



**SPECIFICATION FOR APPROVAL**

产品规格承认书

**SMD POWER INDUCTOR**

贴片共模电感

CUSTOMER.

\_\_\_\_\_

MODEL NO.

MACM9070系列

\_\_\_\_\_

CUSTOMER'S PART NO.

\_\_\_\_\_

LILE NO.

\_\_\_\_\_

DATE.

2020.03.07

\_\_\_\_\_

REVISION.

A/0

\_\_\_\_\_

CUSTOMER APPROVE

\_\_\_\_\_

DATE:

DRAWING

DRAWN BY

CHECK BY

APPROVAL BY

DATE:



**sira**  
CERTIFICATION



IATF16949 / ISO9001 / ISO14000

**深圳市迈翔科技有限公司**

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**COILMX****深圳市迈翔科技有限公司**

CUSTOMER

MODEL NO.

MACM9070系列

REVISION

A/0

FILE NO.

PART NO.

DATE

2020.03.07

## REVISIONS

REW

PROJECT CHANGE

DESCRIPTION

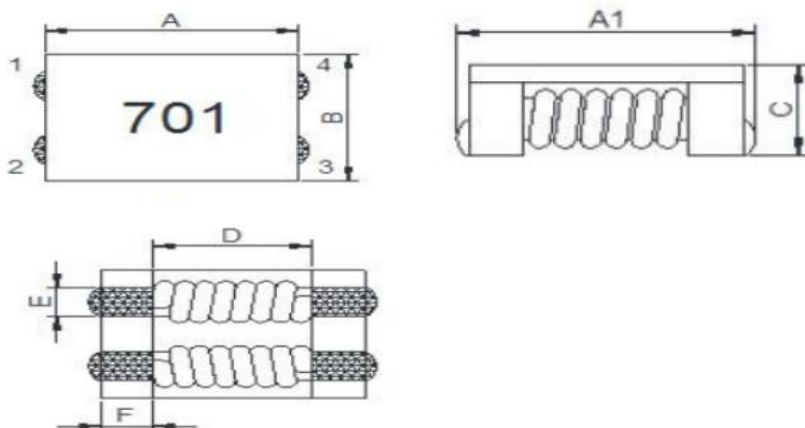
Date

REW	PROJECT CHANGE	DESCRIPTION	Date

CUSTOMER		MODEL NO.	MACM9070系列	REVISION	A/0
FILE NO.		PART NO.		DATE	2020.03.07

## 1.PRODUCT DIMENSION

UNIT:mm



A	9.0±0.5
A1	9.5±0.5
B	7.0±0.5
C	4.8Max
D	5.6Typ
E	1.5Typ
F	1.7Typ

## 2.ELECTRICAL REQUIREMENTS

Product NO	Z(Ω)100MHZ/1V		DCR (mΩ)Max	Rated Current(A) Max	IR (MΩ)Min	Rated Voltage(V) Max	MARKING
	MIN	TYP					
MACM9070-301	225	300	6	6	10	80	301
MACM9070-501	450	600	8	5.5	10	80	501
MACM9070-701	500	700	10	5	10	80	701
MACM9070-102	750	1000	13	4	10	80	102
MACM9070-222	1700	2200	50	3	10	80	222
MACM9070-272	2000	2700	80	2	10	80	272

## 3.CHARACTERISTICS

- (1). All test data is based on 25℃ ambient.
- (2). DC current(A)that will cause an approximate  $\Delta T$ 40℃
- (3). DC current(A)that will cause L0 to drop approximately 10%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

## 4.SPECIAL REQUEST

- (1)Lettering on top of the body.

