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

Fang cheng Electronics(Dong guan) Co,LTD

SPECIFICATION FOR APPROVAL

CUSTOMER:

Part Number : SMD POWER CHOKE

CUSTOMER Number:

CUSTOMER Part :

Fangcheng part : FCRH7045-102M-L-S

DATE: 2021-1-11

REV: 01

RoHS COMPLIANT

Confidential

made in fangcheng:

CUSTOMER APPROD:

prepad	checd	Approd
技术部 2021.1.11 张丽丽	技术部 2021.1.11 易鹏	技术部 2020.1.11 袁宏乐

prepad	checd	Approd

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Description of Revision

REV	Description of Revision	DATE	Prepad	Notes
01	Initial Release	2021. 1. 11	Zhangli	

Prepad	Checd	Approd
Zhangli	Tylee	David-yuan

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 productsfor 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 devicesor protection circuit in the end product.

8 Hi-Pot test with higher voltage than spec value will damage insulating material and shorten its life.

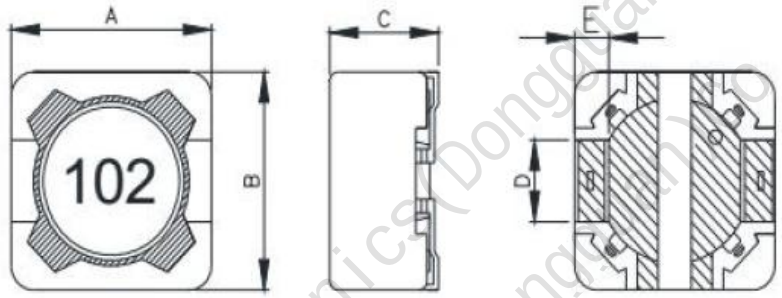
IPC 020D Joint Industry standard

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

(ROHS or other environmental request)

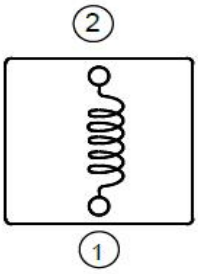
1. Appearance and Dimensions(mm)

Prepad	Checd	Approd
Zhangli	Tylee	David-yuan

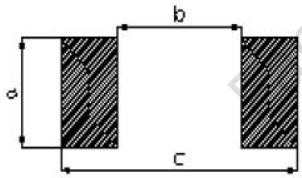


尺寸	A	B	C	D	E
单位（mm）	7.5±0.3	7.5±0.3	4.5 max	2.7±0.2	1.0±0.2

2. Schematic：



3. Reference LandPattern (mm)



推荐安装焊盘（mm）

a	2.11 mm REF
b	5.0 mm REF
c	7.29 mm REF

4. Electrical Characteristics：

Prepad	Checd	Approd
Zhangli	Tylee	David-yuan

Part No.	Inductance (mH)	D.C.R. (Ω)	Saturation current (mA)	Temperature rise current (mA)
FCRH7045-102M-L-S	±20%	MAX	MAX	MAX
	1.0	4.5Ω	300	300

(1).Rated Current: Base on temp.rise & ΔL/L0A≦30% Max and ΔT= 40℃Typ
(2).Operating Temperature: -40°C up to +125℃
(3).Storage Temperature: -20°C up to +40°C, 75% RH max.
(4)All data is tested based on 25ambient temperature.
(5)Operatingtemperature-40+125(Including coil's temperature rise)

Special remindCircuit design, component placement, PCB size andthickness,cooling systemand etc. allwillaffectthe producttemperature.Please verify the product temperature in the final application.

