



SPECIFICATION FOR APPROVAL

产品规格承认书

SMD POWER INDUCTOR

贴片功率电感

CUSTOMER.

MODEL NO.

MBH127-221M

CUSTOMER'S PART NO.

LILE NO.

DATE.

2020.06.22

REVISION.

A/0

NUMBER.

CUSTOMER APPROVE

DATE:

DRAWING

DRAWN BY

CHECK BY

APPROVAL BY

曾伟

刘旸

潘小荣

DATE: 2020.06.22



sira
CERTIFICATION



IATF16949 / ISO9001 / ISO14000

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CUSTOMER		MODEL NO.	MBH127-221M	REVISION	A/0
FILE NO.		PART NO.		DATE	2020.06.22

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

2.ELECTRICAL REQUIREMENTS			
PARAMETER	SPECIFICATION	CONDITION	TEST INSTRUMENTS
L(uH)	220±20%	1KHz/0.25V	MICROTEST 6377
DCR(mΩ)	390MAX	At 25℃	TH2512A
I sat(A)	1.5A 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-0.32	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 221 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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SORT	ITEM	A	B	C						
PRODUCT & DIMENSION	SPEC	12.5MAX	12.5MAX	8.0MAX						
	1	12.21	12.20	7.59						
	2	12.30	12.20	7.61						
	3	12.22	12.23	7.59						
	4	12.20	12.23	7.64						
	5	12.26	12.22	7.59						
	X	12.24	12.22	7.60						
	R	0.10	0.03	0.05						
ELECTRICAL & REQUIREMENTS	ITEM	L(uH)	DCR (mΩ)	I sat(A)	DC BIAS	SHAPE:				
	SPEC	220±20%	390MAX	1.5A Max LOA* 70%						
	1	223.00	305.20	209.00	-6.3%					
	2	219.40	305.60	210.00	-4.3%					
	3	221.20	303.60	208.50	-5.7%					
	4	222.50	304.60	208.90	-6.1%					
	5	223.50	304.80	209.20	-6.4%					
	X	221.92	304.76	209.12	-5.8%					
	R	4.10	2.000	1.50	2.1%					

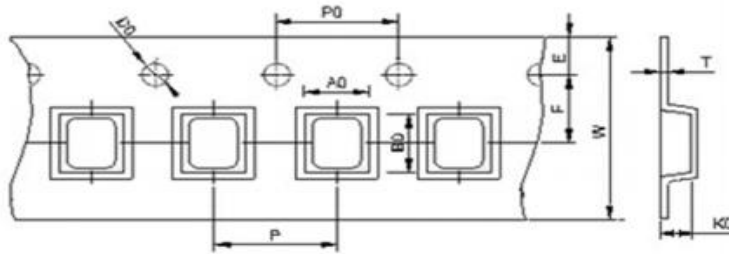
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项目Item	规格与需求 Specification and Requirement	测试方法Test Method		
可焊性 Solderability test	沾锡面积不得小于95%上锡面 Terminals area must have 95% min solder coverage	上锡升温曲线 Solder heat proof: (1) 预热: 160±10℃持续90s Preheating: 160±10℃ for 90 seconds (2) 恒温时段: 245±5℃持续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

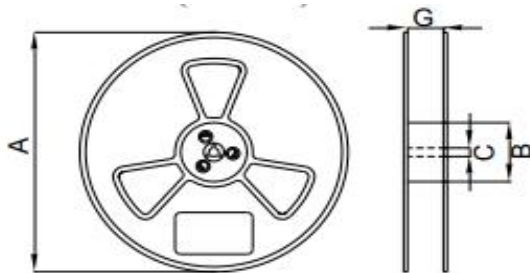


说明：字头朝孔



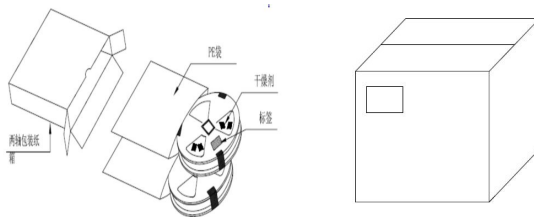
W	A0	B0	K0	E	F	P	D0	P0	T
8.00 ±0.30	1.9 ±0.10	2.3 ±0.10	1.2 ±0.10	1.75 ±0.10	3.5 ±0.05	4.0 ±0.10	1.5 ±0.10	4.0 ±0.10	0.18 ±0.03

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



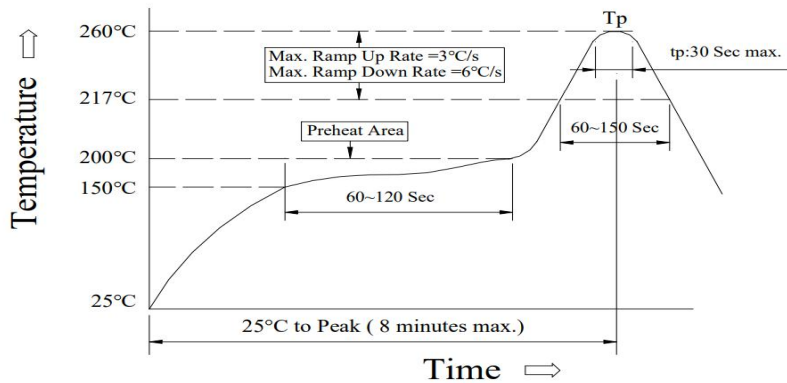
项目	数量 (PCS)
1卷轴	500
1内箱	1000
1外箱	2000

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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.