |   |                                 | 35.50 | 31.36          | 8.99                  | 20.06 | 15.69         | 28.15 | 8.74           |  |
| 5   | 89.0                             | 166.4                |                        |   |                                 | 35.56 | 31.42          | 8.98                  | 19.99 | 15.62         | 28.09 | 8.69           |  |
| 6   | 89.8                             | 165.6                |                        |   |                                 | 35.48 | 31.39          | 8.95                  | 19.96 | 15.63         | 28.06 | 8.75           |  |
| 7   | 90.6                             | 165.7                |                        |   |                                 | 35.69 | 31.44          | 8.92                  | 20.04 | 15.64         | 28.04 | 8.71           |  |
| 8   | 89.2                             | 166.3                |                        |   |                                 | 35.52 | 31.52          | 8.91                  | 20.01 | 15.68         | 28.11 | 8.78           |  |
| 9   | 89.4                             | 165.8                |                        |   |                                 | 35.58 | 31.38          | 8.94                  | 20.07 | 15.59         | 28.13 | 8.77           |  |
| 10  | 90.0                             | 166.0                |                        |   |                                 | 35.47 | 31.47          | 8.97                  | 19.98 | 15.67         | 28.05 | 9.73           |  |
| $\bar{X}$                                   | 89.30                            | 165.94               |                        |   |                                 | 35.55 | 31.41          | 8.94                  | 20.01 | 15.63         | 28.09 | 8.73           |  |
| Y/N   | Y                                |                      |                        |   |                                 | Y     | Y              | Y                     | Y     | Y             | Y     | Y              |  |
| 測試儀器:<br>TEST INSTRUMENTS:<br>E4991A+16194A |                                  |                      |                        |   |                                 |       |                | 檢驗<br>INSPECTED       |       | 復核<br>CHECKED |       | 確認<br>APPROVED |  |
|   |                                  |                      |                        |   |                                 |       |                | 吳小平                   |       | 钟华华           |       | 罗孝金            |  |

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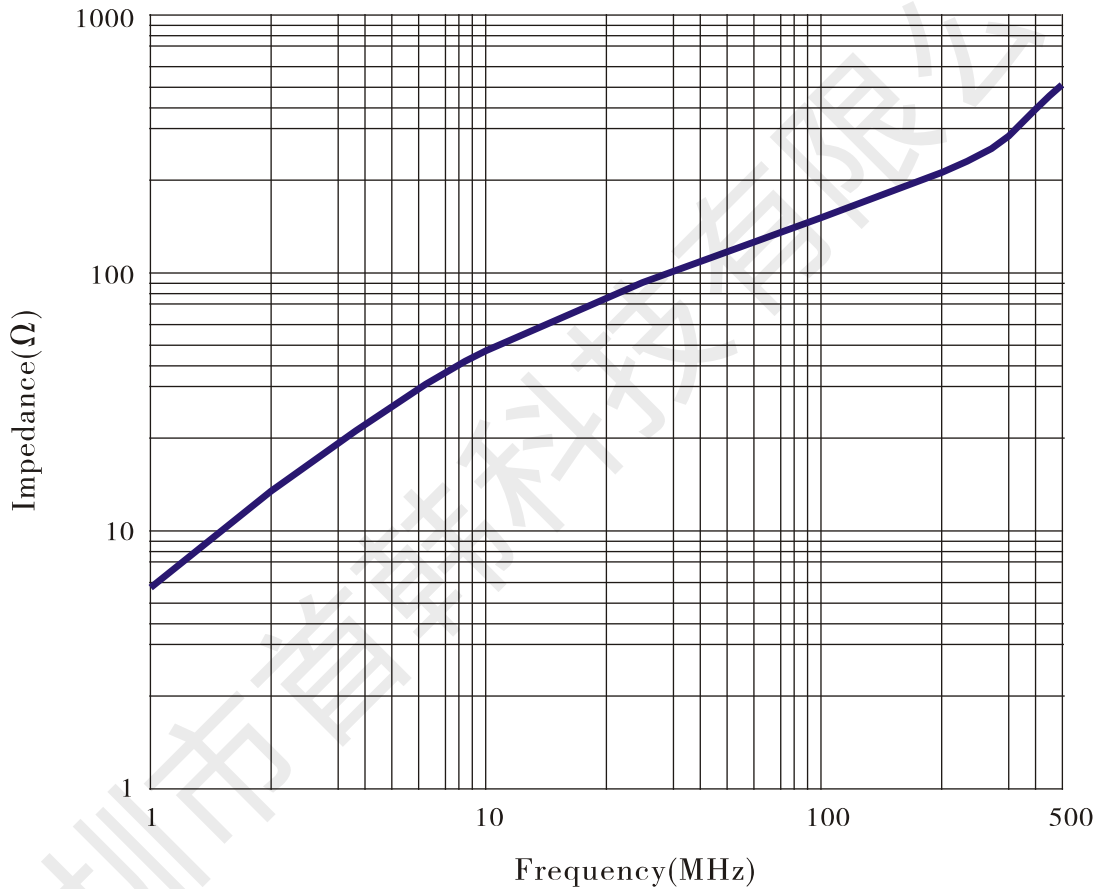
# 阻抗 - 頻率曲綫

## IMPEDANCE V.S FREQUENCY (Z-Y)

|                  |                |                  |           |
|------------------|----------------|------------------|-----------|
| 客戶名稱<br>CUSTOMER |                | 日期<br>DATE       | 2019.5.20 |
| 規格<br>ITEM       | SHKJ 2032-0930 | 編號<br>SERIAL NO. |           |

### 材質特性 MATERIAL CHARACTERISTICS

| 材料牌號<br>Material | 初始磁導率<br>Initial Permeability | 比損耗因子<br>Relative Loss Factor             | 比溫度系數<br>Relative Temperature Coefficient | 飽和磁通密度<br>Saturation Magnetic Flux Density | 剩磁<br>Remanence | 矯頑力<br>Coercivity | 居裏溫度<br>Curie Temperature | 電阻率<br>Electrical Resistivity  | 密度<br>Density          |
|------------------|-------------------------------|---|---|--|-----------------|-------------------|---------------------------|--------------------------------|------------------------|
| Unit symbol      | $\mu_i$<br>$\pm 20\%$         | $\tan \delta / \mu_i$<br>$\times 10^{-6}$ | $\alpha \mu_i \gamma$<br>$\times 10^{-6}$ | Bs<br>(MT)                                 | Br<br>(MT)      | HC<br>(A/m)       | Tc<br>(°C)                | $\rho$<br>( $\Omega \cdot m$ ) | d<br>g/cm <sup>3</sup> |
| F9               | 850                           | 16 (0.1MHz)                               | 5 - 10                                    | 280(1600A/m)                               | 200             | 20                | >130                      | >10 <sup>5</sup>               | 4.6                    |



測試條件：  
TESTING CONDITION:

1. 測試儀器: E4991A+16194A  
Testing Equipment:
2. 測試頻率區間: 1-500MHz  
Testing Frequency Range:
3. 測試綫組:  $\Phi 0.5 \times 0.5 \text{TS} \times 100 \text{L}(\text{mm})$   
Testing Coil Specification:

| 測試<br>TESTED | 復核<br>CHECKED | 確認<br>APPROVED |
|--------------|---------------|----------------|
| 吴小平          | 钟华华           | 罗孝金            |

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