



**SPECIFICATION FOR APPROVAL**

产品规格承认书

**SMD POWER INDUCTOR**

功率电感

CUSTOMER.

\_\_\_\_\_

MODEL NO.

**MBH127-680M**

\_\_\_\_\_

CUSTOMER'S PART NO.

\_\_\_\_\_

LILE NO.

\_\_\_\_\_

DATE.

**2020.07.20**

\_\_\_\_\_

REVISION.

**A0**

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<b>CUSTOMER APPROVE</b>		
DATE:		
<b>DRAWING</b>		
<b>DRAWN BY</b>	<b>CHECK BY</b>	<b>APPROVAL BY</b>
曾伟	刘旻	潘小荣
DATE: 2020.07.20		



**sira**  
CERTIFICATION



IATF16949 / ISO9001 / ISO14000

**深圳市迈翔科技有限公司**

**SHENZHEN MOTTO TECHNOLOGY Co., Ltd**

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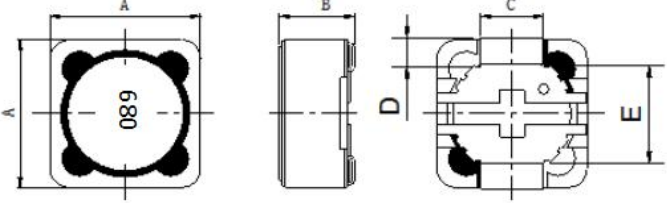
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**COILMX**

深圳市迈翔科技有限公司

<b>CUSTOMER</b>		<b>MODEL NO.</b>	<b>MBH127-680M</b>	<b>REVISION</b>	<b>A0</b>
<b>FILE NO.</b>		<b>PART NO.</b>		<b>DATE</b>	<b>2020.07.20</b>
REVISIONS					
REW	PROJECT CHANGE	DESCRIPTION		Date	

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<b>1.PRODUCT DIMENSION</b>		<b>UNIT:mm</b>	
 <p><b>Note: The UL tube on the winding</b></p>		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>68±20%</b>	100KHz/0.25V	MICROTEST 6377
DCR(mΩ)	<b>132MAX</b>	At 25°C	TH2512A
I sat(A)	<b>2.5A TYP L0A* 70%</b>	100KHz/0.25V	MICROTEST 6377+6220

<b>3.MATERIAL LIST</b>		
<b>ITEM</b>	<b>MATERIAL</b>	<b>SUPPLIER</b>
<b>CORE</b>	JN4H DR9. 85*7.0mm B=6.2mm JN4H R12.2*6.8*10.8 mm	利堡
<b>WIRE</b>	2UEW-0.40*31.5TS	太平洋/台一
<b>SOLDER</b>	TIN-Sn99.95	千島

- 3.CHARACTERISTICS**
- (1). All test data is based on 25°C ambient.
  - (2). DC current(A)that will cause an approximate  $\Delta T40^{\circ}C$
  - (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 **680** on top of the body.

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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

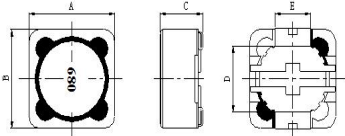


- 7.APPLICATION**
- (1)Low profile,high current power supplies.
  - (2)Battery powered devices.
  - (3)DC/DC converters in distributed power systems.
  - (5)DC/DC converters for field programmable gate array.

- 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.			REVISION	
		MBH127-680M			A0	
FILE NO.		PART NO.			DATE	
					2020.07.20	
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	68±20%	132MAX	2.5A TYP L0A* 70%		
	1	65.40	108.80	59.84	-8.5%	
	2	69.20	110.20	63.29	-8.5%	
	3	67.30	109.20	61.02	-9.3%	
	4	66.50	109.40	61.01	-8.3%	
	5	69.10	108.21	62.54	-9.5%	
	X	67.50	109.16	61.54	-8.8%	
	R	3.80	1.99	3.45	1.2%	

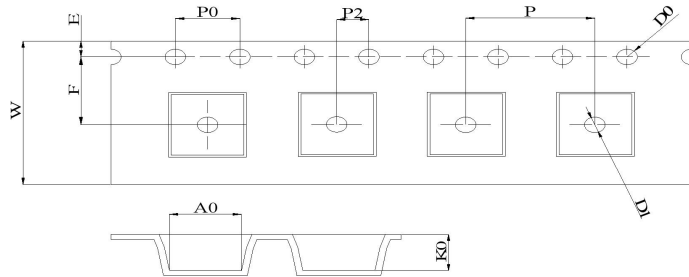
CUSTOMER		MODEL NO.	MBH127-680M	REVISION	A0
FILE NO.		PART NO.		DATE	2020.07.20
项目Item	规格与需求 Specification and Requirement	测试方法Test Method			
可焊性 Solder ability test	沾锡面积不得小于95%上锡面 Terminals area must have 95% min solder coverage	上锡升温曲线Solder heat proof: (1) 预热: 160±10℃持续90s Preheating: 160±10℃ for 90 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

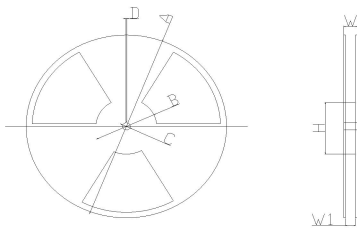


说明：字头朝孔



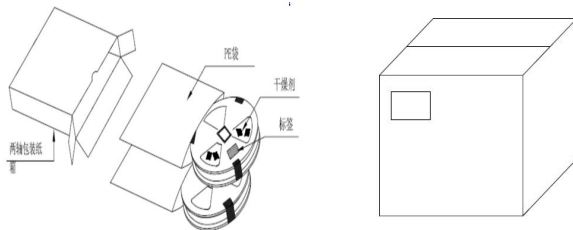
W	A0	B0	K0	P	F	E	D0	P0	T
24.00 ±0.30	10.6 ±0.10	10.7 ±0.10	4.1 ±0.10	16 ±0.10	11.5 ±0.1	1.75 ±0.10	1.50 ±0.10	4.0 ±0.10	0.35 ±0.05

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



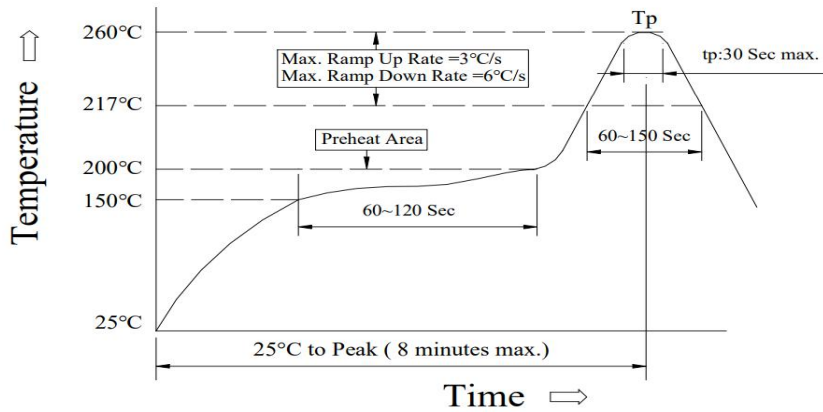
项目	数量 (PCS)
1 卷轴	500
1 内箱	1000
1 外箱	5000

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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.