



SPECIFICATION FOR APPROVAL

产品规格承认书

SMD POWER INDUCTOR

功率电感

CUSTOMER.

MODEL NO.

MBH127-101M

CUSTOMER'S PART NO.

LILE NO.

DATE.

2020.07.20

REVISION.

A0

CUSTOMER APPROVE

DATE:

DRAWING

DRAWN BY

CHECK BY

APPROVAL BY

曾伟

刘旸

潘小荣

DATE: 2020.07.20



IATF16949 / ISO9001 / ISO14000

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香港瑞德科技有限公司 黄冈市迈翔电子有限公司

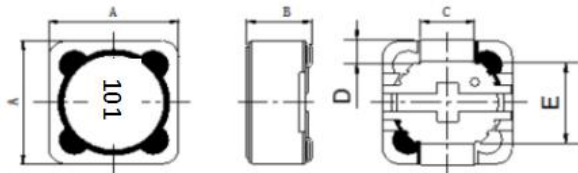
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|----------|--|-----------|-------------|----------|------------|
| CUSTOMER | | MODEL NO. | MBH127-101M | REVISION | A0 |
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| | | | |
|-----------------------------------------------------------------------------------|---|---------|--|
| 1.PRODUCT DIMENSION | | UNIT:mm | |
|  | A | 12.5MAX | |
| | B | 8.0MAX | |
| | C | 4.9±0.2 | |
| | | | |
| | | | |
| Note: The UL tube on the winding | | | |

| | | | |
|---------------------------|-----------------|--------------|---------------------|
| 2.ELECTRICAL REQUIREMENTS | | | |
| PARAMETER | SPECIFICATION | CONDITION | TEST INSTRUMENTS |
| L(uH) | 100±20% | 100KHz/0.25V | MICROTEST 6377 |
| DCR(mΩ) | 215MAX | At 25℃ | TH2512A |
| I sat(A) | 2A TYP LOA* 70% | 100KHz/0.25V | MICROTEST 6377+6220 |

| | | |
|-----------------|---------------------------------------------------------|----------|
| 3.MATERIAL LIST | | |
| ITEM | MATERIAL | SUPPLIER |
| CORE | JN4H DR9. 85*7. 0mm B=6. 2mm JN4H RI12.2*6.8*10.8 mm | 利堡 |
| WIRE | 2UEW-0.37*36.5TS | 太平洋/台一 |
| SOLDER | TIN-Sn99.95 | 千岛 |
| | | |

| |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 30%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 |

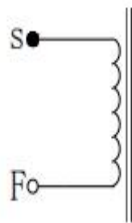
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|-------------------------------------|
| 4.SPECIAL REQUEST |
| (1)Lettering101 on top of the body. |

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|----------|--|-----------|--------------------|----------|-------------------|
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5.PRODUCT IDENTIFICATION

XX XXXX - XXX X X
 ① ② ③ ④ ⑤
 ①、Coilmx Series Name ②、 Dimensions ③、 Inductance
 ④、 Tolerance: M±20%, N±30%. ⑤、 Material

6.ELECTRICAL SCHEMATICS



7.APPLICATION

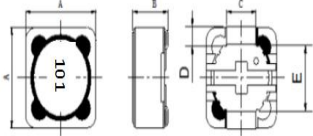
- (1)Low profile,high current power supplies.
- (2)Battery powered devices.
- (3)DC/DC converters in distributed power systems.
- (5)DC/DC converters for field programmable gate array.

