

## Specification Sheet for Approved

Customer Name:	
Customer Part No.:	
Ceaiya Part No:	CR3015 Series
Spec No:	L049-2

### 【For Customer Approval Only】

If you Approval, Please Stamp

### 【RoHS Compliant Parts】

Approved By	Checked By	Prepared By
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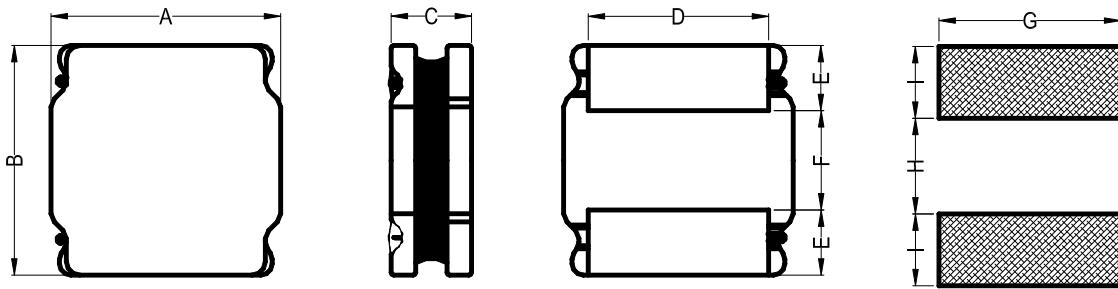
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**【Version of Changed Record】**

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
3.0 ± 0.2	3.0 ± 0.2	1.5Max	2.5 ± 0.3	0.8 ± 0.3	1.4 ± 0.3	2.7Ref	1.5 Ref	0.8 Ref

## 2. Electronic Characteristics List

Part Number	Inductance (uH)	Tolerance (±%)	DCR(mΩ) ±30%	Isat (A)	Irise (A)	Test Condition
CR3015-R24N	0.24	30	14	4.80	3.50	1MHz /0.25V
CR3015-R30N	0.30	30	15	4.60	3.50	1MHz /0.25V
CR3015-R47N	0.47	30	20	4.00	3.50	100KHz /0.25V
CR3015-R56N	0.56	30	20	3.30	2.80	100KHz /0.25V
CR3015-1R0N	1.0	30	30	2.32	2.10	100KHz /0.25V
CR3015-1R2N	1.2	28.5	48	2.20	1.70	100KHz /0.25V
CR3015-1R5N	1.5	30	50	2.00	1.70	100KHz /0.25V
CR3015-1R8N	1.8	30	55	1.75	1.65	100KHz /0.25V
CR3015-2R2M	2.2	20	60	1.60	1.60	100KHz /0.25V
CR3015-2R7N	2.7	30	70	1.52	1.50	100KHz /0.25V
CR3015-3R3M	3.3	20	80	1.32	1.36	100KHz /0.25V
CR3015-3R9M	3.9	20	108	1.20	1.10	100KHz /0.25V
CR3015-4R7M	4.7	20	125	1.10	1.09	100KHz /0.25V
CR3015-5R6M	5.6	20	170	1.05	1.00	100KHz /0.25V
CR3015-6R8M	6.8	20	200	0.85	0.85	100KHz /0.25V
CR3015-8R2M	8.2	20	230	0.80	0.75	100KHz /0.25V
CR3015-100M	10	20	250	0.72	0.77	100KHz /0.25V
CR3015-120M	12	20	288	0.70	0.68	100KHz /0.25V
CR3015-150M	15	20	350	0.66	0.65	100KHz /0.25V
CR3015-180M	18	20	430	0.56	0.59	100KHz /0.25V
CR3015-220M	22	20	460	0.52	0.57	100KHz /0.25V
CR3015-270M	27	20	630	0.48	0.46	100KHz /0.25V
CR3015-330M	33	20	780	0.44	0.42	100KHz /0.25V
CR3015-470M	47	20	1200	0.35	0.32	100KHz /0.25V

※ 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 ΔT of 40 °C

**Measuring Instrument :**

L:HIOKI3532-50/3536

DCR:HIOKI 3540

Isat / Irise:HP4284A+42841

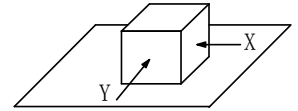
### 3. General Characteristics

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)

