



SPECIFICATION FOR APPROVAL

产品规格承认书

CHIP COMMON MODE INDUCTOR

贴片共模电感

CUSTOMER.

MODEL NO.

MACM4520-102

CUSTOMER'S PART NO.

LILE NO.

DATE.

2022.05.19

REVISION.

A/0

NUMBER.

CUSTOMER APPROVE

DATE:

DRAWING

DRAWN BY

CHECK BY

APPROVAL BY

林思思

陈健波

曾伟

DATE: 2022.05.19



新能源光储充电电子磁性元器件制造商



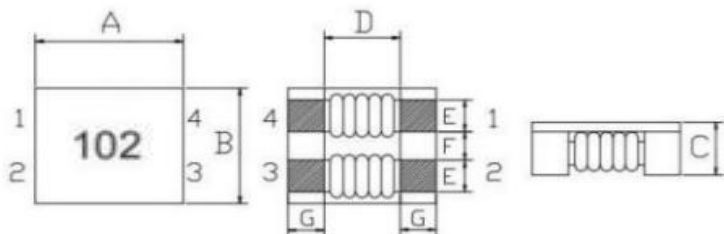
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CUSTOMER		MODEL NO.	MACM4520-102		REVISION	A/0		
FILE NO.		PART NO.			DATE	2022.05.19		
1.PRODUCT DIMENSION					UNIT:mm			
					A	4.70±0.50		
					B	4.50±0.50		
					C	2.20Max		
					D	2.70Typ		
					E	0.80Typ		
					F	1.25Typ		
					G	1.00Typ		
2.ELECTRICAL REQUIREMENTS								
Product NO		Z(Ω)100MHZ/0.1V		DCR (mΩ)max	Rated Current(A) max	IR (MΩ)MIN	Rated Voltage(V)	MARKING
		MIN	TYP					
MACM4520-102		800	1000	68	2.1	10	50	102
3.MATERIAL LIST								
NO.	ITEM	DESCRIPTION			SUPPLIER			
1	CORE	FERRITE			SINCORES OR EQ			
2	WIRE	2UEW P180			PACIFIC OR EQ			
3	膠帶	DM膠帶			HENGRENXIN OR EQ			
4	SOLDER	Sn99.3 :Cu0.7			SHENMAO OR EQ			
5	INK	WHITE			BON MARK			
4.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								
5.SPECIAL REQUEST								
(1)Lettering 102 on top of the body.								

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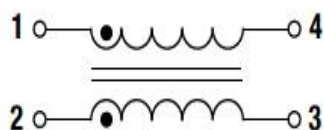
6.PRODUCT IDENTIFICATION

XXXX XXXX - XXX

① ② ③

①、Coilmx Series Name ②、Dimensions ③、Impedance

7.CIRCUIT DIAGRAM



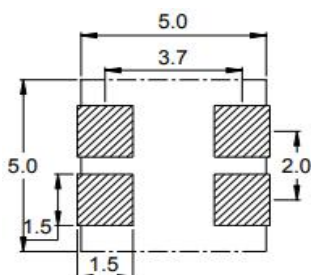
8.APPLICATION

- (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.

9.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.

