



# 零件承认书

SPECIFICATION FOR APPROVAL

客户名称： 0001

规格描述： ZNR252012磁胶电感规格书

日 期： 2023/10/10

增益签核：

| 制订 | 审核 | 核准 |
|----|----|----|
| 夏琳 | 陈雨 | 李万 |

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：

磁胶电感

日 期：

2023/10/10

版 本：

A



#### ◆特征:

- 磁性胶水涂敷结构极大减少了蜂鸣声
- 大电流低直流阻抗
- 直接在磁芯上金属化电极,抗跌落冲击强  
经久耐用
- 闭合磁路结构设计,漏磁少,抗 EMI 能力强
- 省空间,更省电
- 符合 RoHS,无卤和 REACH

#### ◆用途:

- 广泛应用于 LED 背光板、平板电视、  
蓝光 DVD 机顶盒、笔记本电脑、台式电脑、  
服务器、显卡、便携式游戏机、个人导航系统、  
多媒体、汽车产品、通信设备、直流转换。

#### ◆环境:

- 工作温度:  $-40^{\circ}\text{C}$  至  $+125^{\circ}\text{C}$   
(包括线圈自身温升)

#### ◆试验设备:

- 电感值: HP4284A, HP4285A 或同等仪器
- 电流: HP4284+42841A
- 直流电阻: Chroma 16502 或同等仪器

#### ◆产品型号:

#### Features:

- Magnetic-resin shielded construction reduces buzz  
Noise to ultra-low levels
- Large Current and Low DCR
- Metallization on Ferrite Core results in excellent shock  
Resistance and damage-free durability
- Closed magnetic circuit design reduces leakage  
Flux and Electro Magnetic Interference (EMI)
- Takes up less PCB real estate and save more power  
Small parasitic capacitance
- RoHS, Halogen Free and REACH Compliance

#### Applications:

- LED backlight、Flat-screen TVs, blue-ray disc  
Set top box、Notebooks, desktop computers, servers,  
Graphic cards、Portable gaming devices, personal  
Navigation systems, personal multimedia devices,  
Automotive systems Telecomm base station、DC-DC  
Converter

#### Environmental Data:

- Operating Temperature:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$   
(Including coils self-temperature rise)

#### Test Equipment:

- L: HP4284A or HP4285A LCR meter or equivalent
- Isat & Irms: HP4284+42841A
- DCR: Chroma 16502 or equivalent

#### Product Identification:

**ZNR**

①

**8040**

②

**ST**

**100**

④

**M**

①

| 类型 Type |                                                                                                                                  |
|---------|----------------------------------------------------------------------------------------------------------------------------------|
| ZNR     | 闭磁路贴片磁胶电感<br>Shielded SMT<br>Power Inductors  |

②

| 外形尺寸(L×W×H) (mm)<br>External Dimensions (L×W×H)<br>(mm) |             |
|---------------------------------------------------------|-------------|
| 8040                                                    | 8.0×8.0×4.0 |

Inductance

10 uH

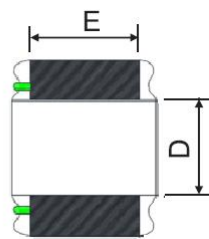
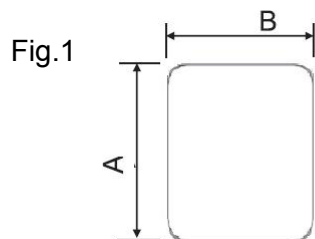
⑤

公差 Inductance Tolerance

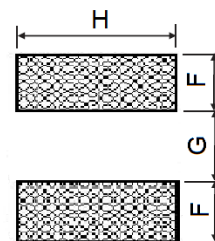
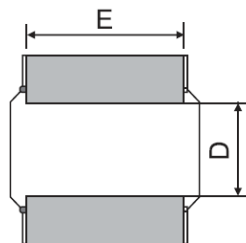
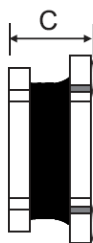
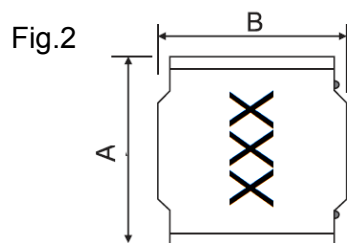
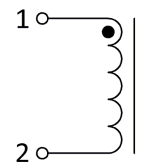
K:  $\pm 10\%$ ,M:  $\pm 20\%$ , N:  $\pm 30\%$ 

