



### SPECIFICATION FOR APPROVAL

产品规格承认书

### High Current Power Inductor

大电流功率电感

CUSTOMER.

\_\_\_\_\_

MODEL NO.

MTP2615-100K-L

\_\_\_\_\_

CUSTOMER'S PART NO.

\_\_\_\_\_

LILE NO.

\_\_\_\_\_

DATE.

2023.04.03

\_\_\_\_\_

REVISION.

A/0

\_\_\_\_\_

CUSTOMER APPROVE		
DATE:		
DRAWING		
DRAWN BY	CHECK BY	APPROVAL BY
DATE:2023.04.03		



IATF16949 / ISO9001 / ISO14000

### 深圳市迈翔科技有限公司

SHENZHEN MOTTO TECHNOLOGY Co., Ltd

香港瑞德科技有限公司 黄冈市迈翔电子有限公司

Motto Technology park, niu e ling village no#214 xintian,nghua Town,

Guanlan Street, Longhua District,Shenzhen

TEL: +86 0755-8948751~2 89487610 Fax: +86 0755-61624574

[Http://www.coilmx.com](http://www.coilmx.com) E-mail: [sales@mottotech.com](mailto:sales@mottotech.com)



<b>CUSTOMER</b>		<b>MODEL NO.</b>	<b>MTP2615-100K-L</b>	<b>REVISION</b>	<b>A/0</b>
<b>FILE NO.</b>		<b>PART NO.</b>		<b>DATE</b>	<b>2023.04.03</b>

1.PRODUCT DIMENSION		UNIT:mm	
	<b>A</b>	27.2MAX	
	<b>B</b>	19.8MAX	
	<b>C</b>	14.2MAX	
	<b>D</b>	10.4±0.4	
	<b>E</b>	17.4±0.5	
	<b>F</b>	3.0±0.1	
	<b>G</b>	0.6±0.1	
	<b>H</b>	1.5±0.8	
	<b>I</b>	5.6MIN	
	<b>L</b>	7~12.5	
<b>M</b>	6.0MIN		

2.ELECTRICAL REQUIREMENTS			
PARAMETER	SPECIFICATION	CONDITION	TEST INSTRUMENTS
L(uH)	10± 10%	200KHz/0.1V	MICROTEST 6377
DCR(mΩ)	4.0MAX	At 25℃	TH16502
I sat(A)	30A TYP L0A*70%	200KHz/0.1V	MICROTEST 6377+6220
I rms(A)	22A TYP ΔT≤40℃	200KHz/0.1V	MICROTEST 6377+6220

3.MATERIAL LIST		
ITEM	MATERIAL	SUPPLIER
<b>CORE</b>	<b>PQ26/14 NH46</b> <b>PQ26/14 DMR91</b>	<b>LIANFENG</b> <b>DMEGC</b>
<b>WIRE</b>	<b>扁平线耐温等级 ≥220/φ0.6*3.0</b>	<b>TAIYI-JIATENG-SONGYE</b>
<b>SOLDER</b>	<b>TIN-Sn99.95</b>	<b>QIANDAO/HONGXINGWEI</b>

- 4.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 20%Typ
  - (4). Operating temperature range: -40℃~+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

**5.SPECIAL REQUEST**

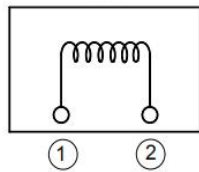
(1)Lettering **COILMX**  
**MTP2615-100** on top of the body.

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<b>FILE NO.</b>		<b>PART NO.</b>		<b>DATE</b>	<b>2023.04.03</b>

**6.PRODUCT IDENTIFICATION**

XXX   XXXX - XXX   X  
 ①      ②      ③      ④  
 ①、 Series name   ②、 Product dimensions   ③、 Inductance  
 ④、 Tolerance: M±20%, N±30%.

