

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) : FSNR3012系列

日期 (Date) : 2018-09-27

版本 (Version) : A0

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

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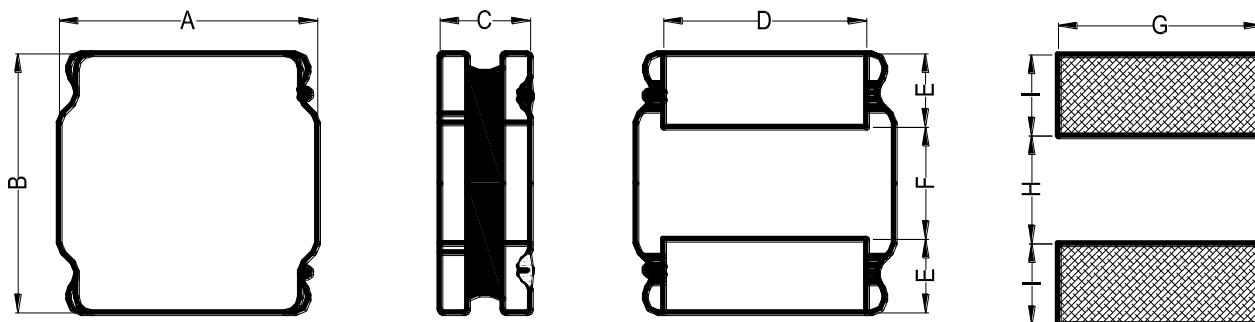
<http://www.ele-founds.com>



【Version of Changed Record】

Rev.	Effective Date	Changed Contents	Change Reasons	Approved By
A0	2018.09.27	New release	/	TopoCheng

1. Shape and Dimension (Unit:mm)



A	B	C	D	E	F	G	H	I
3.0 ± 0.2	3.0 ± 0.2	1.2Max	2.5 ± 0.2	0.75 ± 0.2	1.5 ± 0.2	2.7Ref	1.5Ref	0.8Ref

2. Electronic Characteristics List

Part Number	Inductance (uH)	Tolerance (±%)	DCR(mΩ) ±30%	Isat (A)	Irise (A)	Test Condition
FSNR3012-R33N	0.33	30	21	3.00	2.90	100KHz /0.25V
FSNR3012-R47N	0.47	30	33	2.20	2.20	100KHz /0.25V
FSNR3012-R82N	0.82	30	40	2.05	2.10	100KHz /0.25V
FSNR3012-1R0N	1.0	30	48	1.90	2.00	100KHz /0.25V
FSNR3012-1R5N	1.5	30	55	1.62	1.85	100KHz /0.25V
FSNR3012-2R2M	2.2	20	75	1.20	1.55	100KHz /0.25V
FSNR3012-3R3M	3.3	20	100	1.05	1.35	100KHz /0.25V
FSNR3012-4R7M	4.7	20	120	0.90	1.25	100KHz /0.25V
FSNR3012-5R6M	5.6	20	160	0.80	1.10	100KHz /0.25V
FSNR3012-6R8M	6.8	20	190	0.75	1.00	100KHz /0.25V
FSNR3012-100M	10	20	265	0.60	0.89	100KHz /0.25V
FSNR3012-150M	15	20	430	0.45	0.72	100KHz /0.25V
FSNR3012-220M	22	20	630	0.42	0.55	100KHz /0.25V
FSNR3012-270M	27	20	800	0.35	0.45	100KHz /0.25V
FSNR3012-330M	33	20	875	0.36	0.46	100KHz /0.25V
FSNR3012-470M	47	20	1450	0.27	0.35	100KHz /0.25V

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

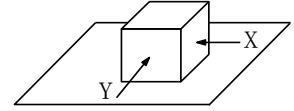
3. General Characteristics

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)

