

## Specification Sheet for Approved

Customer Name:	
Customer Part No.:	
Ceaiya Part No:	CR4015 Series
Spec No:	L025-2

### 【For Customer Approval Only】

If you Approval, Please Stamp

### 【RoHS Compliant Parts】

Approved By	Checked By	Prepared By
李庆辉	刘志坚	劳水花

## Shenzhen Ceaiya Electronics Co., Ltd.

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Http://www.szceaiya.com

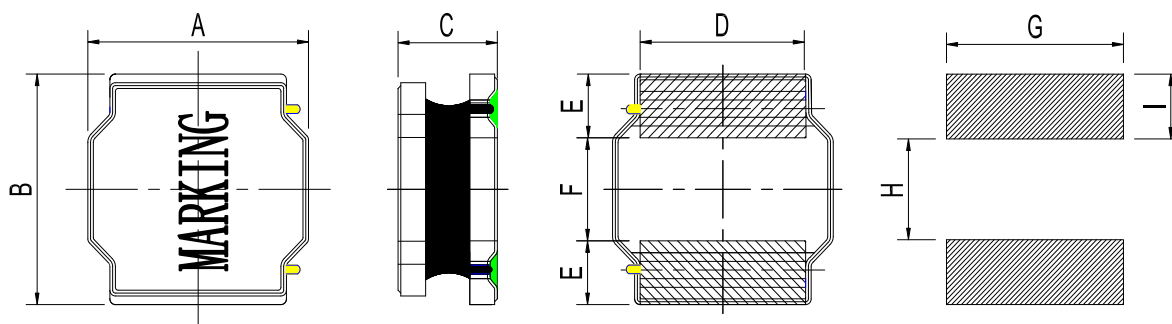
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**【Version of Changed Record】**

Rev.	Effective Date	Changed Contents	Change Reasons	Approved By
A0	2023.05.25	New release	/	Li qing hui

## 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 ( $\mu$ H)	Tolerance ( $\pm\%$ )	DCR(m $\Omega$ ) $\pm 30\%$	Isat (A)	Irise (A)	Test Condition	Marking
CR4015-R50N	0.5	30	25	6.30	4.20	100KHz /0.25V	R50
CR4015-1R0N	1.0	30	35	3.30	2.50	100KHz /0.25V	1R0
CR4015-1R5N	1.5	30	40	2.70	2.20	100KHz /0.25V	1R5
CR4015-2R2M	2.2	20	53	2.10	2.00	100KHz /0.25V	2R2
CR4015-3R3M	3.3	20	75	1.90	1.80	100KHz /0.25V	3R3
CR4015-4R7M	4.7	20	100	1.45	1.35	100KHz /0.25V	4R7
CR4015-6R8M	6.8	20	135	1.30	1.20	100KHz /0.25V	6R8
CR4015-100M	10	20	200	1.10	1.00	100KHz /0.25V	100
CR4015-150M	15	20	300	0.90	0.85	100KHz /0.25V	150
CR4015-220M	22	20	400	0.72	0.68	100KHz/0.25V	220
CR4015-330M	33	20	660	0.63	0.58	100KHz/0.25V	330
CR4015-470M	47	20	975	0.55	0.45	100KHz/0.25V	470
CR4015-680M	68	20	1600	0.50	0.42	100KHz/0.25V	680

※ All test data is referenced to 25°C ambient;

**Isat (A) :**

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

**Irise(A)**

DC Current that will cause an approximate  $\Delta T$  of 40 °C

**Measuring Instrument :**

L:HIOKI3532-50

DCR:HIOKI 3540

Isat / Irise:HP4284+42841A

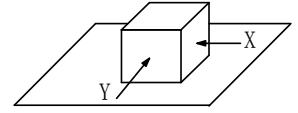
### 3. General Characteristics

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)

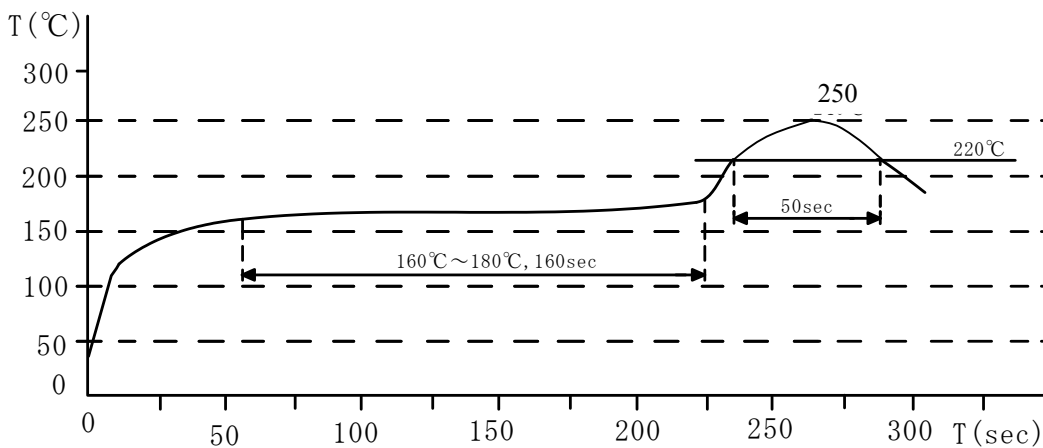
3-3. External appearance : No external defects can be found in the visual inspection.

