

深圳市方磁電子有限公司

SHENZHEN FOUNDS ELECTRONICS CO., LTD

【物料承認書】

APPROVAL SHEET

客戶 (Customer) : _____

產品名稱 (Description) : 功率電感

客戶料號 (Cus P/N) : _____

料號 (Part NO) : F5NR4015系列

日期 (Date) : 2018-09-27

版本 (Version) : A1.0

核准 APPROVED BY	審核 CHECKED BY	製作 DRAWN BY
TopoCheng	VincentShang	AbbyShi

Please sign back after confirmation:

Client signature: Qualified Unqualified

批准 APPROVAL	審核 CHECKED	檢驗 CONFORM

地址 (Address) : 深圳市寶安區新安街道裕安二路 131 號

C33 科創園 2 棟 209 室

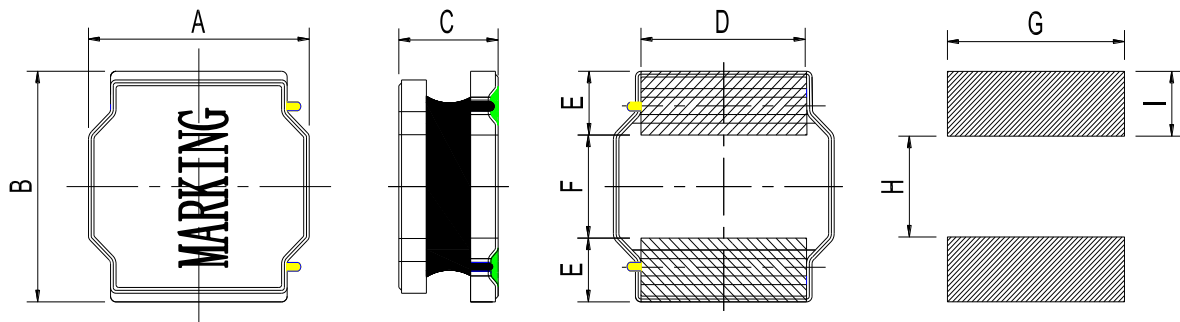
電話 (TEL) : 0755-83222650

傳真 (FAX) : 0755-83222656

<http://www.ele-founds.com>



1. Shape and Dimension (Unit:mm)



A	B	C	D	E	F	G	H	I
4.0 ± 0.2	4.0 ± 0.2	1.65Max	3.3±0.3	1.0±0.2	2.0±0.3	3.7 Ref	1.9 Ref	1.1 Ref

注：喷码尺寸长 2.5±0.5mm, 宽 2.0±0.5mm

2. Electronic Characteristics List

Part Number	Inductance (μ H)	Tolerance (\pm %)	DCR (m Ω) \pm 30%	Isat (A)	Irise (A)	Test Condition	Marking
FSNR4015-1R0N	1.0	30	35	3.30	2.50	100KHz /0.25V	1R0
FSNR4015-1R5N	1.5	30	40	2.70	2.20	100KHz /0.25V	1R5
FSNR4015-2R2M	2.2	20	53	2.10	2.00	100KHz /0.25V	2R2
FSNR4015-3R3M	3.3	20	75	1.90	1.80	100KHz /0.25V	3R3
FSNR4015-4R7M	4.7	20	100	1.45	1.35	100KHz /0.25V	4R7
FSNR4015-6R8M	6.8	20	135	1.30	1.20	100KHz /0.25V	6R8
FSNR4015-100M	10	20	200	1.10	1.00	100KHz /0.25V	100
FSNR4015-150M	15	20	300	0.90	0.85	100KHz /0.25V	150
FSNR4015-220M	22	20	400	0.72	0.68	100KHz/0.25V	220
FSNR4015-330M	33	20	660	0.63	0.58	100KHz/0.25V	330
FSNR4015-470M	47	20	975	0.55	0.45	100KHz/0.25V	470
FSNR4015-680M	68	20	1600	0.50	0.42	100KHz/0.25V	680

Isat (A) :

DC Saturation Current that will cause initial inductance to drop approximately 30% max.

