



Fang cheng Electronics(Dong guan) Co,LTD
SPECIFICATION FOR APPROVAL

CUSTOMER:

Part Number : SMD High Current Power Inductor

CUSTOMER Number:

CUSTOMER Part :

Fangcheng part : FCM1250B-Series

DATE: 2021-1-11

REV: 01



made in fangcheng:

CUSTOMER APPROD:

Prepad	Checd	Approd
<i>zhngli</i>	<i>liufang</i>	<i>yuangle</i>

prepad	checd	Approd

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Description of Revision

REV	Description of Revision	DATE	Prepad	Notes
01	Initial Release	2021. 1. 11	<i>zhangli</i>	

Prepad <i>zhangli</i>	Checd <i>W-pen</i>	Approd <i>David-yuan</i>
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Customer:

made : 方成电子 (东莞) 有限公司

Part Number: FCM1250B-Series-L-S

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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 –FC- 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.

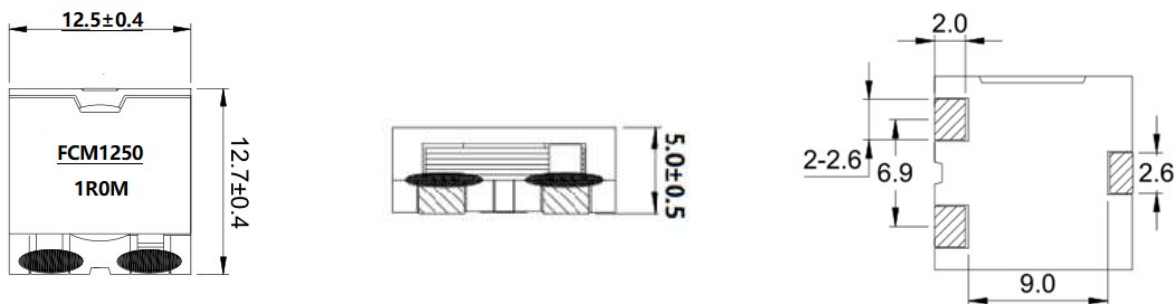
IPC 020D Joint Industry standard

IEC1007 《Transformer and inductors for use in electronic and telecommunication equipment—Measuring methods and test procedures》

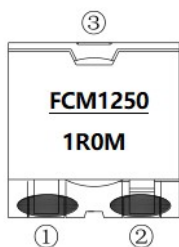
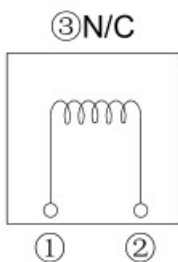
(ROHS or other environmental request)

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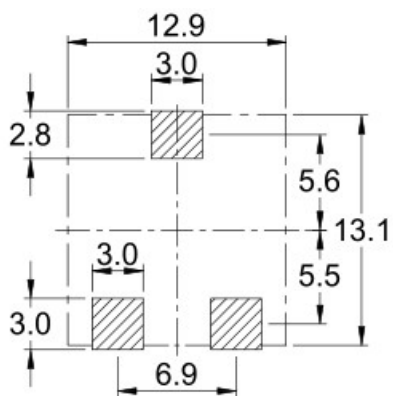
1. Appearance and Dimensions(mm)



2. Schematic :



3. Reference LandPattern (mm)



Outline:

Magnetic shielding structure, excellent resistance to electromagnetic interference.

(EMI)Assemblage design, sturdy structure. Small volume, high current, low magnetic loss, low ESR, small parasitic capacitance.

Temperature rise current and saturation current is less influenced by environment. Operating temperature: -40 +125°C (Including coil's temperature rise)

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4. Electrical Characteristics :

Part No.	Inductance (μ H) 100KHZ/0.1V	D.C.R. ($m\Omega$)	Saturation current (A)	Temperature rise current (A)
	$\pm 20\%$	MAX	MAX	MAX
FCM1250B-R47M-L-S	0.47	1.2m Ω	31.0	28
FCM1250B-1R0M-L-S	1.0	2.2m Ω	22.0	20
FCM1250B-1R5M-L-S	1.5	2.2m Ω	18.5	20
FCM1250B-2R2M-L-S	2.2	4.3 m Ω	17A	13
FCM1250B-3R3M-L-S	3.3	4.3 m Ω	15.5	13
FCM1250B-4R7M-L-S	4.7	6.1 m Ω	13.5	11
FCM1250B-5R6M-L-S	5.6	6.1 m Ω	12.0	11
FCM1250B-6R8M-L-S	6.8	11.5 m Ω	9.5	10
FCM1250B-8R2M-L-S	8.2	11.5 m Ω	8.3	10
FCM1250B-100M-L-S	10.0	13.5 m Ω	7.5	8.0

1.All data is tested based on 25 ambient temperature.

2.Inductance measure condition at 100kHz, 0.1V.