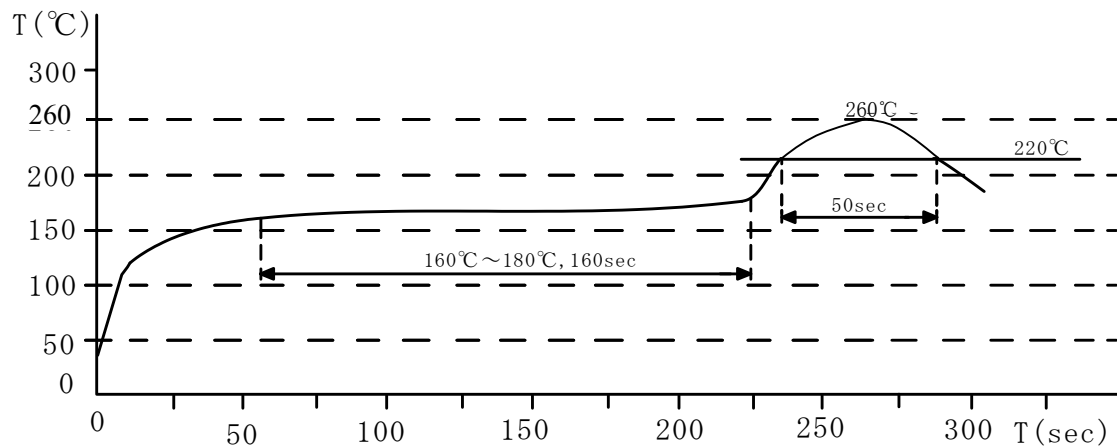
3-3. External appearance : No external defects can be found in the visual inspection.

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:

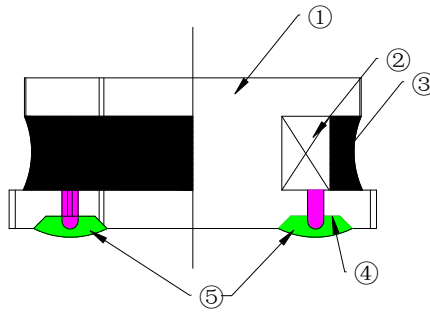


3-7. Humidity test : Inductance deviation is within  $\pm 5.0\%$  after  $96 \pm 4$  hours test under the condition of relative humidity of  $90 \sim 95\%$  and temperature of  $60 \pm 2^{\circ}\text{C}$ , and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

