



SPECIFICATION FOR APPROVAL
产品规格承认书
CHIP COMMON MODE INDUCTOR
贴片共模电感

CUSTOMER.

MODEL NO.

MACM5045系列

CUSTOMER'S PART NO.

LILE NO.

DATE.

2023.08.01

REVISION.

A/0

NUMBER.

CUSTOMER APPROVE		
DATE:		
DRAWING		
DRAWN BY	CHECK BY	APPROVAL BY
林思思	陈健波	曾伟
DATE: 2023.08.01		



IATF16949 / ISO9001 / ISO14000

深圳市迈翔科技有限公司

SHENZHEN MOTTO TECHNOLOGY Co., Ltd

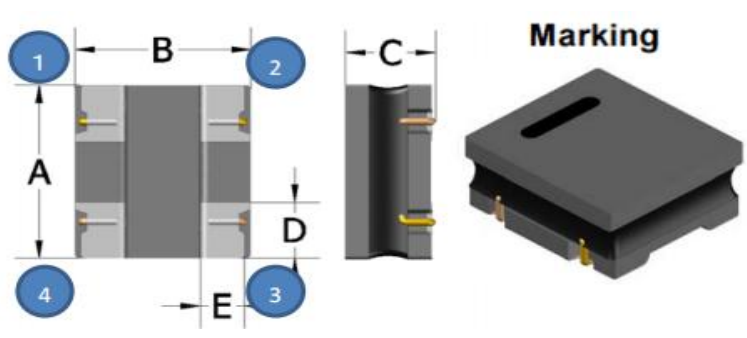
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CUSTOMER		MODEL NO.	MACM5045系列	REVISION	A/0
FILE NO.		PART NO.		DATE	2023.08.01

1.PRODUCT DIMENSION				UNIT:mm		
				A	5.0±0.3	
				B	4.5±0.3	
				C	2.5Max	
				D	2.1±0.3	
				E	1.1±0.3	

2.ELECTRICAL REQUIREMENTS						
Part Number	Z(Ω) @100MHZ	DCR (mΩ)Max	Rated Current (A)Max	Rated Voltage (V)Typ	IR (MΩ)Min	Withstand Voltage (V)Typ
	±40%					
MACM5045-101	100	12.6	6	50	10	125
MACM5045-251	250	19.6	5	50	10	125
MACM5045-501	500	26.6	4	50	10	125
MACM5045-102	1000	33.6	3	50	10	125
MACM5045-142	1400	56	1.5	50	10	125

3.CHARACTERISTICS

(1). All test data is based on 25℃ ambient.

(2). DC current(A)that will cause an approximate ΔT40℃

(3). Operating temperature range: -40℃~+125℃

(4).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)No marking on top of the body.

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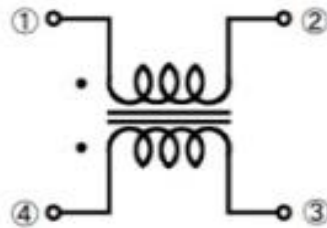
5.PRODUCT IDENTIFICATION

XXXX XXXX - XXX

① ② ③

①、Coilmx Series Name ②、Dimensions ③、Impedance

6.ELECTRICAL SCHEMATICS



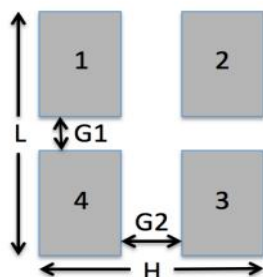
7.APPLICATION

- (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



L	5.5 Ref
H	4.6 Ref
G1	1.5 Ref
G2	1.2 Ref

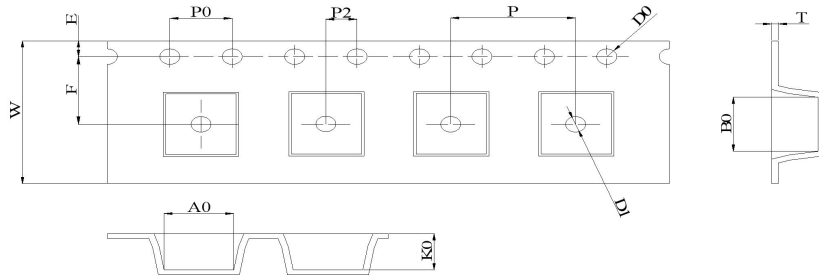
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项目Item	规格与需求 Specification and Requirement	测试方法Test Method			
可焊性 Solderability test	沾锡面积不得小于95%上锡面 Terminals area must have 95% min solder coverage	上锡升温曲线Solder heat proof: (1) 预热: 160±10℃持续90s Preheating: 160±10℃ for 90 seconds (2) 恒温时段: 245±5℃持续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 (-40±2℃,30±3分钟) 室温5分钟 (-40±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 -40±2℃下存放 1000+4/-0 小时 -40±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

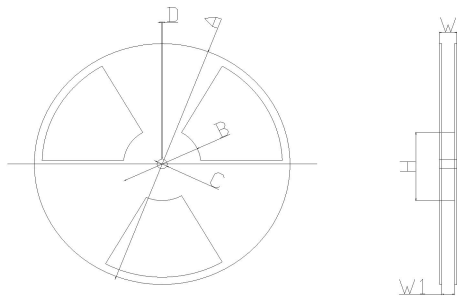
11.1、尺寸 Dimensions

11.1.1 包装料带尺寸 Tape packaging dimensions



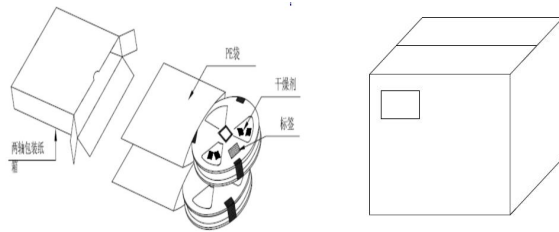
W	A0	B0	K0	P	F	E	D0	P0	T
12.00 ±0.30	4.80 ±0.10	5.30 ±0.10	2.50 ±0.10	8.00 ±0.10	5.50 ±0.10	1.75 ±0.10	1.50 ±0.10	4.00 ±0.10	0.25 ±0.05

11.1.2 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	17.4 Max
W1	12.4 ± 1.0

11.1.3 外箱尺寸Carton dimensions



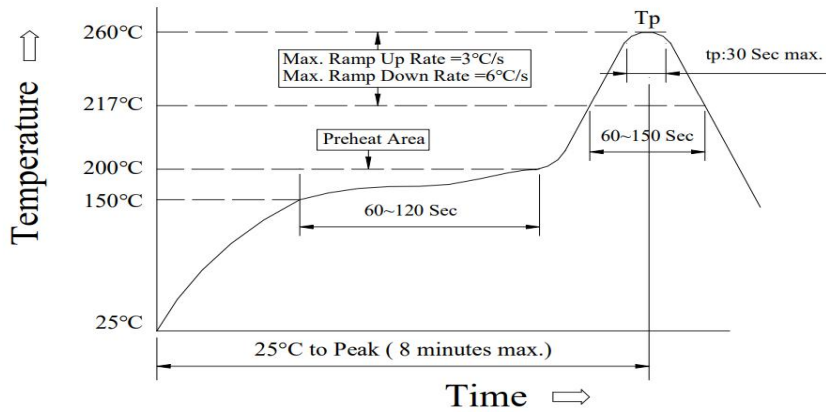
项目	数量 (PCS)
1卷轴	2500
1内箱	
1外箱	

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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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