6.Reliability and test condition:

Test item	test condition	Remark

Prepad	Checd	Approd
Zhangli	Tylee	David-yuan

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)(		

7. Soldering Specification：

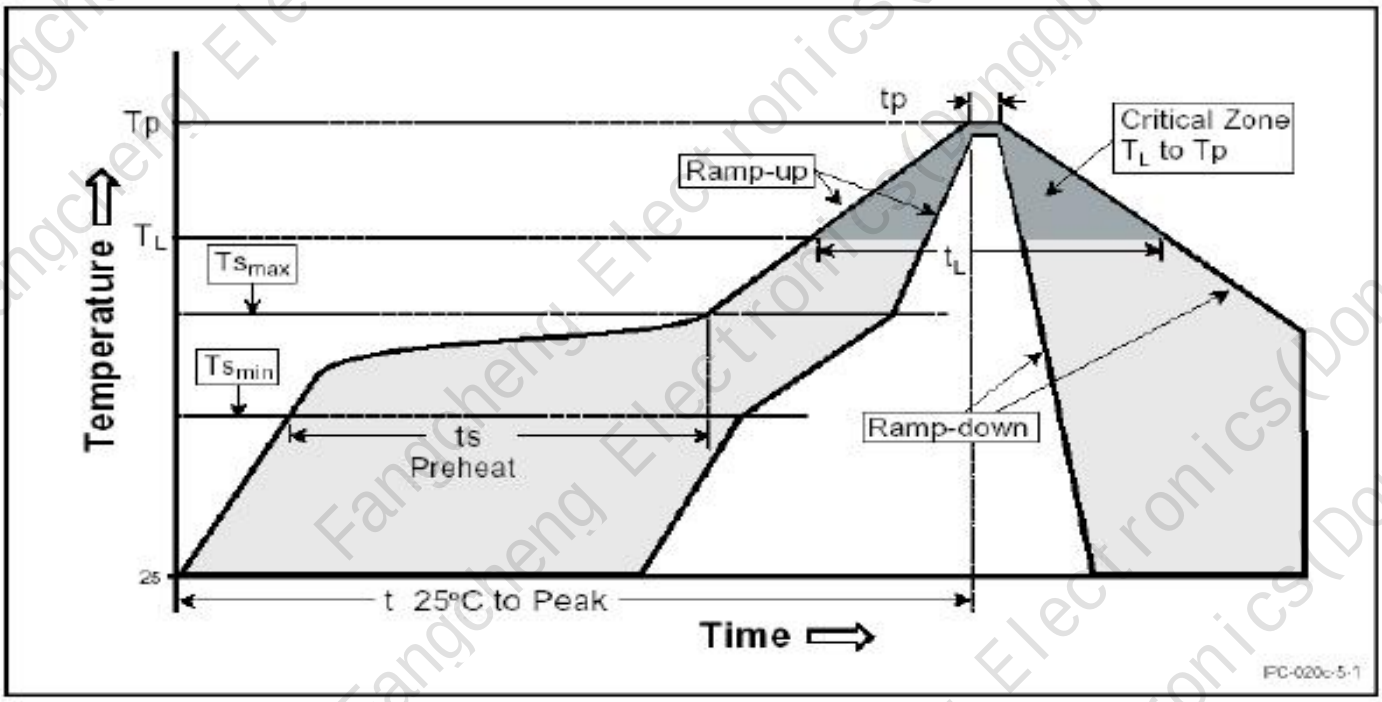
Prepad	Checd	Approd
Zhangli	Tylee	David-yuan

7.1 R eflow P rofile f or SMT C omponents.

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Average Ramp-Up Rate (Ts_{max} to Tp)	3 °C/second max.	3° C/second max.
Preheat – Temperature Min (Ts_{min}) – Temperature Max (Ts_{max}) – Time (ts_{min} to ts_{max})	 100 °C 150 °C 60-120 seconds	 150 °C 200 °C 60-180 seconds
Time maintained above: – Temperature (T_L) – Time (t_L)	 183 °C 60-150 seconds	 217 °C 60-150 seconds
Peak/Classification Temperature (Tp)	See Table 4.1	See Table 4.2
Time within 5 °C of actual Peak Temperature (tp)	10-30 seconds	20-40 seconds
Ramp-Down Rate	6 °C/second max.	6 °C/second max.
Time 25 °C to Peak Temperature	6 minutes max.	8 minutes max.

