



**SPECIFICATION FOR APPROVAL**

产品规格承认书  
**SMD POWER INDUCTOR**  
贴片共模电感

CUSTOMER.

\_\_\_\_\_

MODEL NO.

MACM7060系列

\_\_\_\_\_

CUSTOMER'S PART NO.

\_\_\_\_\_

LILE NO.

\_\_\_\_\_

DATE.

2019.4.17

\_\_\_\_\_

REVISION.

A/0

\_\_\_\_\_

**CUSTOMER APPROVE**

\_\_\_\_\_

DATE:

**DRAWING**

DRAWN BY

CHECK BY

APPROVAL BY

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\_\_\_\_\_

DATE:

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**深圳市迈翔科技有限公司**

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|          |  |           |            |          |           |
|----------|--|-----------|------------|----------|-----------|
| CUSTOMER |  | MODEL NO. | MACM7060系列 | REVISION | A/0       |
| FILE NO. |  | PART NO.  |            | DATE     | 2019.4.17 |

|                     |  |         |         |
|---------------------|--|---------|---------|
| 1.PRODUCT DIMENSION |  | UNIT:mm |         |
|                     |  | A       | 7.0±0.5 |
|                     |  | B       | 6.0±0.5 |
|                     |  | C       | 3.8MAX  |
|                     |  |         | 3.5TYP  |
|                     |  |         | 1.5±0.2 |
|                     |  |         | 1.5±0.2 |
|                     |  |         | 1.7±0.2 |
|                     |  |         |         |
|                     |  |         |         |
|                     |  |         |         |

| 2.ELECTRICAL REQUIREMENTS |               |      |              |                      |            |                  |         |  |
|---------------------------|---------------|------|--------------|----------------------|------------|------------------|---------|--|
| Product NO                | Z(Ω)100MHZ/1V |      | DCR (mΩ )max | Rated Current(A) max | IR (MΩ)MIN | Rated Voltage(V) | MARKING |  |
|                           | MIN           | TYP  |              |                      |            |                  |         |  |
| MACM7060-101              | 100           | 140  | 10           | 9                    | 10         | 125              | 101     |  |
| MACM7060-301              | 225           | 300  | 10           | 5                    | 10         | 125              | 301     |  |
| MACM7060-501              | 275           | 350  | 10           | 5                    | 10         | 125              | 501     |  |
| MACM7060-601              | 500           | 700  | 15           | 4                    | 10         | 125              | 601     |  |
| MACM7060-701              | 500           | 700  | 15           | 4                    | 10         | 125              | 701     |  |
| MACM7060-102              | 800           | 1020 | 17           | 3                    | 10         | 125              | 102     |  |

|  |
|--|
| 3.CHARACTERISTICS  |
| (1). All test data is based on 25℃ ambient.  |
| (2). DC current(A)that will cause an approximate ΔT40℃   |
| (3). DC current(A)that will cause L0 to drop approximately 10%Typ  |
| (4). Operating temperature range: -55℃~+125℃   |
| (5).The part temperature (ambient + temp rise)should not exceed 125℃ under worst case operating conditions. circuit design, component.PWB trace size and thickness,airflow and other cooling provision all affect the part temperature. Part temperature should be verified in the den application |

|                                  |
|----------------------------------|
| 4.SPECIAL REQUEST                |
| (1)Lettering on top of the body. |

|          |  |           |            |          |           |
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**5.PRODUCT IDENTIFICATION**

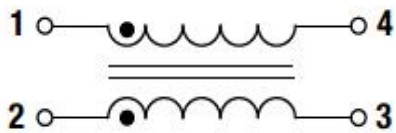
XX XXXX - XXX X X

①      ②      ③      ④      ⑤

①、 Product Symbol    ②、 Dimensions    ③、 Inductance

④、 Tolerance: M±20%, N±30%.    ⑤、 Material

**6.ELECTRICAL SCHEMATICS**



**7.APPLICATION**

- (1)Low profile,high current power supplies.
- (2)Battery powered devices.
- (3)DC/DC converters in distributed power systems.
- (5)DC/DC converters for field programmable gate array.

**8.FEATURES**

- (1)ROHS compliant.
- (2)Super low resistance,ultra high current rating.
- (3)high performance(I sat)realized by metal dust core.
- (4)Frequency Range:up to 1MHZ.

