



SPECIFICATION FOR APPROVAL

产品规格承认书

High Current Power Inductor

大电流功率电感

CUSTOMER.

MODEL NO.

MTP2920系列

CUSTOMER'S PART NO.

LILE NO.

DATE.

2021.06.16

REVISION.

A/0

CUSTOMER APPROVE

DATE:

DRAWING

DRAWN BY

CHECK BY

APPROVAL BY

林思思

陈健波

曾伟

DATE:2021.06.16



惠州市迈翔电子有限公司
深圳市迈翔科技有限公司

黄冈市迈翔电子有限公司 英德市迈翔电子有限公司

5~6F, Building B, Jinhao Smart Park, No. 207 Sihuan South Road, Zhongkai High tech Zone, Huizhou City, Guangdong Province, China

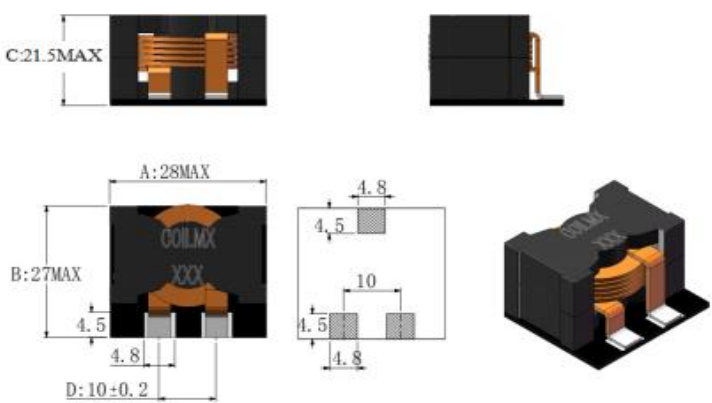
TEL: +86 0752-3398115 3398116 3398117

Http: //www.coilcrafts.com www.coilmx.com E-mail: pxr@coilmx.com



惠州市迈翔电子有限公司 深圳市迈翔科技有限公司

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CUSTOMER		MODEL NO.	MTP2920系列	REVISION	A/0
FILE NO.		PART NO.		DATE	2021.06.16
1.PRODUCT DIMENSION				UNIT:mm	
 >组立式设计，机构坚固。高电感值，大电流低磁损，低阻抗，寄生电容小。 >扁平线绕组，实现极低的直流电阻。温升电流饱和和电流受环境条件影响小。				A	28MAX
				B	27MAX
				C	21.5MAX
				D	10±0.2
2.ELECTRICAL REQUIREMENTS					
Part NO. 型号	Inductance(uH) 电感值±20%	DCR (mΩ)MAX	Saturationcurrent(A) 饱和电流	Temperature risecurrent (A)温升电流	
	100KHz/0.25V	AT25°C MICROTEST 6377	100KHz/0.25V	100KHz/0.25V	
MTP2920-1R5MC	1.5	2.5	>100	33	
MTP2920-2R2MC	2.2	2.5	>100	33	
MTP2920-3R3MC	3.3	2.5	>90	33	
MTP2920-4R7MC	4.7	2.5	60	33	
MTP2920-6R8MC	6.8	2.5	46	33	
MTP2920-100MC	10	2.5	32	33	
MTP2920-150MC	15	2.5	21	33	
MTP2920-220MC	22	2.5	15	33	
MTP2920-330MC	33	2.5	11	33	
MTP2920-470MC	47	2.5	10	33	
3.CHARACTERISTICS					
(1). All test data is based on 25°C ambient.					
(2). DC current(A)that will cause an approximate ΔT40°C					
(3). DC current(A)that will cause L0 to drop approximately 30%Typ					
(4). Operating temperature range: -40°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 XXX on top of the body.					

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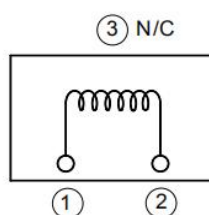
5.PRODUCT IDENTIFICATION

MTP 2920 - XXX M

① ② ③ ④

①、 Series name ②、 Product dimensions ③、 Inductance

④、 Tolerance: M±20%, N±30%.