**7.ELECTRICAL SCHEMATICS**



**8.APPLICATION**

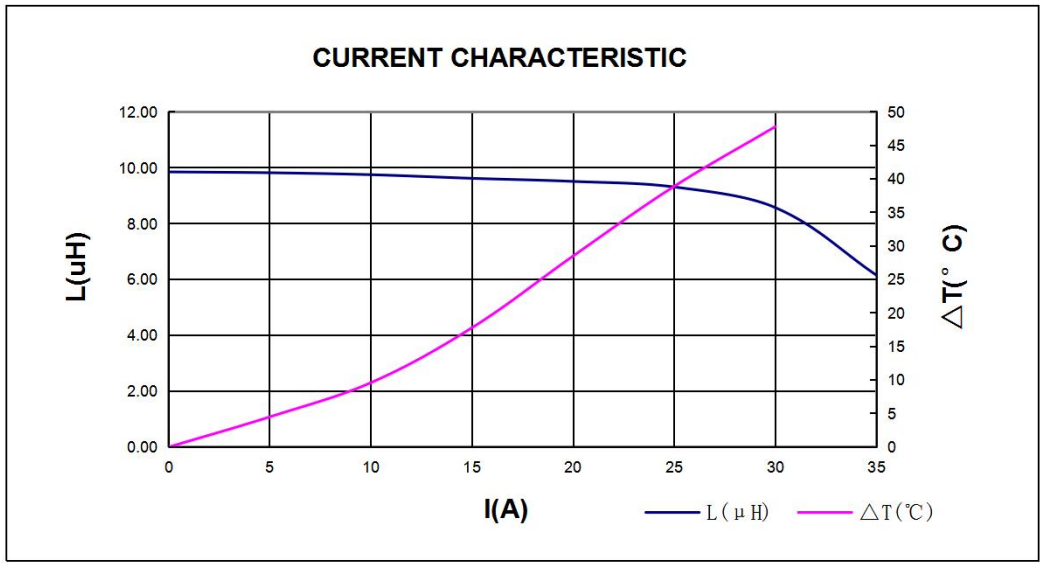
- (1)Low profile,high current power supplies.
- (2)Battery powered devices.
- (3)DC/DC converters in distributed power systems.
- (4)DC/DC converters for field programmable gate array.

**9.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.

**10.RECOMMENDED PCB LAYOUT**

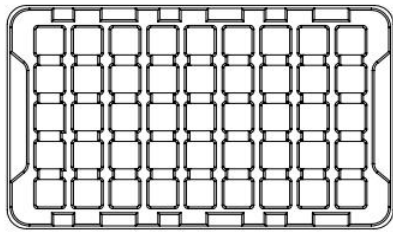
CUSTOMER		MODEL NO.			MTP2615-100K-L		REVISION		A/0		
FILE NO.		PART NO.					DATE		2023.04.03		
SORT		ITEM	A	B	C	D	E	F	G		
PRODUCT & DIMENSION		SPEC	27.2MAX	19.8MAX	14.2MAX	10.4±0.4	17.4±0.5	3.0±0.1	0.6±0.1		
		1	26.86	19.48	13.96	10.59	17.17	3.01	0.62		
		2	26.85	19.46	13.95	10.58	17.18	3.02	0.63		
		3	26.75	19.48	13.98	10.61	17.26	3.01	0.62		
		4	26.81	19.46	13.95	10.62	17.24	2.99	0.62		
		5	26.89	19.49	13.96	10.58	17.19	2.98	0.63		
		X	26.83	19.47	13.96	10.60	17.21	3.00	0.62		
		R	0.14	0.03	0.03	0.04	0.09	0.04	0.01		
ELECTRICAL & REQUIREMENTS		ITEM	L(μH)	DCR (mΩ)	I sat(A)	DC BIAS	Irms	SHAPE:			
		SPEC	10± 10%	4.0MAX	30A TYP LOA*70%	降幅 %	22A TYP ΔT≤40℃				
		1	9.75	3.26	8.770	-10.1%	OK				
		2	9.83	3.25	8.670	-11.8%	OK				
		3	9.87	3.24	8.730	-11.6%	OK				
		4	9.78	3.21	8.770	-10.3%	OK				
		5	9.82	3.35	8.650	-11.9%	OK				
		X	1.63	3.26	8.72	-11.1%					
		R	0.12	0.14	0.12	1.9%					



