

## SMC 系列共模线圈

### SMC Series Common Mode Chokes

#### 特征 Features

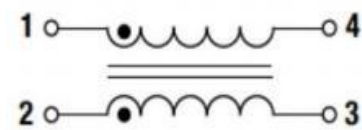
|           |                               |
|-----------|-------------------------------|
| 超薄小型化     | Low Profile & Small Size      |
| 温度最高125°C | High Temperature, Up to 125°C |
| 低信号损耗     | Lower Signal Loss             |

#### 应用 Applications

|        |                       |
|--------|-----------------------|
| 笔记本电脑  | Notebook              |
| 智慧型手机  | Smart Phone           |
| 共模信号滤波 | Common Mode Filtering |



#### 电路接线图 Circuit

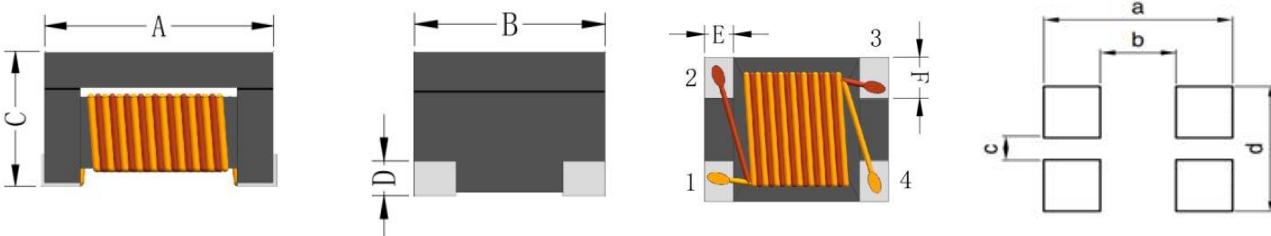


#### 产品规格型号表示方法 How to Order

SMC 1812 B - 101 Y S  
① ② ③ ④ ⑤ ⑥

| ①                    | ②                             |             | ③                 |                | ④  | ⑤  | ⑥                   |                                |
|----------------------|-------------------------------|-------------|-------------------|----------------|--|--|---------------------|--------------------------------|
| 产品代号<br>Product Code | 规格尺寸(L×W×T)<br>Dimensions(mm) |             | 型号规格<br>Type Code |                | 电感值<br>Inductance                                | 误差<br>Tolerance                            | 应用领域<br>Application |                                |
| SMC 系列<br>SMC Series | 1812                          | 4.5×3.2×2.6 | B                 | For CAN/CAN-FD | 1R0=1.0μH<br>100=10μH<br>101=100μH<br>102=1000μH | K=10%<br>M=20%<br>P=25%<br>N=30%<br>Y=其他误差 | S                   | 标准品<br>For Standard.           |
|                      |                               |             | E                 | For Ethernet   |  |  | C                   | 车载品 125°C<br>Automotive 125°C. |
|                      |                               |             |                   |                |  |  | T                   | 特制品<br>For Special.            |

#### 外型尺寸 Dimensions(Unit:mm)



| Type Name | A       | B       | C       | D        | E        | F        | a        | b        | c        | d        |
|-----------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|
| SMC1812   | 4.5±0.2 | 3.2±0.2 | 2.6±0.2 | 0.8 Typ. | 0.7 Typ. | 1.1 Typ. | 5.9 Typ. | 3.0 Typ. | 1.6 Typ. | 3.4 Typ. |

### 性能参数 Electrical Characteristics

#### SMC1812B Series

| Part No.       | Common Mode Impedance @10MHz (Ω) |      | Inductance @100KHz,0.1V (uH) | DCR (Ω) Max. | I <sub>dc</sub> (mA) Max. | V <sub>DC</sub> (V) | IR (MΩ) Min. | Withstanding Voltage (Vdc) |
|----------------|----------------------------------|------|------------------------------|--------------|---------------------------|---------------------|--------------|----------------------------|
| SMC1812B-110YS | 300                              | 600  | 11 -30%/+50%                 | 0.5          | 360                       | 50                  | 10           | 125                        |
| SMC1812B-220YS | 500                              | 1200 | 22 -30%/+50%                 | 0.8          | 310                       | 50                  | 10           | 125                        |
| SMC1812B-510YS | 1000                             | 2800 | 51 -30%/+50%                 | 1.0          | 230                       | 50                  | 10           | 125                        |
| SMC1812B-101YS | 2000                             | 5800 | 100 -30%/+50%                | 2.0          | 200                       | 50                  | 10           | 125                        |