6.ELECTRICAL SCHEMATICS**7.APPLICATION**

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

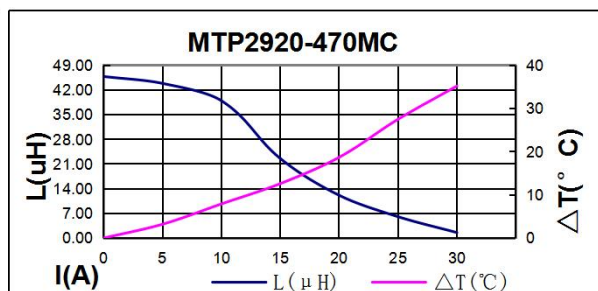
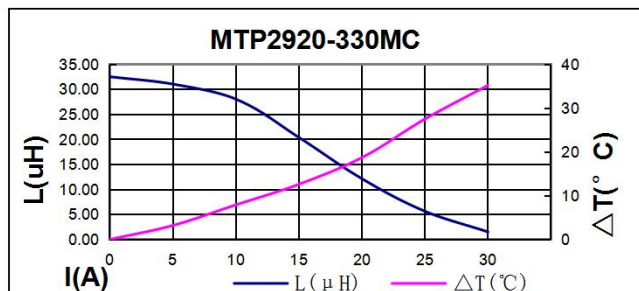
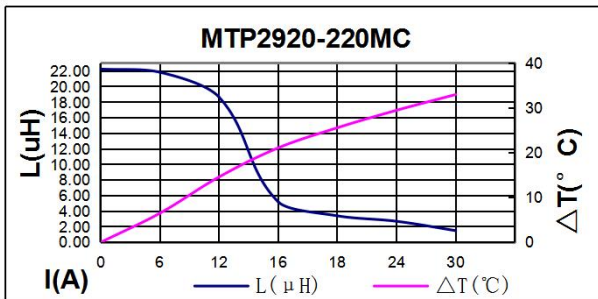
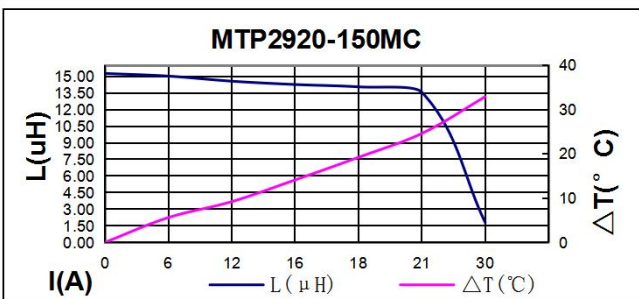
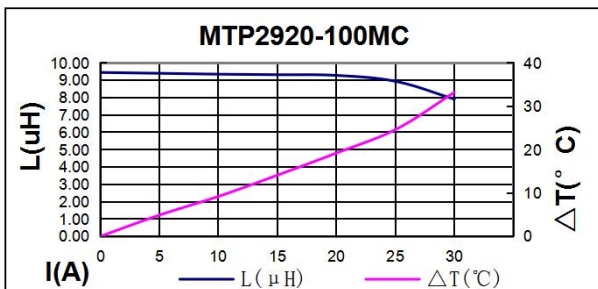
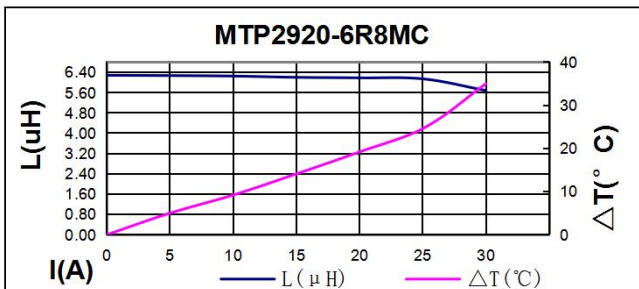
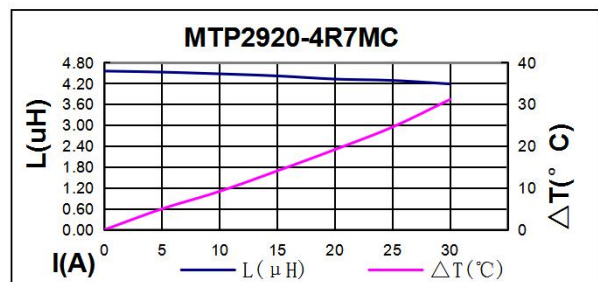
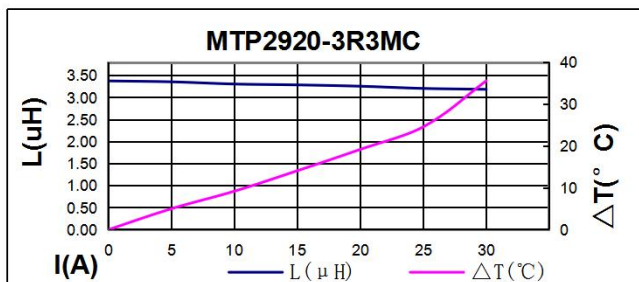
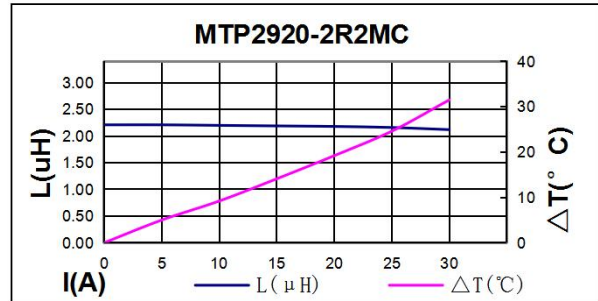
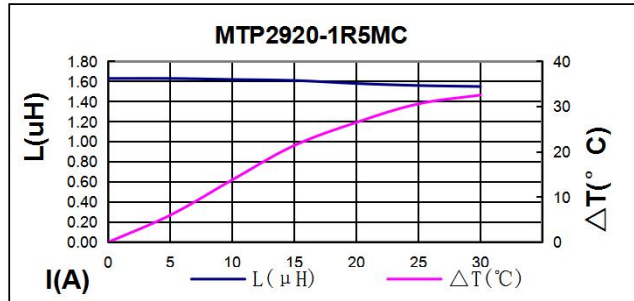
8.FEATURES