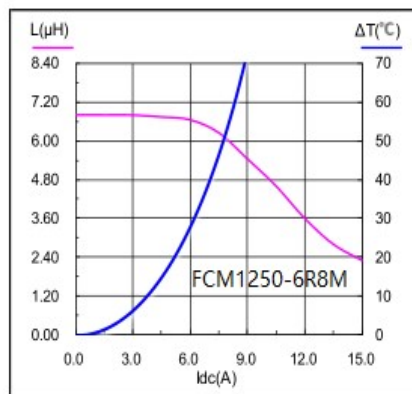
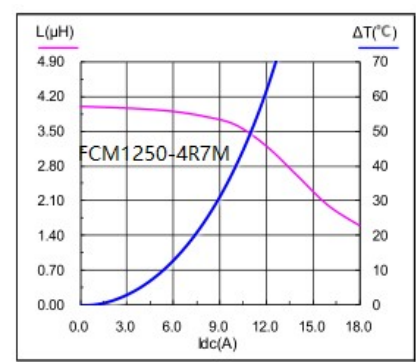
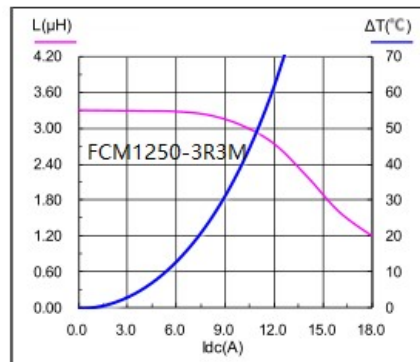
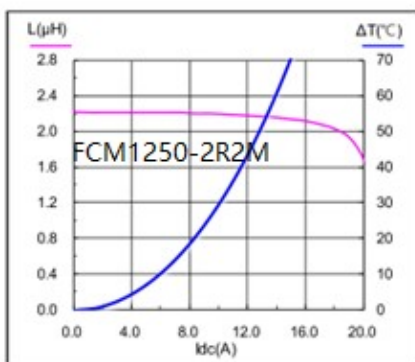
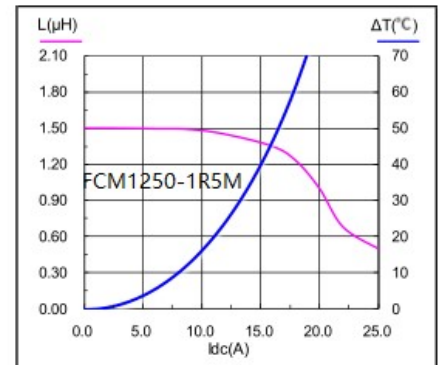
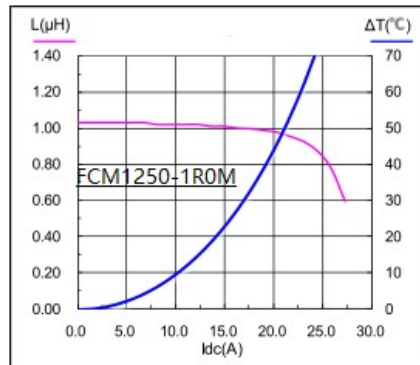
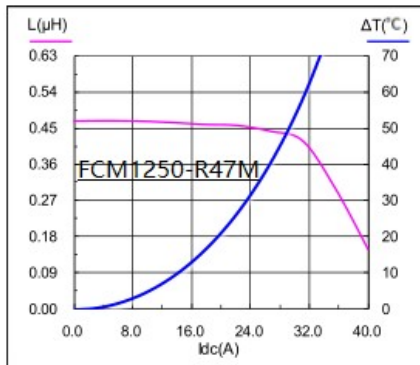
3.Saturation current the actual value of DC current when the inductance decrease 20% of its initial value.

4. Temperature rise current the actual value of DC current when the temperature rise is $\Delta T40$ ($T_a=25$).

5. Special remind Circuit design, component placement, PCB size and thickness, cooling system and etc.all will affect the product temperature. Please verify the product temperature in the final application.

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5. Saturation Current vs Temperature Rise Current Curve



Special remind Circuit design, component placement, PCB size and thickness, cooling system and etc. all will affect the product temperature. Please verify the product temperature in the final application.

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Part Number: FCM1250B-Series-L-S

