



FANGCHENG ELECTRON
FANGCHENG ELECTRONICS (DONGGUAN) CO., LTD.

方成电子（东莞）有限公司
SPECIFICATION FOR APPROVAL

CUSTOMER:

Part Number : Coupled Inductors
CUSTOMER Number: 贴片驱动电感
CUSTOMER Part :
Fangcheng part : FC-FCM5030B-102M-L
DATE: 2023-3-17
REV: 02



Confidential

made in fangcheng:

CUSTOMER APPROD:

prepad	chechd	Approd
黄敏	刘凡	陈丽娟

prepad	chechd	Approd

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Description of Revision

REV	Description of Revision	DATE	Prepad	Notes
01	Initial Release	2022-10-28	黄敏	

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Notice of Use

For the parameters not prescribed in the *Specification for Approval*, please refer to the following standards or the relative industry standards.

1. Product in packing storage condition : temperature 540, RH70%.
 2. A storage of - F C -Electronic products for longer than 12 months is not recommended, Within other effects, the terminals may suffer degradation, resulting in bad solderability. Therefore, all products shall be used within the period of 12 months based on the day of shipment.
 3. Do not keep products in unsuitable storage conditions, such as areas susceptible to high temperatures, high humidity, dust or corrosion.
 - 4 Always handle products with care.
 - 5 Don't touch electrodes directly with bare hands as oil secretions may inhibit soldering.
- Always ensure optimum conditions for soldering.
- 6 When this product will be used on a similar or new project to the original one, sometimes it might be unable to satisfy the specifications due to different condition of usage.
 - 7 This inductor itself does not have any protective function in abnormal condition, such as overload, short-circuit, open-circuit conditions, etc. Therefore, it shall be confirmed that there is no risk of smoke, fire, dielectric withstand voltage, insulation resistance, etc., or use in abnormal conditions protective devices or protection circuit in the end product.
 - 8 Hi-Pot test with higher voltage than spec value will damage insulating material and shorten its life.

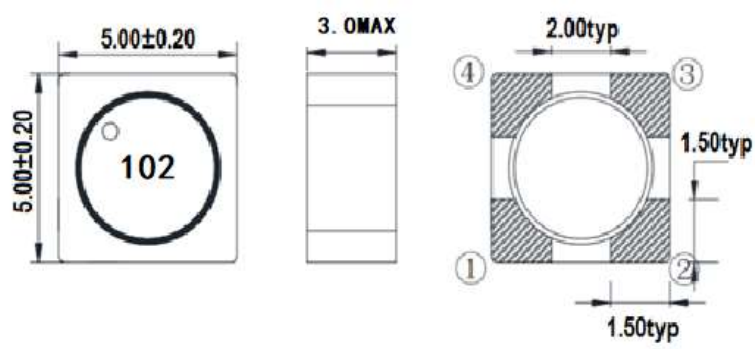
IPC 020D Joint Industry standard

IEC1007 《Transformer and inductors for use in electronic and telecommunication equipment—Measuring methods and test procedures》
(ROHS or other environmental request)

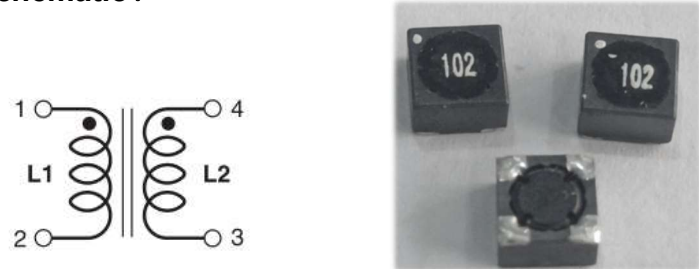


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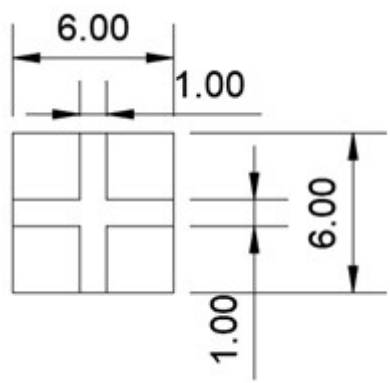
1. Appearance and Dimensions(mm)