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  $10 \pm 2$  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:

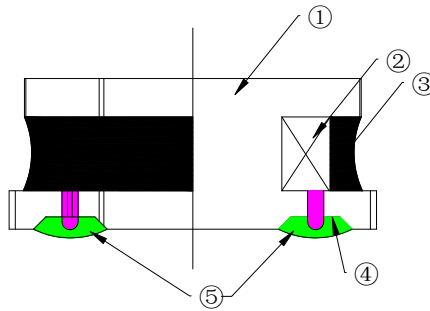


3-7. Humidity test : Inductance deviation is within  $\pm 5.0\%$  after  $96 \pm 4$  hours test under the condition of relative humidity of  $90 \sim 95\%$  and temperature of  $60 \pm 2^{\circ}\text{C}$ , and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

**LEAD-FREE**



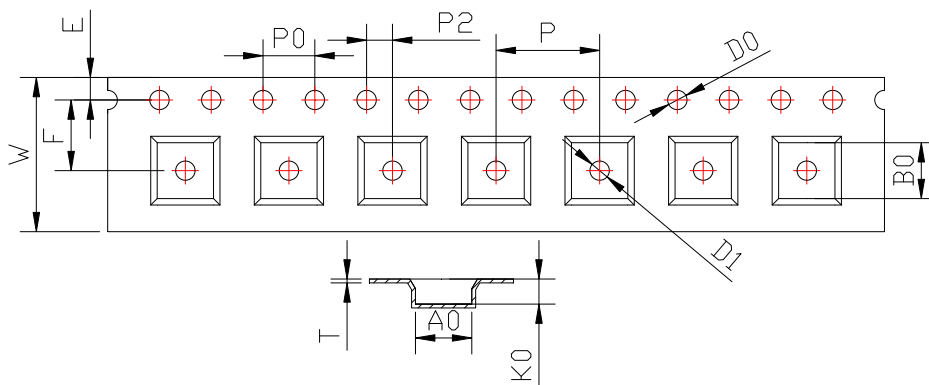
#### 4. Construction and materials



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

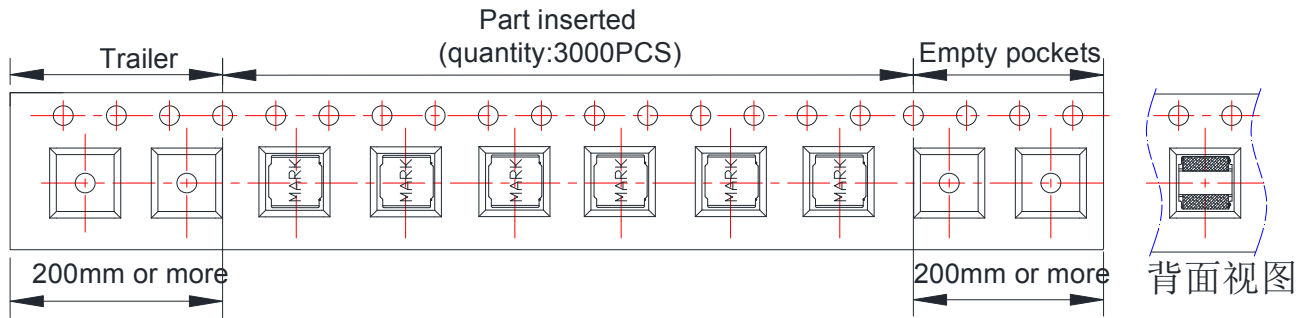
#### 5. Packaging and Marking:

5-1. Carrier Tape Dimensions:

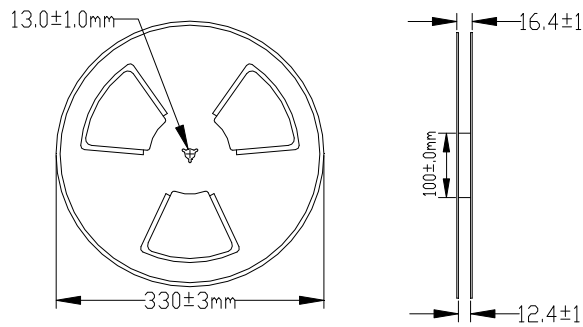


ITEM	W	A0	B0	K0	P	F	E	D0	D1	P0	P2	T
DIM	12.00	4.3	4.3	1.6	8.00	5.50	1.75	1.50	1.50	4.00	2.00	0.30
TOLE	+0.30 -0.10	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	+0.1	+0.1	±0.1	±0.1	±0.05

5-2. Taping Dimensions:



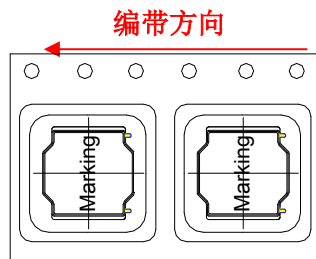
5-3. Reel Dimensions:



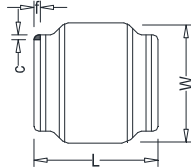
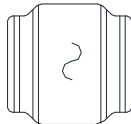
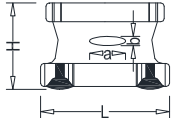
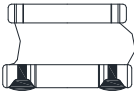
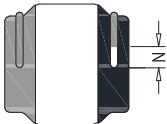
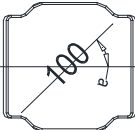
6. PACKAGE SPECIFICATION:

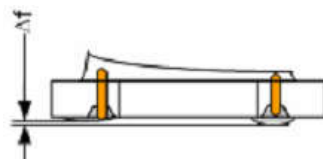
3KPCS/ Reel    9KPCS/ Inner Box    27KPCS/ Outer Box

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>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 0.2mm max when coil is placed on a flat plate.**

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