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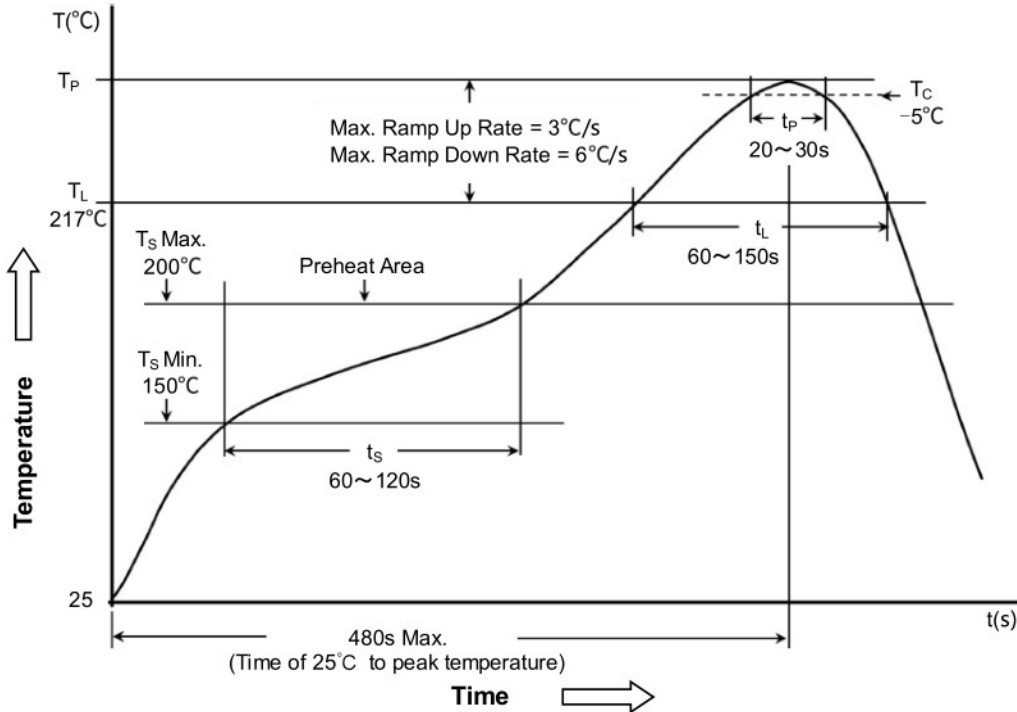
6. Reliability and test condition:

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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7. Soldering Specification:

7.1 Reflow Profile for SMT Components.



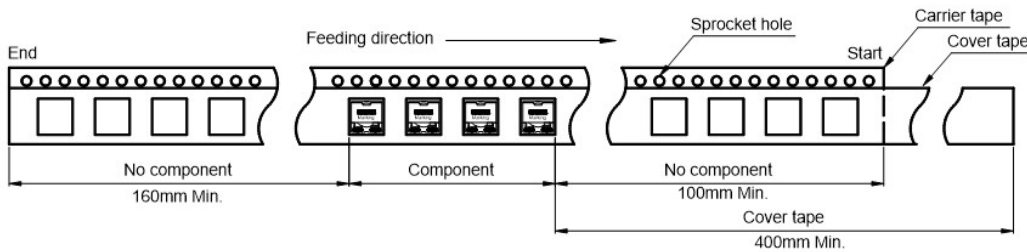
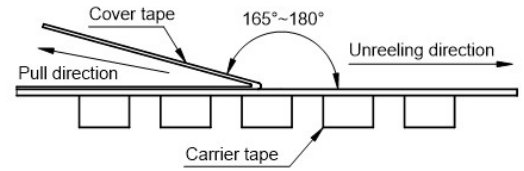
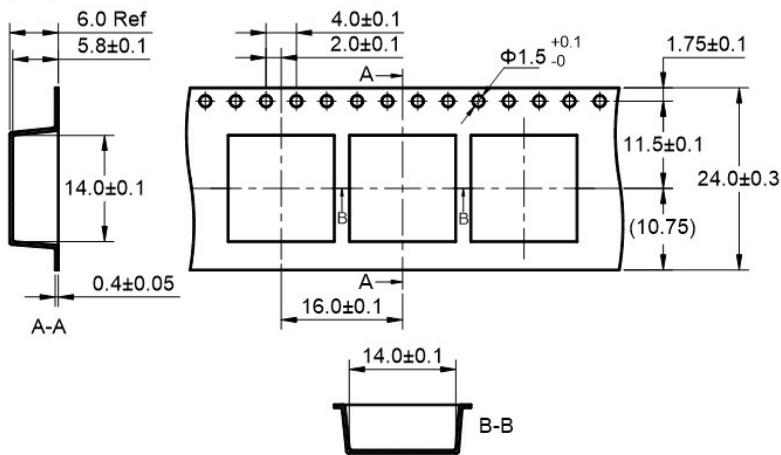
7.2 Classification of Peak Package Body Temperature (T P)

	Package Thickness 封装厚度	Package Volume 封装体积		
		<350 mm ³	350~2000 mm ³	>2000 mm ³
PB-Free Assembly 无铅装配	<1.6mm	260°C	260°C	260°C
	1.6~2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

※ Reflow is referred to standard IPC/JEDEC J-STD-020D.
回流焊参照标准 IPC/JEDEC J-STD-020D。

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8. Reel Dimensions (mm)



Product Series 产品系列	Quantity / Reel 数量 / 卷	Inner Carton Quantity 内盒 包装数量	Out Carton Quantity 外箱 包装总数量
FCM 1250	500pcs	(500×2) = 1000pcs	(1000×4) = 4000pcs

II, AQL=0.4; L0A, L30DC, S-4, AQL=0.15。

The inspection must be performed per GB/T2828.1-2003, with its examination level: Appearance and dimensions, II, AQL=0.4; L0A and L30DC, S-4, AQL: 0.15;

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