Irise(A)

DC Current that will cause an approximate ΔT of 40 °C

Measuring Instrument :

L:HIOKI3532-50

DCR:HIOKI 3540

Isat / Irise:HP4284+42841A

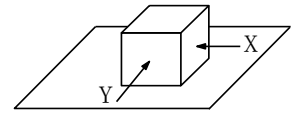
3. General Characteristics

3-1. Storage Temperature range : $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$

3-2. Operating temperature range: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (Including coil's self temperature rise)

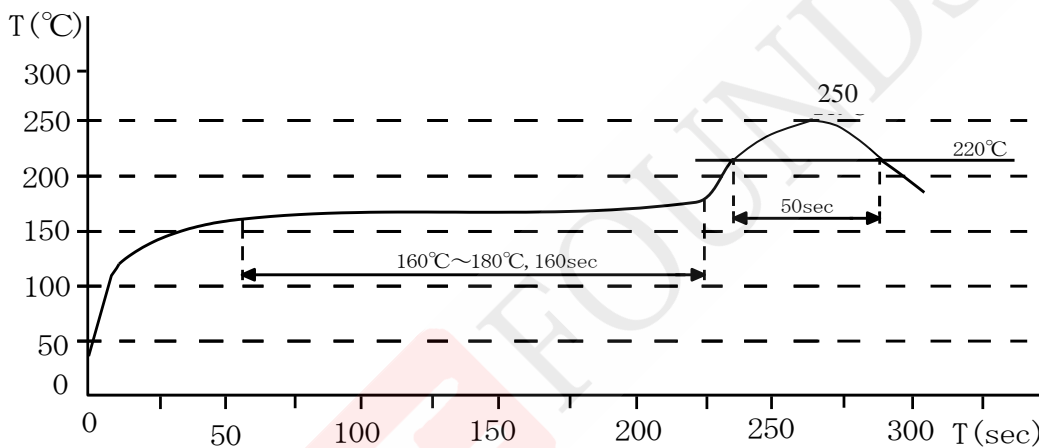
3-3. External appearance : No external defects can be found in the visual inspection.

3-4. Electrode strength : No electrode detachment should be found when the device is pushed in two directions of X and Y with the force of 10.0N for 10 ± 2 seconds after soldering between copper plate and the electrodes.
(Refer to figure at right)



3-5. Vibration test : Inductance deviation is within $\pm 10.0\%$ after 1 hour sweeping vibration in each three directions, namely, forward and backward, up and down, right and left. The frequency is $10 \sim 55 \sim 10\text{Hz}$ and the amplitude of 1 minute cycle is 1.5mm PP.

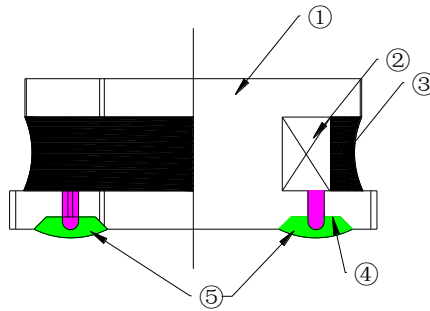
3-6. Recommended reflow condition:



3-7. Humidity test : Inductance deviation is within $\pm 5.0\%$ after 96 ± 4 hours test under the condition of relative humidity of $90 \sim 95\%$ and temperature of $60 \pm 2^{\circ}\text{C}$, and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.



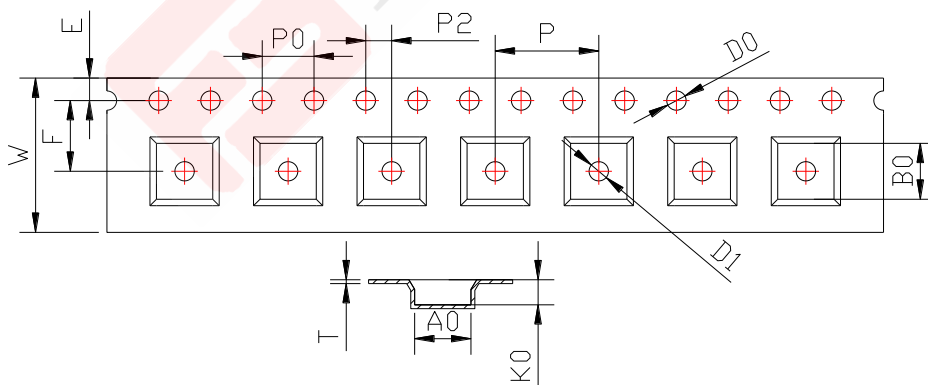
4. Construction and materials



No.	Part name	Material	Ceaiya P/N
①	Drum Core	Ni-Zn Ferrite Core	YN
②	Wire	Polyurethane enameled copper wire	YLSL
③	Adhesive	Epoxy Resin Magnetic Powder	
④	Plating Electrodes	Plating: Ag 10-20 μ m Ni 1-3 μ m Sn 3-7 μ m	
⑤	Outer Electrodes	Top surface solder coating Sn99%、 Ag0.3%、Cu0.7%	YX