**9.RECOMMENDED PCB LAYOUT**

|  |  |  |
|--|--|--|
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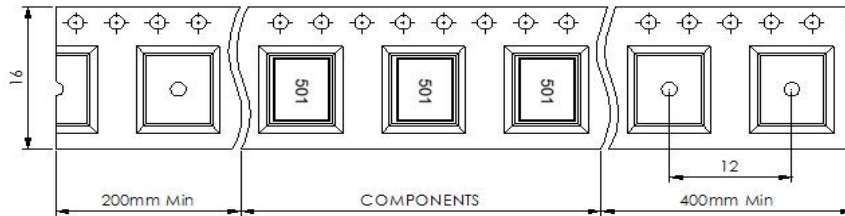
| CUSTOMER                             |   | MODEL NO.   | MACM7060系列 | REVISION | A/0       |
|--------------------------------------|---|---|------------|----------|-----------|
| FILE NO.                             |   | PART NO.  |            | DATE     | 2019.4.17 |
| 项目Item                               | 规格与需求<br>Specification and Requirement  | 测试方法Test Method   |            |          |           |
| 可焊性<br>Solderability test            | 沾锡面积不得小于95%上锡面<br>Terminals area must have 95% min solder coverage                                  | 上锡升温曲线Solder heat proof:<br>(1) 预热: 160±10℃持续90s<br>Preheating: 160±10℃ for 90 seconds<br>(2) 恒温时段: 245±5℃持续2±0.5s<br>Retention time: 245±5℃ for 2±0.5 seconds  |            |          |           |
| 振动测试<br>Vibration test               | 感值变化: 不超过±5%<br>且无破裂等机械损伤产生<br>Inductance change: Within±5% Without mechanical damage such as break | (1) 振动频率(10Hz 55Hz 10Hz)60s为一个周期 Vibration frequency: (10Hz to 55Hz to 10Hz) in 60 seconds as a period<br>(2) 振动时间 Vibration time:<br>三维正交坐标系每个方向振动(周期)循环2小时 Period cycled for 2 hours in each of 3 mutual perpendicular directions<br>(3) 振幅 Amplitude: 1.5 mm Max   |            |          |           |
| 冲击测试<br>Shock test                   | 感值变化: 不超过±5%<br>且无破裂等机械损伤产生<br>Inductance change: Within±5% Without mechanical damage such as break | (1) 最大振幅 Peak value: 100G<br>(2) 脉冲波长 Duration of pulse: 11ms<br>(3) 三维正交坐标系每个方向正负方向冲击3次 Times in each positive and negative direction of 3 mutual perpendicular directions   |            |          |           |
| 冷热冲击<br>Thermal shock                | 感值变化: 不超过±5%<br>且无破裂等机械损伤产生<br>Inductance change: Within±5% Without mechanical damage such as break | (1)重复以上100个循环Repeat 100 cycle as follow<br>(-55±2℃,30±3分钟) 室温5分钟<br>(-55±2℃,30±3 minutes)<br>Room temperature,5 minutes<br>(+125±2℃,30±3分钟) 室温5分钟<br>(+125±2℃,30±3 minutes)<br>Room temperature,5 minutes<br>(2)恢复: 测试于标准条件下恢复48+4/-0小时(参考注释1)<br>Recovery:48+4/-0 hours of recovery under the standard condition after the test. (see Note1) |            |          |           |
| 耐高温测试<br>High temperature life test  | 感值变化: 不超过±5%<br>且无破裂等机械损伤产生<br>Inductance change: Within±5% Without mechanical damage such as break | (1)环境条件: 85±2℃<br>Environment condition : 85±2℃<br>应用电流: 额定电流<br>Applied current: Rated current<br>(2)持续时间: 1000+4/-0 小时(参考注释1)<br>Duration:1000+4/-0 hours (see Note1)   |            |          |           |
| 耐湿测试<br>Humidity Resistance          | 感值变化: 不超过±5%<br>且无破裂等机械损伤产生<br>Inductance change: Within±5% Without mechanical damage such as break | (1)环境条件: 60±2℃<br>Environment condition : 60±2℃<br>湿度: 90~95%<br>Humidity:90~95%<br>应用电流: 额定电流<br>Applied current: Rated current<br>(2)持续时间: 1000+4/-0 小时(参考注释1)<br>Duration:1000+4/-0 hours (see Note1)  |            |          |           |
| 低温存放测试<br>Low temperature life test  | 感值变化: 不超过±5%<br>且无破裂等机械损伤产生<br>Inductance change: Within±5% Without mechanical damage such as break | (1)存储温度 Store temperature<br>-55±2℃下存放 1000+4/-0 小时<br>-55±2℃for total 1000+4/-0 hours  |            |          |           |
| 高温存放测试<br>High temperature life test | 感值变化: 不超过±5%<br>且无破裂等机械损伤产生<br>Inductance change: Within±5% Without mechanical damage such as break | (1)存储温度 Store temperature<br>+125±2℃下存放 1000+4/-0 小时<br>+125±2℃for total 1000+4/-0 hours  |            |          |           |

