



**SPECIFICATION FOR APPROVAL**

产品规格承认书

**SMD POWER INDUCTOR**

功率电感

CUSTOMER.

MODEL NO.

**MBH127-330M**

CUSTOMER'S PART NO.

LILE NO.

DATE.

**2020.07.20**

REVISION.

**A/0**

CUSTOMER APPROVE

DATE:

DRAWING

DRAWN BY

CHECK BY

APPROVAL BY

曾伟

刘旸

潘小荣

DATE: 2020.07.20



**深圳市迈翔科技有限公司**

**SHENZHEN MOTTO TECHNOLOGY Co., Ltd**

香港瑞德科技有限公司 黄冈市迈翔电子有限公司

Motto Technology park, niu e ling village no#214 xintian, nghua Town,

Guanlan Street, Longhua District, Shenzhen

TEL: +86 0755-8948751~2 89487610 Fax: +86 0755-61624574

[Http://www.coilmx.com](http://www.coilmx.com) E-mail: [sales@mottotech.com](mailto:sales@mottotech.com)



CUSTOMER		MODEL NO.	<b>MBH127-330M</b>	REVISION	<b>A/0</b>
FILE NO.		PART NO.		DATE	<b>2020.07.20</b>

<b>1.PRODUCT DIMENSION</b>		<b>UNIT:mm</b>	
		A	<b>12.5MAX</b>
		B	<b>8.0MAX</b>
		C	<b>4.9±0.2</b>

<b>2.ELECTRICAL REQUIREMENTS</b>			
<b>PARAMETER</b>	<b>SPECIFICATION</b>	<b>CONDITION</b>	<b>TEST INSTRUMENTS</b>
L ( uH)	<b>33±20%</b>	<b>100KHz/0.25V</b>	<b>MICROTEST 6377</b>
DCR(mΩ)	<b>80MAX</b>	<b>At 25°C</b>	<b>TH2512A</b>
I sat(A)	<b>3.0A TYP L0A* 70%</b>	<b>100KHz/0.25V</b>	<b>MICROTEST 6377+6220</b>

**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	2UEWH/ 0.45*22.5TS	太平洋/台一
SOLDER	TIN-Sn99.95	千岛

**3.CHARACTERISTICS**

- (1). All test data is based on 25°C ambient.
- (2). DC current(A)that will cause an approximate ΔT40°C
- (3). DC current(A)that will cause L0 to drop approximately 30%Typ
- (4). Operating temperature range: -55°C~+125°C
- (5).The part temperature (ambient + temp rise)should not exceed 125°C 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 **330** on top of the body.

CUSTOMER		MODEL NO.	<b>MBH127-330M</b>	REVISION	<b>A/0</b>
FILE NO.		PART NO.		DATE	<b>2020.07.20</b>

**5.PRODUCT IDENTIFICATION**

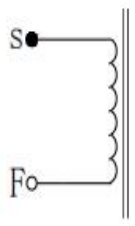
XX XXXX - XXX X X

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	

CUSTOMER		MODEL NO.	<b>MBH127-330M</b>		REVISION	<b>A/0</b>	
FILE NO.		PART NO.			DATE	<b>2020.07.20</b>	
SORT	ITEM	A	B	C			
<b>PRODUCT &amp; DIMENSION</b>	<b>SPEC</b>	<b>12.5MAX</b>	<b>8.0MAX</b>	<b>4.9±0.2</b>			
	<b>1</b>	<b>12.25</b>	<b>7.51</b>	<b>4.92</b>			
	<b>2</b>	<b>12.21</b>	<b>7.56</b>	<b>4.93</b>			
	<b>3</b>	<b>12.20</b>	<b>7.59</b>	<b>4.91</b>			
	<b>4</b>	<b>12.24</b>	<b>7.55</b>	<b>4.92</b>			
	<b>5</b>	<b>12.21</b>	<b>7.50</b>	<b>4.92</b>			
	<b>X</b>	<b>12.22</b>	<b>7.54</b>	<b>4.92</b>			
	<b>R</b>	<b>0.05</b>	<b>0.09</b>	<b>0.02</b>			
<b>ELECTRICAL &amp; REQUIREMENTS</b>	ITEM	L(uH)	DCR (mΩ)	I sat(A)	DC BIAS	<b>SHAPE:</b>	
	<b>SPEC</b>	<b>33±20%</b>	<b>80MAX</b>	<b>3.0A TYP</b> <b>LOA* 70%</b>			
	<b>1</b>	<b>31.87</b>	<b>58.00</b>	<b>28.50</b>	<b>-10.6%</b>		
	<b>2</b>	<b>31.56</b>	<b>59.20</b>	<b>28.60</b>	<b>-9.4%</b>		
	<b>3</b>	<b>32.02</b>	<b>59.20</b>	<b>27.99</b>	<b>-12.6%</b>		
	<b>4</b>	<b>31.56</b>	<b>58.50</b>	<b>28.26</b>	<b>-10.5%</b>		
	<b>5</b>	<b>32.46</b>	<b>59.20</b>	<b>27.98</b>	<b>-13.8%</b>		
	<b>X</b>	<b>31.89</b>	<b>58.82</b>	<b>28.27</b>	<b>-11.4%</b>		
	<b>R</b>	<b>0.90</b>	<b>1.20</b>	<b>0.62</b>	<b>4.4%</b>		