CUSTOMER		MODEL NO.	MTP2615-100K-L	REVISION	A/0
FILE NO.		PART NO.		DATE	2023.04.03
<b>11.可靠性Reliability</b>					
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			

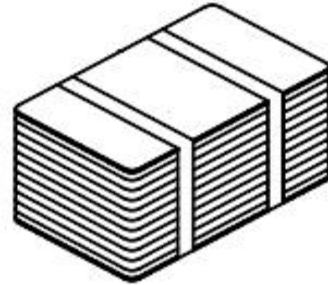
CUSTOMER		MODEL NO.	MTP2615-100K-L	REVISION	A/0
FILE NO.		PART NO.		DATE	2023.04.03

**12、包装 Packaging**

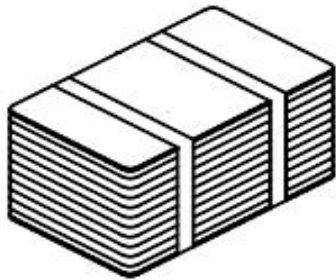


Quantity/Tray:40PCS

Tray X 7

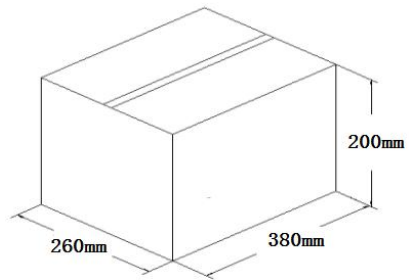


Quantity/Bundle:280PCS



Quantity/Bundle:280PCS

Bundle X 1



Quantity/Carton:280PCS

**包装数量 packing quantity**

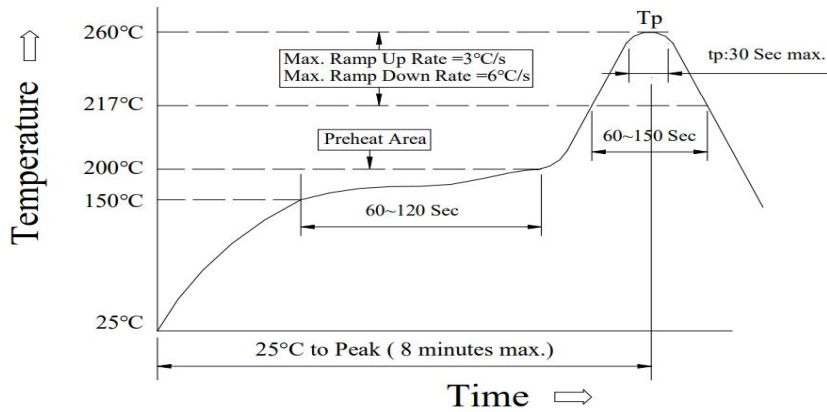
Product Series 产品系列	Quantity/Tray 数量/盘	Quantity/Bundle 数量/捆	Quantity/Carton 数量/箱
MTP2615	40PCS	280PCS	280PCS

CUSTOMER		MODEL NO.	MTP2615-100K-L	REVISION	A/0
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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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[PE-53601NL](#) [PE-53602NL](#) [PG0936.113NLT](#) [9220-20](#) [9310-16](#) [PM06-2N7](#) [PM06-39NJ](#) [A01TK](#) [1206CS-471XJ](#) [HC2-R47-R](#) [HC8-1R2-R](#)  
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[1812LS-224XJ](#) [1812LS-563XJ](#) [1812LS-683XJ](#) [1812LS-824XJ](#) [NIN-FB101JTR110F](#) [NIN-FB471JTR62F](#) [NIN-FC1R5JTR220F](#) [NIN-](#)  
[HCR15JTRF](#) [NIN-HCR33JTRF](#) [NIN-HDR22JTRF](#) [NIN-HDR82JTRF](#) [NIN-HK2N7STRF](#) [NIN-PA150KTR370F](#) [NIN-PB100KTR550F](#)