#### SMC1812E Series

| Part No.       | Inductance @100KHz,0.1V (uH) | DCR (Ω) Max. | I <sub>dc</sub> (mA) Max. | V <sub>DC</sub> (V) | IR (MΩ) Min. | Withstanding Voltage (Vdc) |
|----------------|------------------------------|--------------|---------------------------|---------------------|--------------|----------------------------|
| SMC1812E-201YS | 200@0.1MHz,0.1V              | 4.5          | 110                       | 20                  | 10           | 50                         |

#### 备注 Remark

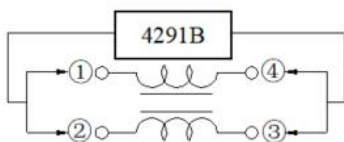
Temperature : 20±2°C

Humidity : 60 to 75% (RH)

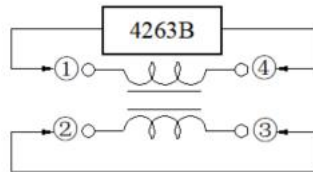
Atmospheric Pressure : 86 to 106 kPa

### 测试设备 Test Equipment

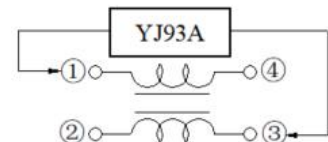
共模阻抗  
Common Mode Impedance



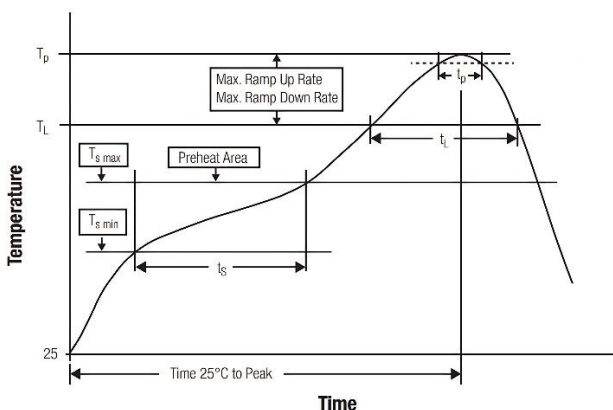
直流电阻  
DC Resistance



绝缘电阻  
Insulation Resistance

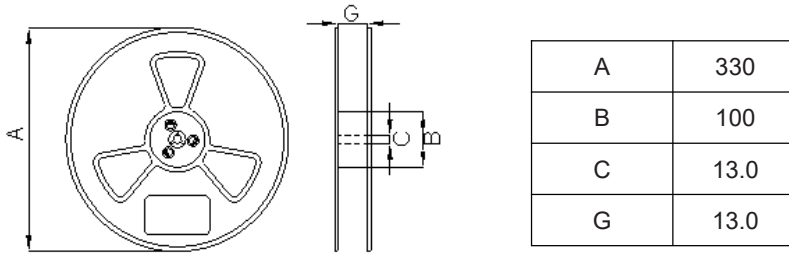


### 推荐回流焊条件 Recommended Reflow Soldering Conditions

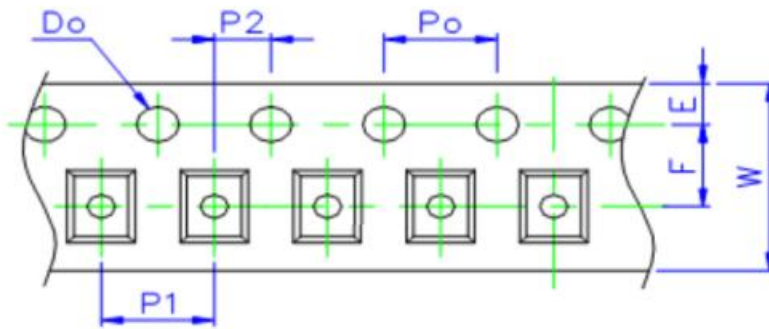


| Profile Feature   | Lead-Free Assembly |
|---|--------------------|
| Preheat Temperature Min (T <sub>s</sub> min)                              | 150°C              |
| Preheat Temperature Max (T <sub>s</sub> max)                              | 200°C              |
| Preheat Time t <sub>s</sub> from T <sub>s</sub> min to T <sub>s</sub> max | 60-120 seconds     |
| Average Ramp-Up Rate (T <sub>L</sub> to T <sub>P</sub> )                  | 3°C /second max.   |
| Liquidous Temperature (T <sub>L</sub> )                                   | 217°C              |
| Time t <sub>L</sub> maintained above T <sub>L</sub> (t <sub>L</sub> )     | 60-150 seconds     |
| Peak/Classification Temperature (T <sub>P</sub> )                         | 255°C              |
| Time within 5°C of actual peak temperature (t <sub>p</sub> )              | 20-30 second       |
| Ramp-down Rate (T <sub>P</sub> to T <sub>L</sub> )                        | 6 °C/second max.   |
| Time 25 °C to Peak Temperature  | 8 minutes max.     |