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

| | | |
|--|---|--|
| | H | |
| | S | |
| | M | |
| | | |
| | | |
| | | |
| | | |

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|---------------------------|------|-----------|-------------|--------------------|---------|---------------------------------------------------------------------------------------|------------|--|--|--|
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| SORT | ITEM | A | B | C | | | | | | |
| PRODUCT & DIMENSION | SPEC | 12.5MAX | 8.0MAX | 4.9±0.2 | | | | | | |
| | 1 | 12.25 | 7.51 | 4.92 | | | | | | |
| | 2 | 12.21 | 7.56 | 4.93 | | | | | | |
| | 3 | 12.20 | 7.59 | 4.91 | | | | | | |
| | 4 | 12.24 | 7.55 | 4.92 | | | | | | |
| | 5 | 12.21 | 7.50 | 4.92 | | | | | | |
| | X | 12.22 | 7.54 | 4.92 | | | | | | |
| | R | 0.05 | 0.09 | 0.02 | | | | | | |
| ELECTRICAL & REQUIREMENTS | ITEM | L(uH) | DCR (mΩ) | I sat(A) | DC BIAS | SHAPE: | | | | |
| | SPEC | 100±20% | 215MAX | 2A TYP LOA* 70% | |  | | | | |
| | 1 | 102.75 | 156.18 | 93.50 | -9.0% | | | | | |
| | 2 | 96.70 | 156.08 | 88.54 | -8.4% | | | | | |
| | 3 | 98.36 | 157.36 | 88.98 | -9.5% | | | | | |
| | 4 | 98.98 | 156.17 | 89.95 | -9.1% | | | | | |
| | 5 | 99.82 | 161.25 | 89.95 | -9.9% | | | | | |
| | X | 99.32 | 157.41 | 90.18 | -9.2% | | | | | |
| | R | 6.05 | 5.17 | 4.96 | 1.4% | | | | | |

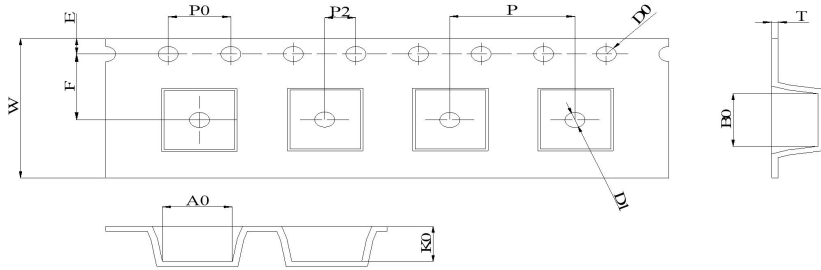
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|--------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|------------|
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| 项目Item | 规格与需求 Specification and Requirement | 测试方法Test Method | | | |
| 可焊性 Solderability test | 沾锡面积不得小于95%上锡面 Terminals area must have 95% min solder coverage | 上锡升温曲线Solder heat proof: (1) 预热: 160±10℃持续90s Preheating: 160±10℃ for 90 seconds (2) 恒温时段: 245±5℃持续2±0.5s Retention time: 245±5℃ for 2±0.5 seconds | | | |
| 振动测试 Vibration test | 感值变化: 不超过±5% 且无破裂等机械损伤产生 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 (2) 振动时间 Vibration time: 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 (3) 振幅 Amplitude: 1.5 mm Max | | | |
| 冲击测试 Shock test | 感值变化: 不超过±5% 且无破裂等机械损伤产生 Inductance change: Within±5% Without mechanical damage such as break | (1) 最大振幅 Peak value: 100G (2) 脉冲波长 Duration of pulse: 11ms (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 Thermal shock | 感值变化: 不超过±5% 且无破裂等机械损伤产生 Inductance change: Within±5% Without mechanical damage such as break | (1)重复以上100个循环Repeat 100 cycle as follow (-55±2℃,30±3分钟) 室温5分钟 (-55±2℃,30±3 minutes) Room temperature,5 minutes (+125±2℃,30±3分钟) 室温5分钟 (+125±2℃,30±3 minutes) Room temperature,5 minutes (2)恢复: 测试于标准条件下恢复48+4/-0小时(参考注释1) Recovery:48+4/-0 hours of recovery under the standard condition after the test. (see Note1) | | | |
| 耐高温测试 High temperature life test | 感值变化: 不超过±5% 且无破裂等机械损伤产生 Inductance change: Within±5% Without mechanical damage such as break | (1)环境条件: 85±2℃ Environment condition : 85±2℃ 应用电流: 额定电流 Applied current: Rated current (2)持续时间: 1000+4/-0 小时(参考注释1) Duration:1000+4/-0 hours (see Note1) | | | |
| 耐湿测试 Humidity Resistance | 感值变化: 不超过±5% 且无破裂等机械损伤产生 Inductance change: Within±5% Without mechanical damage such as break | (1)环境条件: 60±2℃ Environment condition : 60±2℃ 湿度: 90~95% Humidity:90~95% 应用电流: 额定电流 Applied current: Rated current (2)持续时间: 1000+4/-0 小时(参考注释1) Duration:1000+4/-0 hours (see Note1) | | | |
| 低温存放测试 Low temperature life test | 感值变化: 不超过±5% 且无破裂等机械损伤产生 Inductance change: Within±5% Without mechanical damage such as break | (1)存储温度 Store temperature -55±2℃下存放 1000+4/-0 小时 -55±2℃ for total 1000+4/-0 hours | | | |
| 高温存放测试 High temperature life test | 感值变化: 不超过±5% 且无破裂等机械损伤产生 Inductance change: Within±5% Without mechanical damage such as break | (1)存储温度 Store temperature +125±2℃下存放 1000+4/-0 小时 +125±2℃ for total 1000+4/-0 hours | | | |