◆外观尺寸:

Shape and Dimensions(dimensions are in mm):



SCHEMATIC

Recommended  
Land Pattern

| Part No    | ITEM  |               |               |         |               |                |         |        |        |
|------------|-------|---------------|---------------|---------|---------------|----------------|---------|--------|--------|
|            | Shap  | A             | B             | C       | D             | E              | F       | G      | H      |
| ZNR252012S | Fig.1 | 2.5 $\pm$ 0.1 | 2.0 $\pm$ 0.1 | 1.20Max | 0.8 $\pm$ 0.2 | 2.00 $\pm$ 0.2 | 0.85Typ | 0.8Typ | 2.0Typ |



◆规格特性：  
● ZNR252012 Series

Specifications:

| Part Number     | Inductance<br>(uH) @100KHz | DC Resistance (Ω) |       | 额定电流<br>Current (A) | 饱和电流<br>Current (A) |
|-----------------|----------------------------|-------------------|-------|---------------------|---------------------|
|                 |                            | Typ.              | Max.  |                     |                     |
| ZNR252012STR22N | 0.22                       | 0.039             | 0.047 | 2.60                | 6.10                |
| ZNR252012STR33N | 0.33                       | 0.039             | 0.047 | 2.50                | 4.40                |
| ZNR252012STR47N | 0.47                       | 0.047             | 0.061 | 2.34                | 4.27                |
| ZNR252012STR68N | 0.68                       | 0.057             | 0.074 | 2.13                | 3.68                |
| ZNR252012ST1R0N | 1.00                       | 0.069             | 0.090 | 2.10                | 2.90                |
| ZNR252012ST1R2N | 1.20                       | 0.099             | 0.129 | 1.59                | 2.67                |
| ZNR252012ST1R5M | 1.50                       | 0.113             | 0.147 | 1.53                | 2.51                |
| ZNR252012ST2R2M | 2.20                       | 0.166             | 0.216 | 1.25                | 2.07                |
| ZNR252012ST2R7M | 2.70                       | 0.184             | 0.239 | 1.19                | 1.92                |
| ZNR252012ST3R3M | 3.30                       | 0.203             | 0.264 | 1.13                | 1.80                |
| ZNR252012ST3R6M | 3.60                       | 0.268             | 0.348 | 0.98                | 1.64                |
| ZNR252012ST4R3M | 4.30                       | 0.290             | 0.377 | 0.95                | 1.53                |
| ZNR252012ST4R7M | 4.70                       | 0.290             | 0.377 | 0.92                | 1.25                |
| ZNR252012ST5R1M | 5.10                       | 0.385             | 0.500 | 0.82                | 1.37                |
| ZNR252012ST5R6M | 5.60                       | 0.414             | 0.538 | 0.80                | 1.25                |
| ZNR252012ST6R2M | 6.20                       | 0.417             | 0.542 | 0.80                | 1.16                |
| ZNR252012ST6R8M | 6.80                       | 0.447             | 0.581 | 0.75                | 1.09                |
| ZNR252012ST7R5M | 7.50                       | 0.470             | 0.611 | 0.74                | 1.09                |
| ZNR252012ST8R2M | 8.20                       | 0.506             | 0.658 | 0.71                | 1.10                |
| ZNR252012ST9R1M | 9.10                       | 0.531             | 0.690 | 0.68                | 1.02                |
| ZNR252012ST100M | 10.0                       | 0.531             | 0.690 | 0.68                | 0.88                |
| ZNR252012ST120M | 12.0                       | 0.827             | 1.075 | 0.56                | 0.88                |
| ZNR252012ST150M | 15.0                       | 1.224             | 1.591 | 0.46                | 0.77                |
| ZNR252012ST220M | 22.0                       | 1.520             | 1.976 | 0.41                | 0.59                |

