



**SPECIFICATION FOR APPROVAL**

产品规格承认书

**SMD POWER INDUCTOR**

贴片功率电感

CUSTOMER.

MODEL NO.

MBH127-471M

CUSTOMER'S PART NO.

LILE NO.

DATE.

2020.10.09

REVISION.

A/0

NUMBER.

CUSTOMER APPROVE		
DATE:		
DRAWING		
DRAWN BY	CHECK BY	APPROVAL BY
曾伟	刘旸	潘小荣
DATE: 2020.10.09		



IATF16949 / ISO9001 / ISO14000

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CUSTOMER		MODEL NO.	MBH127-471M	REVISION	A/0
FILE NO.		PART NO.		DATE	2020.10.09

1.PRODUCT DIMENSION		UNIT:mm	
		A	12.5MAX
		B	12.5MAX
		C	8.0MAX

2.ELECTRICAL REQUIREMENTS			
PARAMETER	SPECIFICATION	CONDITION	TEST INSTRUMENTS
L( uH)	470±20%	1KHz/0.25V	MICROTEST 6377
DCR(Ω)	0.95MAX	At 25℃	TH2512A
I sat(A)	0.9A Max LOA* 70%	1KHz/0.25V	MICROTEST 6377+6220

3.MATERIAL LIST		
ITEM	MATERIAL	SUPPLIER
CORE	JN4H DR9.85*7.0mm B=6.2mm JN4H R112.2*6.8*10.8 mm	利堡
WIRE	2UEW-0.25*81.5TS	太平洋
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%Max
  - (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 471 on top of the body.

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**5.PRODUCT IDENTIFICATION**

XXX XXX - XXX X

①      ②      ③      ④

①、Coilmx Series Name    ②、 Dimensions    ③、 Inductance

④、 Tolerance: M±20%, N±30%.



- 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(l sat)realized by metal dust core.
  - (4)Frequency Range:up to 1MHZ.

**9.RECOMMENDED PCB LAYOUT**


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FILE NO.		PART NO.				DATE	<b>2020.10.09</b>			
SORT	ITEM	A	B	C						
<b>PRODUCT &amp; DIMENSION</b>	<b>SPEC</b>	<b>12.5MAX</b>	<b>12.5MAX</b>	<b>8.0MAX</b>						
	<b>1</b>	<b>12.21</b>	<b>12.20</b>	<b>7.59</b>						
	<b>2</b>	<b>12.30</b>	<b>12.20</b>	<b>7.61</b>						
	<b>3</b>	<b>12.22</b>	<b>12.23</b>	<b>7.59</b>						
	<b>4</b>	<b>12.20</b>	<b>12.23</b>	<b>7.64</b>						
	<b>5</b>	<b>12.26</b>	<b>12.22</b>	<b>7.59</b>						
	<b>X</b>	<b>12.24</b>	<b>12.22</b>	<b>7.60</b>						
	<b>R</b>	<b>0.10</b>	<b>0.03</b>	<b>0.05</b>						
<b>ELECTRICAL &amp; REQUIREMENTS</b>	<b>ITEM</b>	<b>L(uH)</b>	<b>DCR (Ω)</b>	<b>I sat(A)</b>	<b>DC BIAS</b>	<b>SHAPE:</b>				
	<b>SPEC</b>	<b>470±20%</b>	<b>0.95MAX</b>	<b>0.9A Max</b> <b>LOA* 70%</b>						
	<b>1</b>	<b>457.50</b>	<b>0.70</b>	<b>408.20</b>	<b>-10.8%</b>					
	<b>2</b>	<b>468.20</b>	<b>0.71</b>	<b>412.60</b>	<b>-11.9%</b>					
	<b>3</b>	<b>474.50</b>	<b>0.69</b>	<b>415.60</b>	<b>-12.4%</b>					
	<b>4</b>	<b>452.50</b>	<b>0.68</b>	<b>408.50</b>	<b>-9.7%</b>					
	<b>5</b>	<b>453.60</b>	<b>0.69</b>	<b>407.90</b>	<b>-10.1%</b>					
	<b>X</b>	<b>461.26</b>	<b>0.69</b>	<b>410.56</b>	<b>-11.0%</b>					
	<b>R</b>	<b>22.00</b>	<b>0.030</b>	<b>7.70</b>	<b>2.7%</b>					