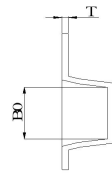
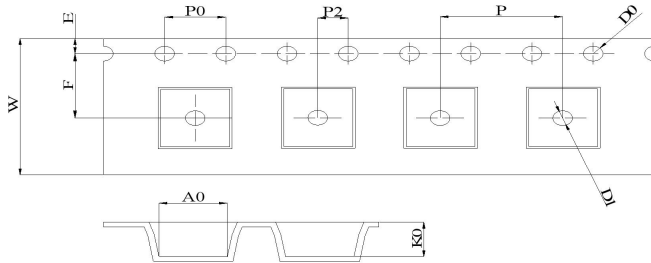
CUSTOMER		MODEL NO.	MBH127-330M	REVISION	A/0
FILE NO.		PART NO.		DATE	2020.07.20
项目Item	规格与需求 Specification and Requirement	测试方法Test Method			
可焊性 Solderability test	沾锡面积不得小于95%上锡面 Terminals area must have 95% min solder coverage	上锡升温曲线Solder heat proof: (1) 预热: 160±10℃持续90s Preheating: 160±10℃ for 90 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			

CUSTOMER		MODEL NO.	<b>MBH127-330M</b>	REVISION	<b>A/0</b>
FILE NO.		PART NO.		DATE	<b>2020.07.20</b>

**12、包装 Packaging**

**12.1、尺寸 Dimensions**

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

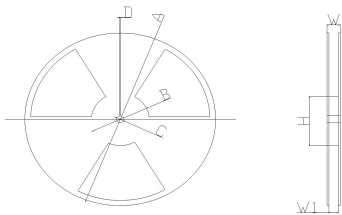


说明：字头朝孔



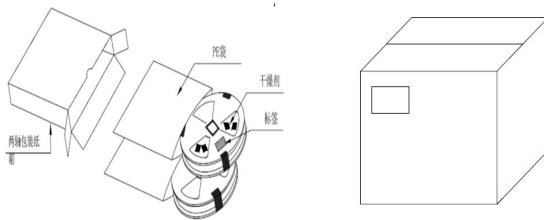
W	A0	B0	K0	P	F	E	D0	P0	T
<b>24.00</b> <b>±0.30</b>	<b>10.6</b> <b>±0.10</b>	<b>10.7</b> <b>±0.10</b>	<b>4.1</b> <b>±0.10</b>	<b>16</b> <b>±0.10</b>	<b>11.5</b> <b>±0.1</b>	<b>1.75</b> <b>±0.10</b>	<b>1.50</b> <b>±0.10</b>	<b>4.0</b> <b>±0.10</b>	<b>0.35</b> <b>±0.05</b>

**12.1.2 卷轴尺寸 Reel dimensions**



项目	尺寸(mm)
<b>A</b>	<b>330.0 ± 2.0</b>
<b>B</b>	<b>100.0 ± 1.0</b>
<b>C</b>	<b>13.0 ± 1.0</b>
<b>D</b>	<b>1.9 ± 0.4</b>
<b>W</b>	<b>17.5max</b>
<b>W1</b>	<b>12.5max</b>

**12.1.3 外箱尺寸 Carton dimensions**



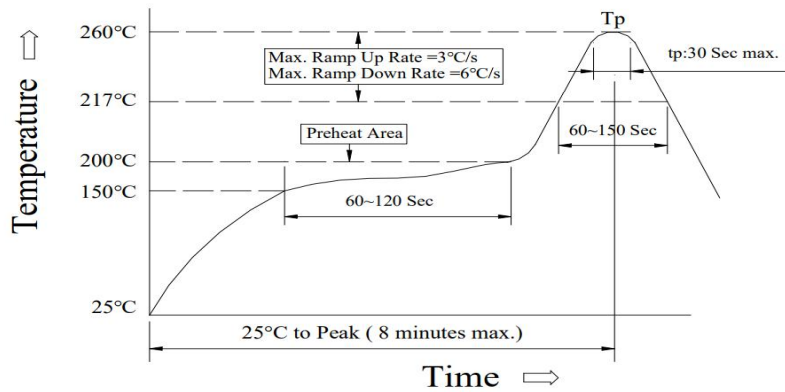
项目	数量 (PCS)
<b>1卷轴</b>	<b>500</b>
<b>1内箱</b>	<b>1000</b>
<b>1外箱</b>	<b>5000</b>

CUSTOMER		MODEL NO.	MBH127-330M	REVISION	A/0
FILE NO.		PART NO.		DATE	2020.07.20

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.