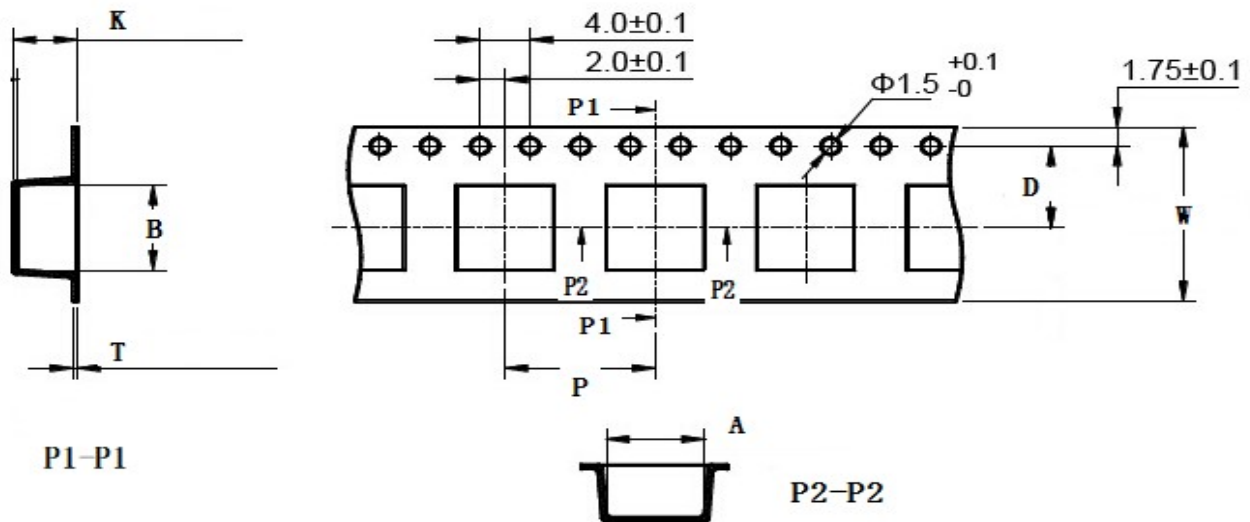
※ The saturation current value is the DC current value having inductance decrease down to 30%.(at 20℃)

※ The temperature rise current value is the DC current value having temperature increase up to 40℃. (at 20℃)

※ The rated current is the DC current value that satisfies both of current value saturation current value and temperature rise current value.