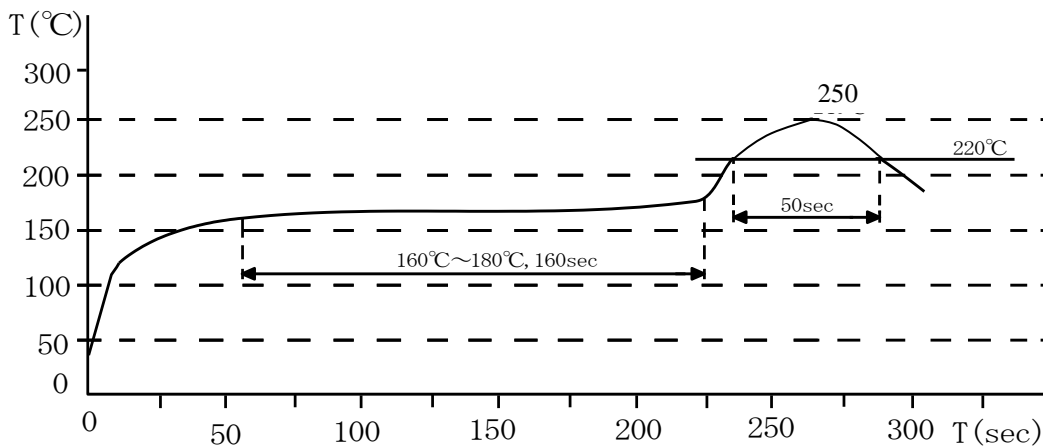
3-3. External appearance : No external defects can be found in the visual inspection.

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:

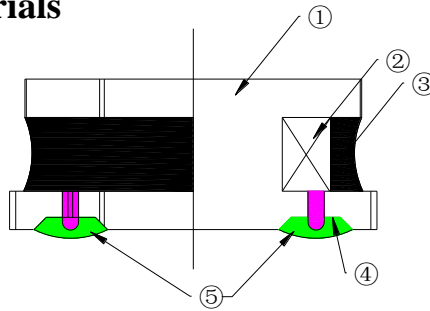


3-7. Humidity test : Inductance deviation is within $\pm 5.0\%$ after 96 ± 4 hours test under the condition of relative humidity of 90~95% and temperature of $60 \pm 2^{\circ}\text{C}$, and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