Note 1: All temperatures refer to topside of the package, measured on the package body surface.

7.2 Classification of Peak Package Body Temperature (T P)

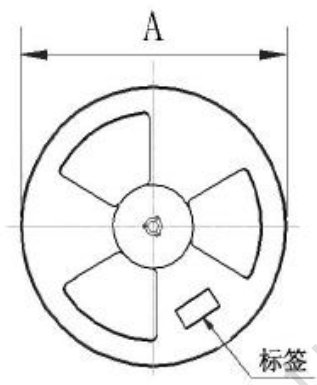


Package Thickness	Volume mm³ <350	Volume mm³ 350 - 2000	Volume mm³ >2000
<1.6 mm	260 +0 °C *	260 +0 °C *	260 +0 °C *
1.6 mm - 2.5 mm	260 +0 °C *	250 +0 °C *	245 +0 °C *
≥2.5 mm	250 +0 °C *	245 +0 °C *	245 +0 °C *

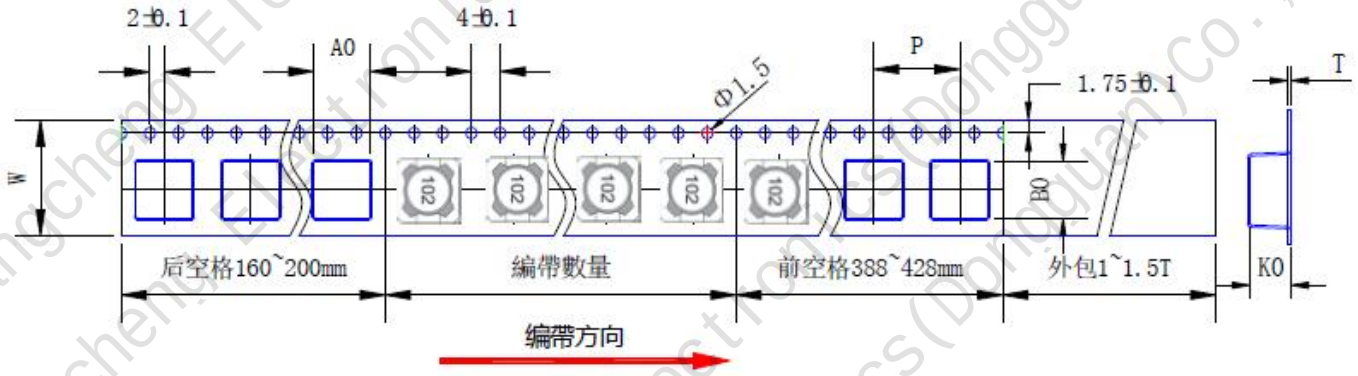
* Tolerance: The device manufacturer/supplier **shall** assure process compatibility up to and including the stated classification temperature (this means Peak reflow temperature +0 °C. For example 260 °C+0°C) at the rated MSL level.

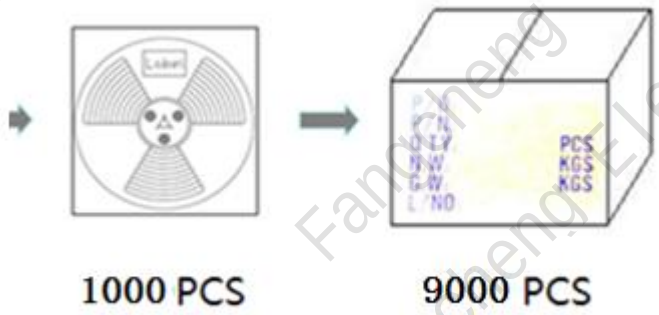
8. Reel Dimensions (mm)

Prepad	Checd	Approd
Zhangli	Tylee	David-yuan



包装盘尺寸（mm）		
A	B	C
330	16.5	100





1000 PCS 9000 PCS

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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Zhangli	Tylee	David-yuan