- (1)Assemblage design, sturdy structure.
- (2)High inductance, high current, low magnetic loss,low ESR, small parasitic capacitance.
- (3)Flat wire winding, achieve a low D.C. Resistance.
- (4)Temperature rise current and saturation current is less influenced by environment.

9.RECOMMENDED PCB LAYOUT

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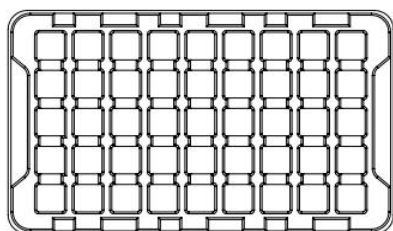
10.Saturation current VS temperature rise current curve



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11.可靠性Reliability					
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			

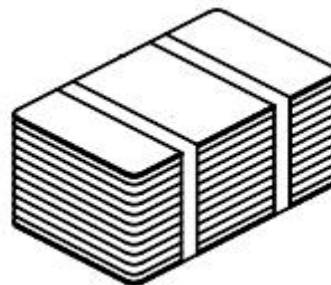
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12、包装 Packaging

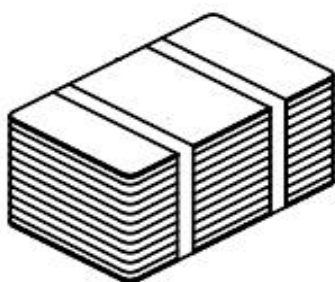


Quantity/Tray:40PCS

Tray X 7

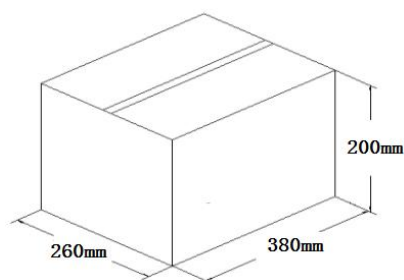


Quantity/Bundle:280PCS



Quantity/Bundle:280PCS

Bundle X 1



Quantity/Carton:280PCS

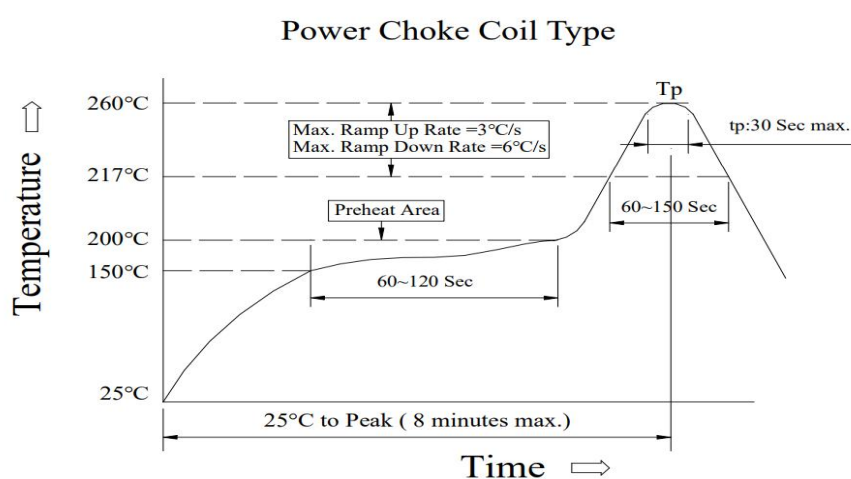
包装数量 packing quantity

Product Series 产品系列	Quantity/Tray 数量/盘	Quantity/Bundle 数量/捆	Quantity/Carton 数量/箱
MTP2920	40PCS	280PCS	280PCS

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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.