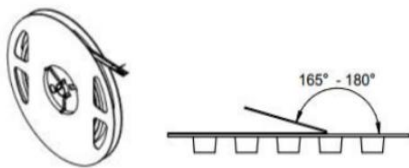
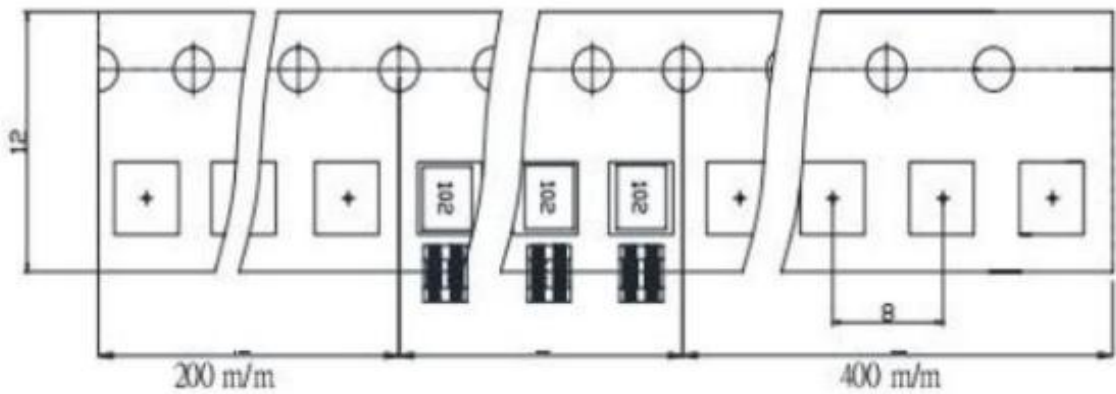
10.RECOMMENDED PCB LAYOUT



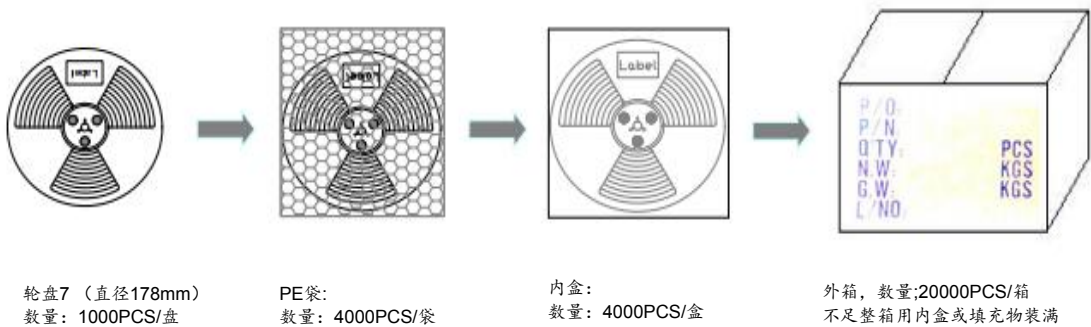
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项目 Item	规格与需求 Specification and Requirement	测试方法 Test Method			
可焊性 Solder ability test	沾锡面积不得小于95%上锡面 Terminals area must have 95% min solder coverage	上锡升温曲线 Solder heat proof: (1) 预热: 160±10℃持续90s Preheating: 160±10℃ for 90 seconds (2) 恒温时段: 245±5℃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



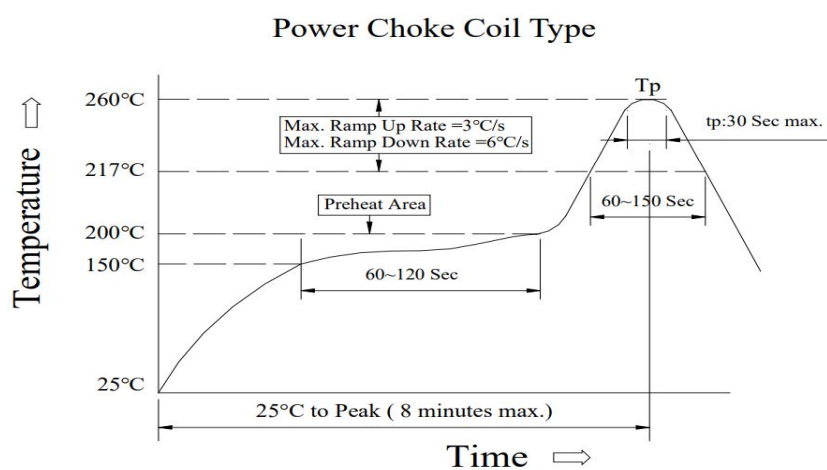
Tape width	Distance	Pull-of force
12mm	8mm	20-120g



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Reflow curve

※ Reflow Profile



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.