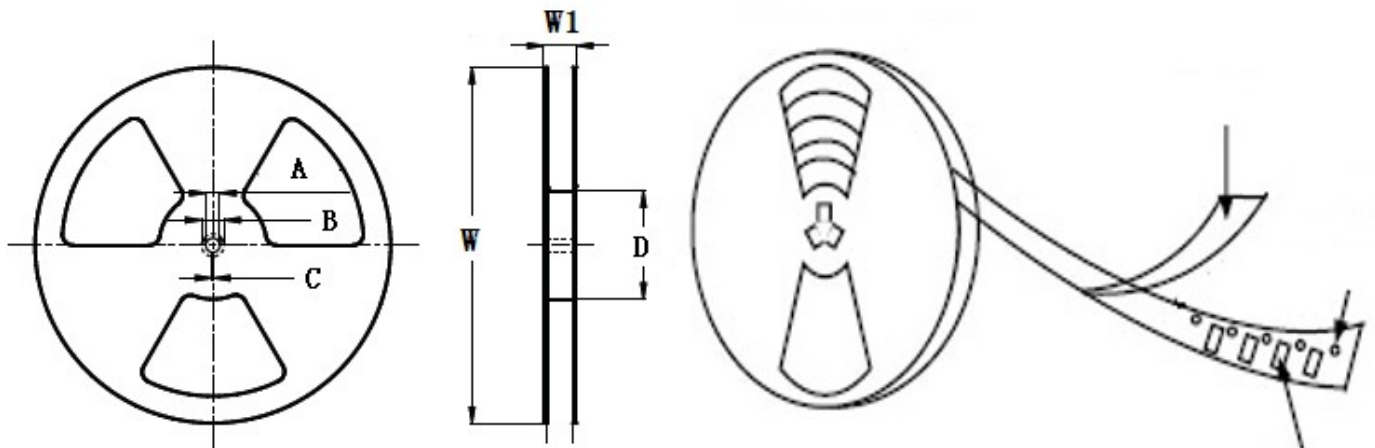


## ■ Taping Dimensions(Unit:mm)



| TYPE      | Chip Thickness | W    | A    | B    | D    | P    | K Max | T Max | MPQ  |
|-----------|----------------|------|------|------|------|------|-------|-------|------|
| ZNR252012 | 1.20           | 8.00 | 2.35 | 2.65 | 3.50 | 4.00 | 1.40  | 0.25  | 2000 |

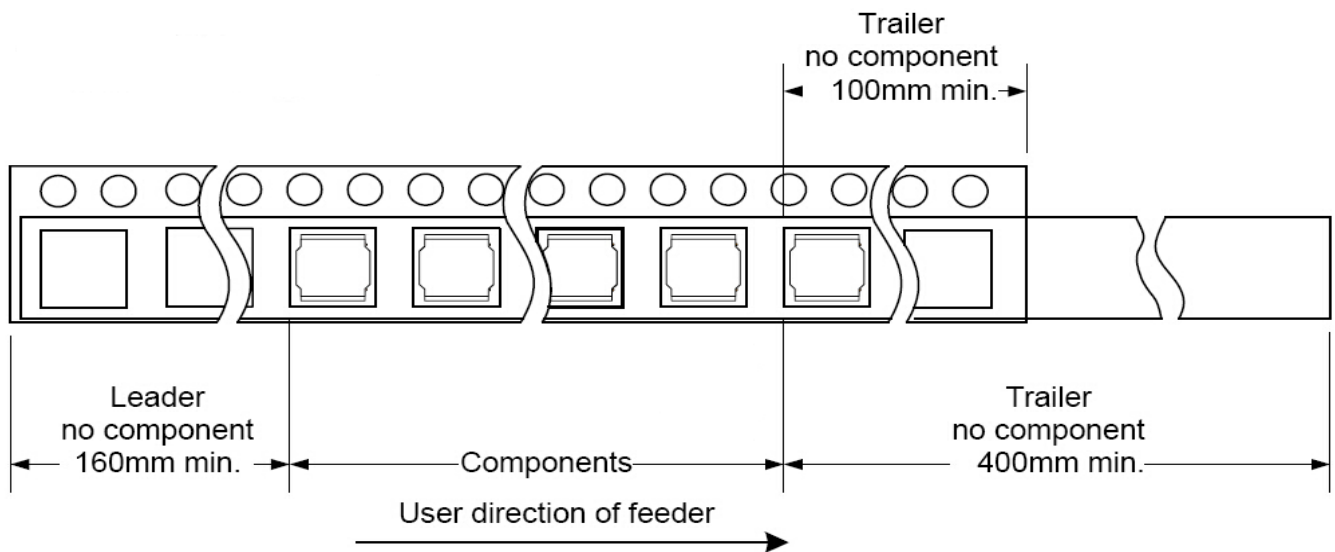
## ■ Reel Dimensions(Unit:mm)