**LEAD-FREE**



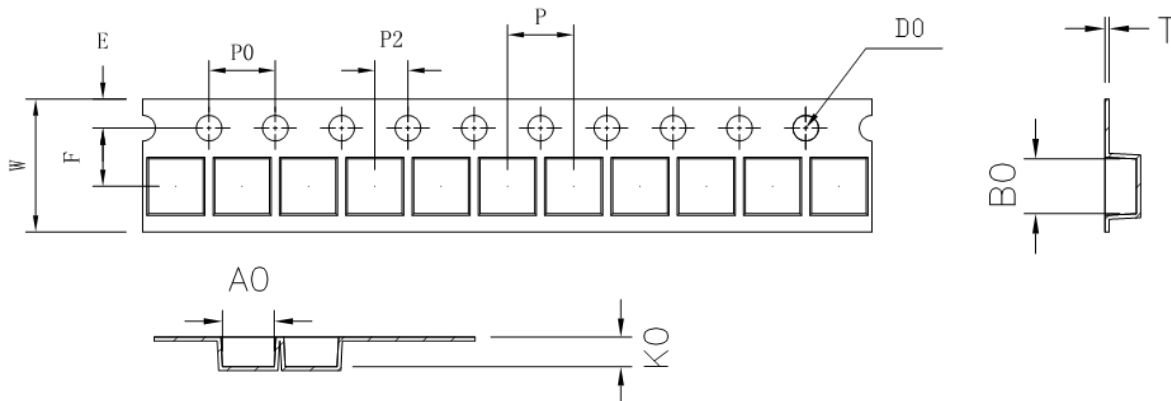
#### 4. Construction and materials



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

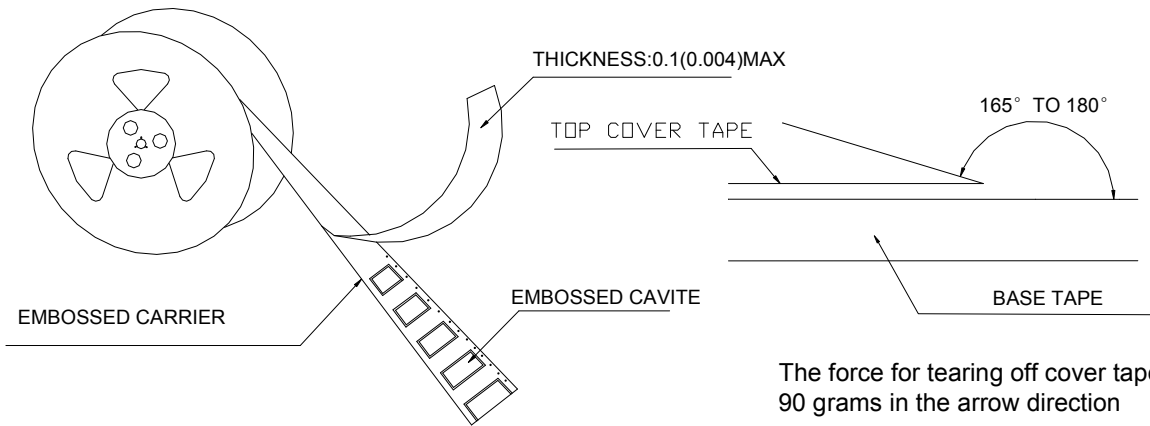
#### 5. Packaging and Marking:

5-1. Carrier Tape Dimensions:

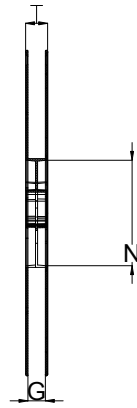
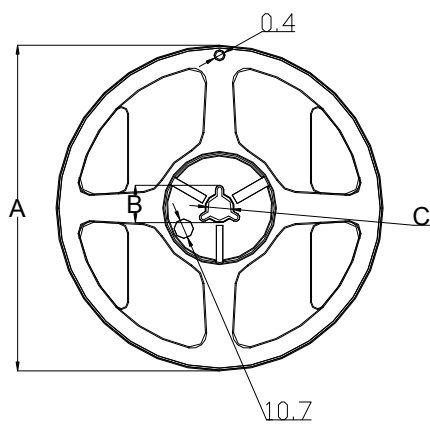


TEM	W	A0	B0	K0	P	F	E	D0	P0	P2	T
DIM	8.00	3.3	3.3	1.9	4.00	3.50	1.75	1.50	4.00	2.00	0.25
TOLE	$\pm 0.3$	$\pm 0.05$	$\pm 0.05$	$\pm 0.05$	$\pm 0.1$	$\pm 0.05$	$\pm 0.1$	+0.1	$\pm 0.1$	$\pm 0.05$	$\pm 0.05$

### 5-2. Reel Dimensions:



Carrier Tape Reel



MATERIAL:PAPER/PLASTIC

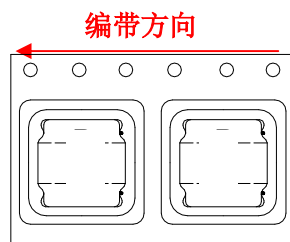
Type	A	B	C	G	N	T
8mm	178	20.7±0.8	13±0.4	9	60	10.8

### 6. PACKAGE SPECIFICATION:

2KPCS/ Reel    20KPCS/ Inner Box    80KPCS/ Outer Box

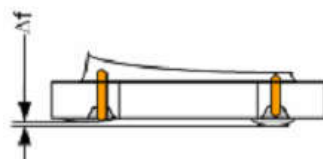
编带方向，如下图所示

编带时，卷带前后各留空 20cm 最小



## 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



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

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