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10、包装 Packaging

10.1、尺寸 Dimensions

10.1.1 包装料带尺寸 Tape packaging dimensions

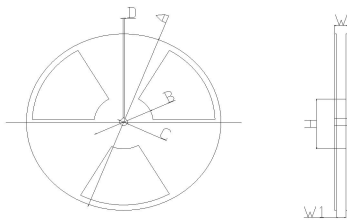


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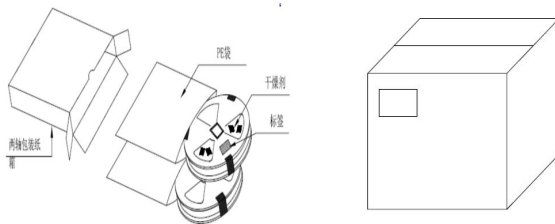
| W | A0 | B0 | K0 | P | F | E | D0 | P0 | T |
|------------------------------|-----------------------------|-----------------------------|----------------------------|---------------------------|----------------------------|-----------------------------|-----------------------------|----------------------------|-----------------------------|
| 24.00 ±0.30 | 10.6 ±0.10 | 10.7 ±0.10 | 4.1 ±0.10 | 16 ±0.10 | 11.5 ±0.1 | 1.75 ±0.10 | 1.50 ±0.10 | 4.0 ±0.10 | 0.35 ±0.05 |

10.1.2 卷轴尺寸 Reel dimensions



| 项目 | 尺寸(mm) |
|-----------|--------------------|
| A | 330.0 ± 2.0 |
| B | 100.0 ± 1.0 |
| C | 13.0 ± 1.0 |
| D | 1.9 ± 0.4 |
| W | 17.5max |
| W1 | 12.5max |

10.1.3 外箱尺寸 Carton dimensions



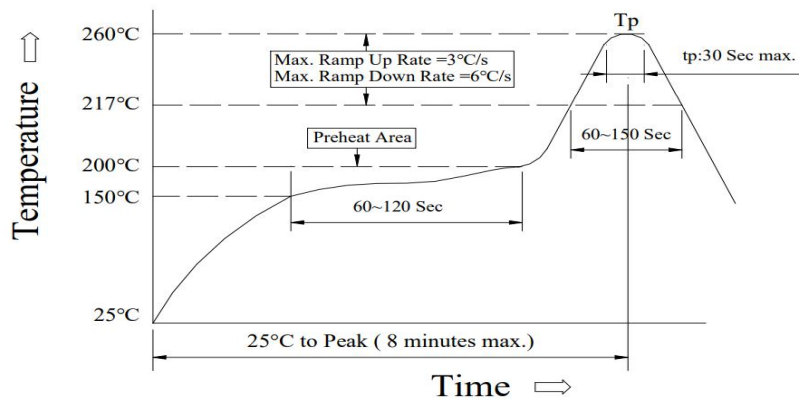
| 项目 | 数量 (PCS) |
|------------|-------------|
| 1卷轴 | 500 |
| 1内箱 | 1000 |
| 1外箱 | 5000 |

| | | | | | |
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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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