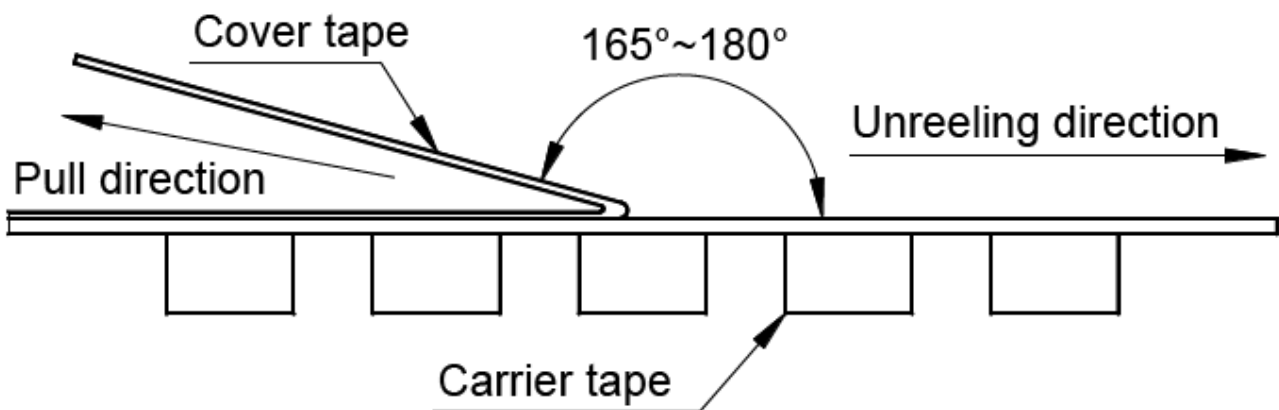
| TYPE      | W       | W1        | A        | B        | C        | D      |
|-----------|---------|-----------|----------|----------|----------|--------|
| ZNR252012 | 178±2.0 | 8.40±1.50 | 4.3±0.20 | 5.0±0.10 | 3.0±0.10 | 58±2.0 |



### ■ Direction of rolling



### ■ Cover tape peel off condition



Cover tape peel force shall be 0.1N to 1.3N.

Reference peel speed  $300 \pm 10$  mm/min.

## 使用注意事项

### REMINDERS FOR USING THESE PRODUCTS



- 保存时间为12 个月以内，保存条件（温度5~40°C以下、湿度35 ~ 66%RH 以下），需充分注意。  
若超过保存时间，端子电极的可焊性将可能老化。

The storage period is within 12 months. Be sure to follow the storage conditions (temperature: 5~40°C, humidity: 35 to 65% RH or less). If the storage period elapses, the soldering of the terminal electrodes may deteriorate.

- 请勿在气体腐蚀环境（盐、酸、碱等）下使用和保存。

Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).

- 手上的油脂会导致可焊性降低，应避免用手直接接触端子。

Don't touch electrodes directly with bare hands as oil secretions may inhibit soldering. Always ensure optimum conditions for soldering.

- 请小心轻拿轻放,避免由于产品的跌落或取出不当而导致的损坏。

Please always handle products carefully to prevent any damage caused by dropping down or inappropriate removing.

- 端子过度弯曲会导致断线,请不要过度弯曲端子。

Don't bend the terminals with excessive stress in case of any wire fracture.

- 不要清洗产品，如需要清洗时请联系我司。

Don't rinse coils by yourself and please contact ZE if necessary.

- 请勿将本产品靠近磁铁或带有磁力的物体

Don't expose the products to magnets or magnetic fields

- 在实施焊接前，请务必进行预热。预热温度与焊接温度及芯片温度的温度差要在150°C 以内。

Before soldering, be sure to preheat components. The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.

- 安装后的焊接修正应在规格书规定的条件范围内。若加热过度可能导致短路、性能降低、寿命减少。

Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.

- 装置会因通电而自我发热（温度上升），因此在热设计方面需留有充分余地。

Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.

- 非磁屏蔽型在基板设计时需注意配置线圈，受到电磁干扰可能会导致误动作。

Carefully lay out the coil for the circuit board design of the non-magnetic shield type. A malfunction may occur due to magnetic interference.

- 当本公司产品使用在一般电子设备以外的场合,如:车载,医疗设备,军用,航空航天等,请务必联系本公司营业部门,如超出本公司产品使用条件而引起的机器故障时,本公司概不负责。

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