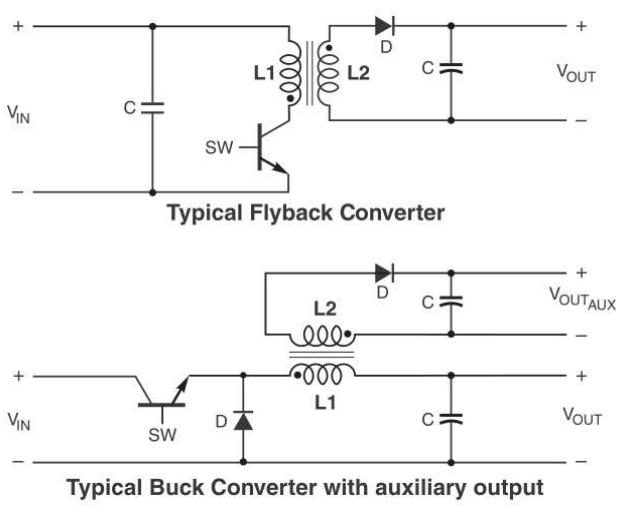
2. Schematic :



3.Recommende land patten:mm



4.typical circuit.



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3. Electrical Characteristics :

Part No.	Inductance (mH) ※1	Leakage (μH)	DC Resistance (Ω)		HI-POT N1-N2	Heat Rating Current (mA)	
FC-FCM5030S-102M-L	±20%	typ	typ	Max	1500V	Irms	Isat
	1.0	2.0	16.5	20	3mA/3S	110	170

※ All data is tested on 25℃ ambient temperature.

※ Test equipment:

Inductance(L) and Saturation Current(Isat): WK3255B meter or equivalent;

Direct Current Resistance(DCR): TH2515 or equivalent;

Heat Rating Current(Irms): KXN-3050D or equivalent.

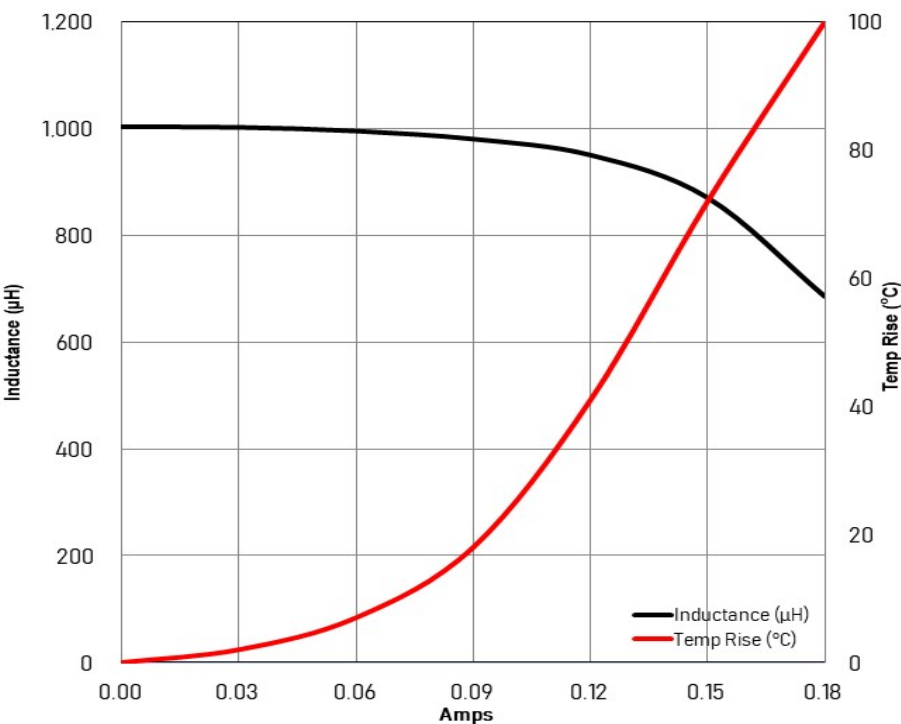
1 Inductance is tested at 100KHz, 0.1V.