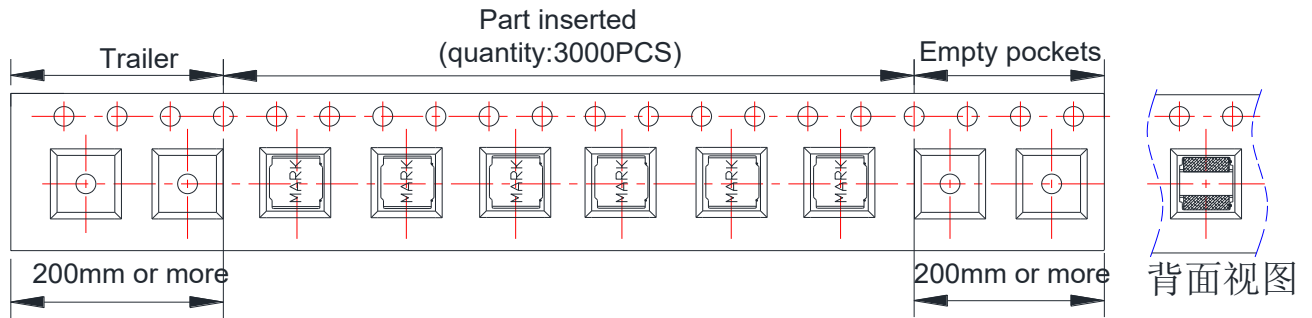
5. Packaging and Marking:

5-1. Carrier Tape Dimensions:

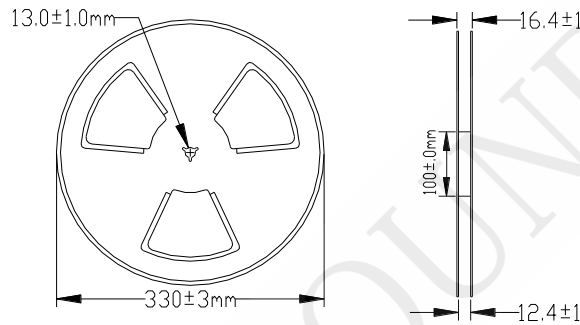


ITEM	W	A0	B0	K0	P	F	E	D0	D1	P0	P2	T
DIM	12.00	4.3	4.3	1.6	8.00	5.50	1.75	1.50	1.50	4.00	2.00	0.30
TOLE	+0.30 -0.10	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	+0.1	+0.1	± 0.1	± 0.1	± 0.05

5-2. Taping Dimensions:



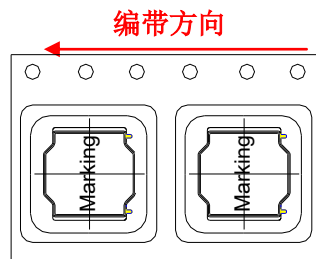
5-3. Reel Dimensions:



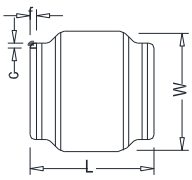
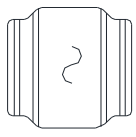
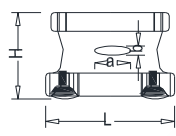
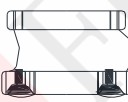
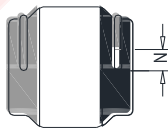
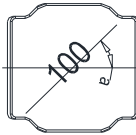
6. PACKAGE SPECIFICATION:

3KPCS/ Reel 9KPCS/ Inner Box 27KPCS/ Outer Box

编带方向，如右图所示



Visual Inspection Standard of Product

No.	Defect Item	Figure	Rejection Identification	Acceptance
1	Core Defect		The defect length(c or f) more than L/6 or W/6 , NG	AQL=0.65
2	Core Crack		Visual cracks , NG	AQL=0.65
3	Starvation		(1)Resin starved length a more than L/2, NG (2)When $L > 2\text{mm}$, $b > H/2$, NG (3)When $L \leq 2\text{mm}$, b don't control	AQL=0.65
4	Excessive glue		The length, width or height of product beyond specified value, NG	AQL=0.65
5	Cold Solder		(1)For CR2520** Series , cold solder $N > 0.5\text{mm}$, NG (2)For other series, cold solder $N > 1\text{mm}$, NG	AQL=0.65
6	Marking Defect		The marking angle $a > 45^\circ$, NG	AQL=0.65