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5.PRODUCT IDENTIFICATION

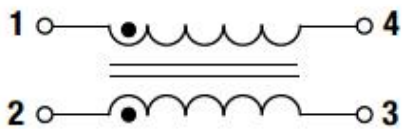
XX XXXX - XXX X X

① ② ③ ④ ⑤

①、 Product Symbol ②、 Dimensions ③、 Inductance

④、 Tolerance: M±20%, N±30%. ⑤、 Material

6.ELECTRICAL SCHEMATICS



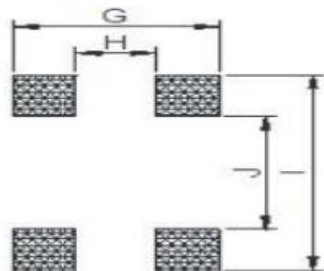
7.APPLICATION

- (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



G	5.5Typ
H	1.5Typ
I	10.5Typ
J	5.0Typ

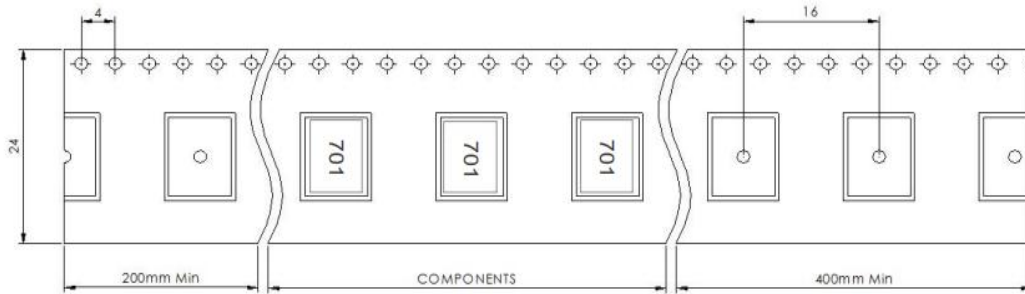
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FILE NO.	PART NO.	DATE	2020.03.07	
项目Item	规格与需求 Specification and Requirement	测试方法Test Method		
可焊性 Solderability test	沾锡面积不得小于95%上锡面 Terminals area must have 95% min solder coverage	上锡升温曲线Solder heat proof: (1) 预热: 160±10℃持续90s Preheating: 160±10℃ 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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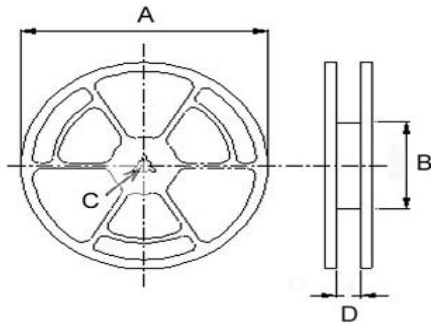
**11、包装 Packaging**

**11.1、尺寸 Dimensions**

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

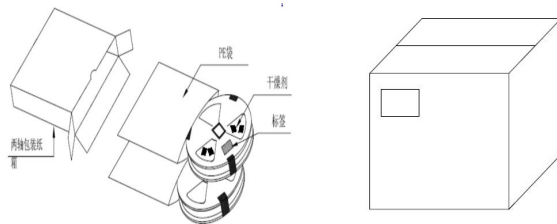


**11.1.2 卷轴尺寸 Reel dimensions**



项目	尺寸(mm)
A	330
B	100
C	13
D	16.5

**11.1.3 外箱尺寸 Carton dimensions**



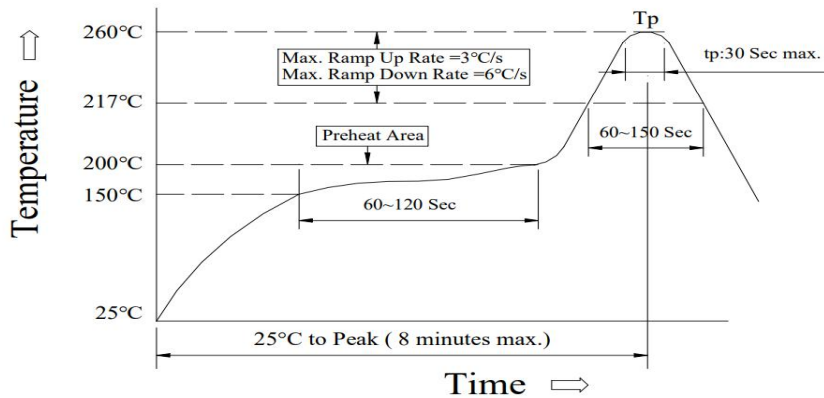
项目	数量 (PCS)
1卷轴	700
1内箱	1400
1外箱	7000

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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.