2**Leakage Inductance is for L1 and is measured with L2 shorted.** 100KHz, 0.1V.

3.Isat: |ΔL/L| < 30 %

4 Heat rating current: The value of DC current when product temperature rise is approximate ΔT40℃ (Ta=25℃

4.L@ Rating Current (电感值对应电流曲线)



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4. Reliability and test condition:

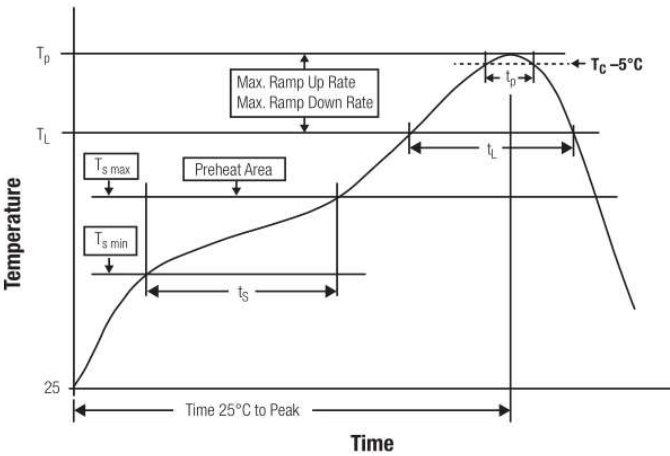
Test item	test condition	Remark
Cold Operating Test	GB2423.1 Ad	
Heat Operating Test	GB2423.2 Bd	
Cold Storage Test	GB2423.1 Ab	
Heat Storage Test	GB2423.2 Bb	
Steady Damp Heat Test	GB2423.3 Cb	
Circular Damp Heat Test	GB2423.4 Db	
Temperature Cycling Test	GB2423.22 Nb	
Temperature Shock Test	GB2423.22 Na	
Vibration Test	GB2423.10~15 Fc, Fdb	
Mechanical Shock Test (Bump)	GB2423.5 Eb	
Free Fall Test	GB2423.8 Ed	
Solderability	GJB360A-96	
High Temperature Step Stress Test	Enhancement Test Specifications	
Low Temperature Step Stress Test		
High-speed Thermal Cycling		
Limit Vibration		
Composite Stress		
Highly-Accelerated Temperature and Humidity Stress Test (HAST) (		



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5. Soldering Specification:

5.1 Reflow Profile for Components.



Package Classification Reflow Temperature (T_c):

Properties	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly Package Thickness < 1.6 mm	260 °C	260 °C	260 °C
PB-Free Assembly Package Thickness 1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
PB-Free Assembly Package Thickness ≥ 2.5 mm	250 °C	245 °C	245 °C

refer to IPC/ JEDEC J-STD-020E

5.2 波峰焊温度:255℃±5℃;时间:不少于 7 秒.

波峰焊预热温度:100 至 160℃;时间:不少于 10 秒.

5.3 高温耐热性:

在 260℃的熔融钎料中，停留时间不少于 10 秒，无质量问题。

5.4 返修温度和时间:

温度：350℃；时间：不少于 5 秒。

5.5 焊接次数:

元器件能承受的焊接次数不少于 5 次。

6.1 包装:

- 1)包装箱上应标明产品型号、名称、数量、出厂日期、承制方名称及出厂检验章；
- 2)货物运达客户方后，包装箱封条应完好，箱体无破损、开裂等现象；
- 3)电感用木箱或其他材料包装，方便拆卸，四周用软性材料填充；
- 4)包装数量 2000PCS, 8000PCS 箱。

6.2 外观:

- 1)产品应有合格证和耐擦防水洗标签，应注明型号、规格；
- 2)产品外观整洁，应无破损、划伤；

6.3 检验:

- 1)产品生产中必须全数进行电气性能，抗电强度检测；箱内应有 100%电气性能合格保证书或检测报告；
- 2)产品出货前按批次，必须根据承认书按国家行业标准进行抽样检验，合格后出具出厂检验报告，记录抽样测试数据，在每批次包装尾箱中放置一份；检验报告须注明 100%耐压测试合格。注：批次按定单号发货为准



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