|                 |  |                  |                   |                 |                  |
|-----------------|--|------------------|-------------------|-----------------|------------------|
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| <b>FILE NO.</b> |  | <b>PART NO.</b>  |                   | <b>DATE</b>     | <b>2019.4.17</b> |

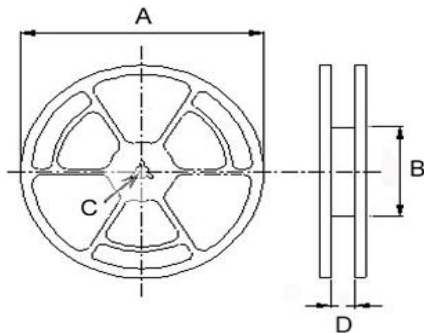
**11、包装 Packaging**

**11.1、尺寸 Dimensions**

**11.1.1 包装料带尺寸 Tape packaging dimensions**

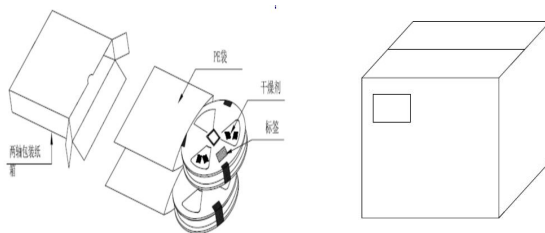


**11.1.2 卷轴尺寸 Reel dimensions**



| 项目 | 尺寸(mm) |
|----|--------|
| A  | 330    |
| B  | 100    |
| C  | 13     |
| D  | 16.5   |
|    |        |
|    |        |

**11.1.3 外箱尺寸 Carton dimensions**



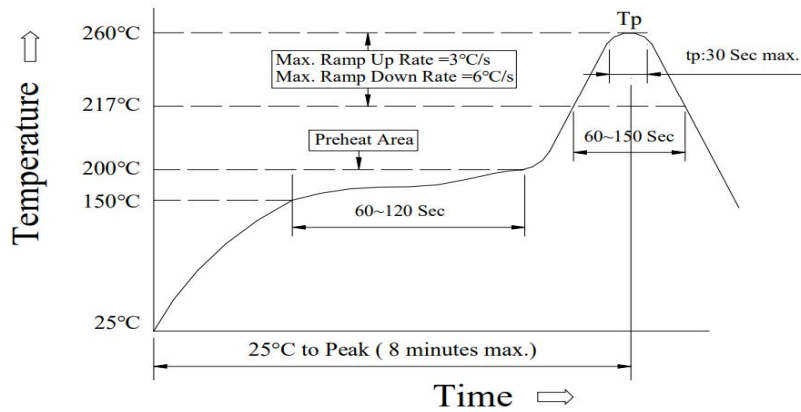
| 项目  | 数量 (PCS) |
|-----|----------|
| 1卷轴 | 1500     |
| 1内箱 | 4500     |
| 1外箱 | 22500    |

|          |  |           |            |          |           |
|----------|--|-----------|------------|----------|-----------|
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Reflow curve

※ Reflow Profile

Power Choke Coil Type



1. Reflow Soldering Method

|                               |                |                       |
|-------------------------------|----------------|-----------------------|
| Reflow Soldering              | Tp:255~260°C   | Max.30 seconds ( tp ) |
|                               | 217°C          | 60~150 seconds        |
| Pre-Heat                      | 150 ~ 200°C    | 60~120 seconds        |
| Time 25°C to peak temperature | 8 minutes max. |                       |

2. Soldering iron method : 350±5°C Max.3 seconds.

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