LEAD-FRE

RoHS
Compliance

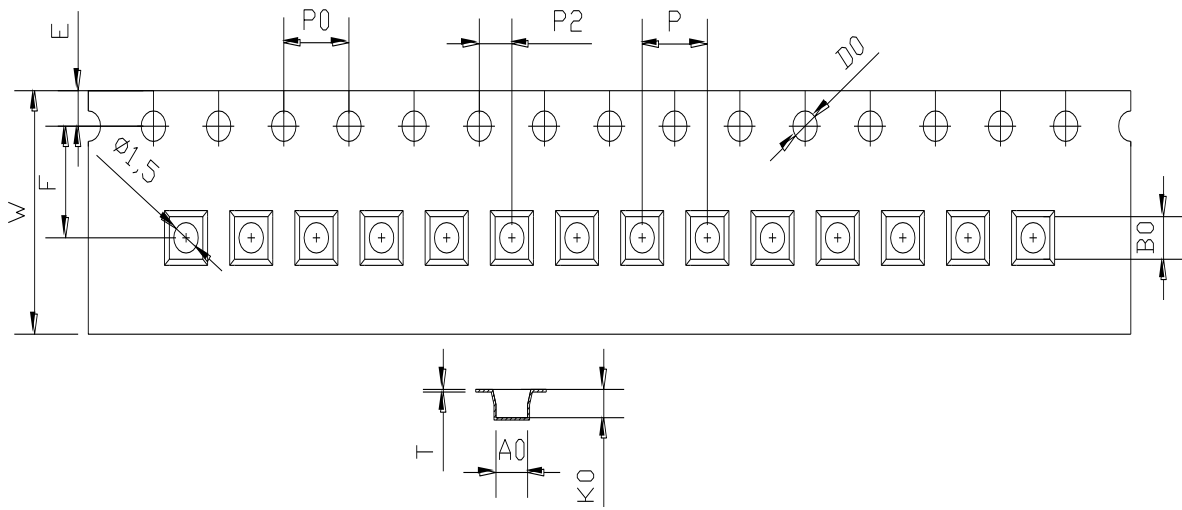
4. Construction and materials



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

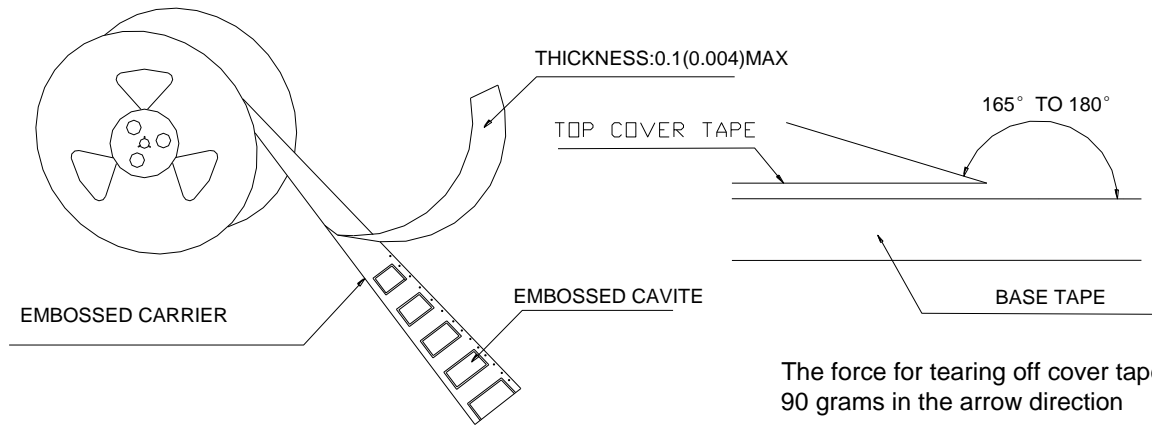
5. Packaging and Marking:

5-1. Carrier Tape Dimensions:



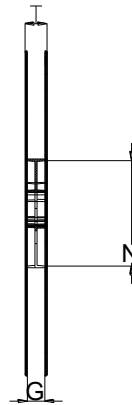
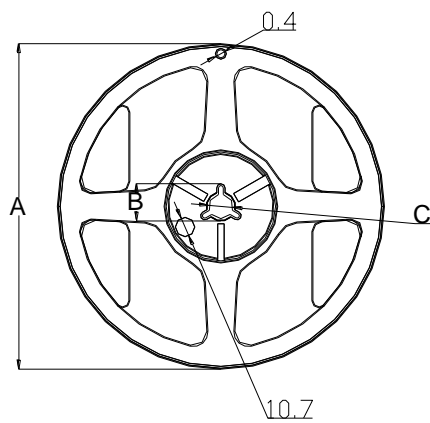
ITEM	W	A0	B0	K0	P	F	E	D0	P0	P2	T
DIM	8.00	3.3	3.3	1.6	4.00	3.50	1.75	1.50	4.00	2.00	0.25
TOLE	± 0.1	± 0.05	± 0.05	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.05

5-2. Reel Dimensions:



The force for tearing off cover tape is 15 to 90 grams in the arrow direction

Carrier Tape Reel



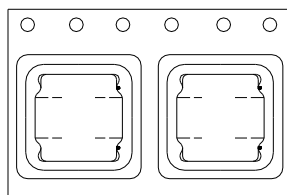
MATERIAL:PAPER/PLASTIC

Type	A	B	C	G	N	T
8mm	178	20.7±0.8	13±0.4	9	60	10.8

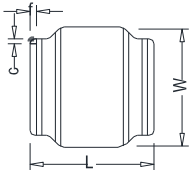
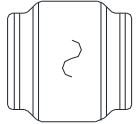
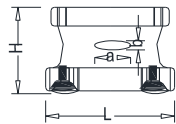
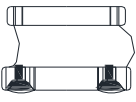
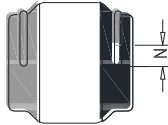
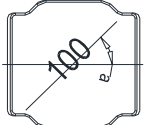
6. PACKAGE SPECIFICATION:

2KPCS/ Reel 20KPCS/ Inner Box 80KPCS/ 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>2mm,b>H/2, NG (3)When L≤2mm, 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>0.5mm,NG (2)For other series, cold solder N>1mm,NG	AQL=0.65
6	Marking Defect		The marking angle a>45° , NG	AQL=0.65



Δf: Clearance between terminal and the surface of plate must be 0.1mm max when coil is placed on a flat plate.