**包装材料及规格 Packaging Materials and Specifications (mm)**



**包装方式及数量 The Packing Method and Quantity (mm)**



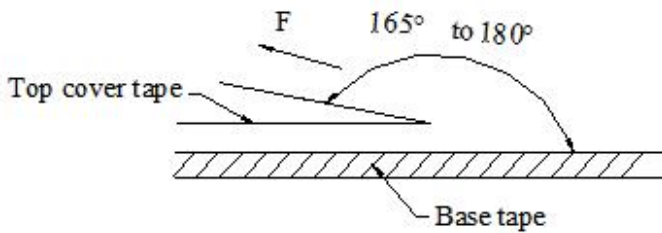
| W        | E        | F        | P1      | P2      | P0      | D0           |
|----------|----------|----------|---------|---------|---------|--------------|
| 12.0±0.3 | 1.75±0.1 | 5.5±0.05 | 8.0±0.1 | 2.0±0.1 | 4.0±0.1 | 1.5+0.1/-0.0 |

包装数量 Packaging Quantities: 1500pcs/Reel

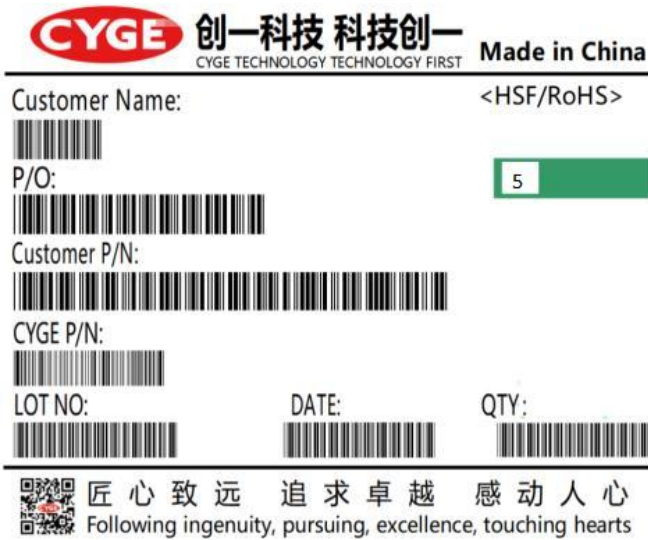
**剥离强度 Peeling Strength**

在箭头方向上撕下10克到100克(0.1N到1.0N)的力,剥离速度300mm/MIN以上.

The force tearing off cover 10 to 100 grams (0.1N to 1.0N) in the arrow direction under the following conditions, The stripping speed is above 300mm/minute.



## 内外箱标识内容 Inside and Outside Box Identification Content



## 储存条件/注意事项 Storage Conditions/Note things

1. 贮存温度、湿度条件 Storage temperature and humidity conditions :

1.1. 产品包装与载体: -5℃ ~ +40℃, 低于60% RH.

Product packing with Carrier tape: -5℃~+40℃ and less than 60% RH.

1.2. 单独的产品: -20℃ ~ +60℃, 低于60% RH.

Product alone: -20℃~+60℃ and less than 60% RH.

2. 产品在6个月内使用(注意:产品一经拆开包装,须尽快使用).

Products should be used within 6 months.

(Note that the product should be used as soon as possible once it is folded) .

3. 包装材料应保存在空气中不存在氯或硫的地方.

The packaging material should be kept where no chlorine or sulfur exists in the air.

4. 不要用手指触摸电极(焊接端子),因为这可能导致焊接能力的下降.

Do not touch the electrodes (soldering terminals) with fingers as this may lead to deterioration of solder ability.

5. 个别零件强烈建议使用镊子或真空取料机散装搬运应减少磨损和机械冲击.

The use of tweezers or vacuum pick-ups is strongly recommended for individual components.

Bulk handling should ensure that abrasion and mechanical shock are minimized.