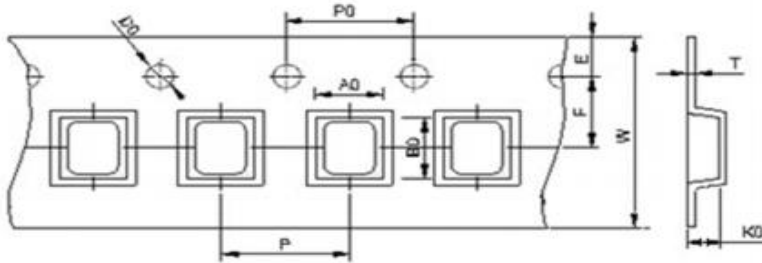
CUSTOMER		MODEL NO.	MBH127-471M	REVISION	A/0
FILE NO.		PART NO.		DATE	2020.10.09
项目Item	规格与需求 Specification and Requirement	测试方法Test Method			
可焊性 Solder ability test	沾锡面积不得小于95%上锡面 Terminals area must have 95% min solder coverage	上锡升温曲线 Solder heat proof: (1) 预热: 160±10℃持续90s Preheating: 160±10℃ for 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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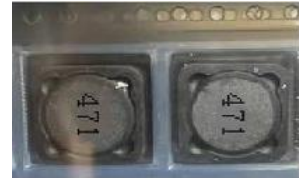
10、包装 Packaging

10.1、尺寸 Dimensions

10.1.1 包装料带尺寸 Tape packaging dimensions

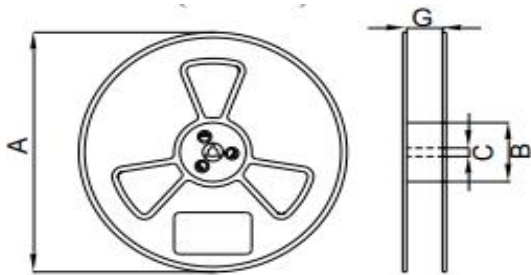


说明：字头朝孔



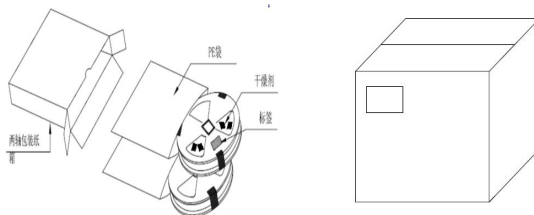
W	A0	B0	K0	E	F	P	D0	P0	T
8.00 ±0.30	1.9 ±0.10	2.3 ±0.10	1.2 ±0.10	1.75 ±0.10	3.5 ±0.05	4.0 ±0.10	1.5 ±0.10	4.0 ±0.10	0.18 ±0.03

10.1.2 卷轴尺寸 Reel dimensions



项目	尺寸(mm)
A	178 ± 2.0
B	58 ± 1.0
C	13.5 ± 0.2
D	9.0 ± 1.5

10.1.3 外箱尺寸 Carton dimensions



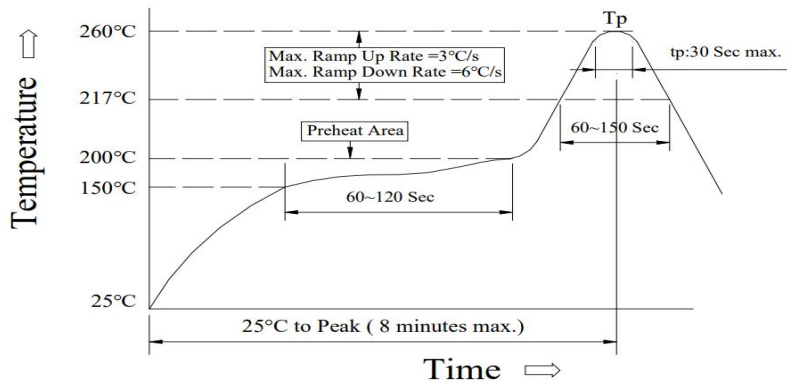
项目	数量 (PCS)
1卷轴	500
1内箱	1000
1外箱	2000

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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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